FDR®/UPSTREAM® Unix Systems Services VERSION V3.2.0

PURPOSE OF THE GUIDE

The purpose of this guide is to provide you with the information to install, use and understand the Unix Systems Services component of FDR/UPSTREAM.

WHAT ARE FDR/UPSTREAM AND FDR/UPSTREAM USS?

FDR/UPSTREAM is an unattended PC/LAN to MVS Mainframe Backup and Recovery product for Personal Computers, LAN File Servers and UNIX systems connected to the Mainframe.

FDR/UPSTREAM USS allows you to backup files stored in HFS files under Unix System Services for OS/390.

FDR/UPSTREAM is a proprietary program product of

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1 Overview

OS/390 Unix Systems Services, previously known as OpenEdition/MVS is a UNIX operating environment that is an integral part of the OS/390 system. Many corporations looking to leverage the strengths of the OS/390 world are also looking to take advantage of USS by using applications that operate under USS, such as using the mainframe as a WEB server, Websphere, or Lotus Domino. The OS/390 UNIX files reside on MVS storage, and as a result the OS/390 storage management team is being tasked with the responsibility for backups and restores. Traditional OS/390 storage management products can backup an entire USS file system, but are unable to offer file level support. In today's corporate environment with a greater emphasis on leaner and fewer operations staff, greater efficiency, 24 x 7 availability, and the growing E-commerce marketspace, that's not good enough. Why restore an entire volume when you only need a single file within the dataset? Thus the best way to offer the best class of service and reliably provide file level backup and restore support as an Unix Systems Services application, such as FDR/Upstream

The HFS file system offers a number of file system features not found in other UNIX systems including external links (references to true MVS files), auditing flags and HFS extended attributes. For backup and restores, the HFS file system includes such UNIX features as long file names, case sensitivity, UNIX type security, and symbolic links. The best way to back these up is via a true USS application. That's where FDR/Upstream for Unix Systems Services support comes in! It supports the UNIX Systems Services features: External Links, Symbolic Links, Auditing flags HFS Extended Attributes, Unix owners and permissions, and case sensitivity. And because FDR/Upstream is also an OS/390 application, you can save time and money on your OS/390 storage management team for training issues.

FDR/Upstream was designed as a complete storage management solution for corporate data distributed across a heterogeneous network. The facilities of FDR/UPSTREAM provide companies with completely automated operations for backup/restores, file transfers, and storage management operations. FDR/UPSTREAM offers several unique data reduction techniques to minimize the amount of data to be transmitted, leverages the advanced services and dependability of the MVS server, while offering low resource and system utilization. By using the automation systems of the FDR/UPSTREAM MVS server, storage managers can have the highest degree of flexibility and reliability in backup management, while offering unparalleled features! And now with Upstream/Unix Systems Services support, they can improve efficiency and save time and resources.

The FDR/UPSTREAM UNIX Systems Services process can be initiated manually or automatically with your existing MVS job scheduler. By submitting MVS "batch jobs", the Upstream process can wait until the completion of the request. JCL condition code checking can then take place providing automated exception handling. The OS/390 tape management system controls the retention period of the backups and the OS/390 security system controls access to the system. Restores can be performed and controlled from either a TSO ISPF panel or JAVA interface. The JAVA interface provides an easy to use, graphical user interface that fully utilizes the FDR/UPSTREAM storage management functions especially for restores, and can be used from a PC or X Terminal.

FDR/UPSTREAM for Unix Systems Services for OS/390 is similar to the other UNIX client versions of FDR/UPSTREAM. It supports the following UNIX Systems Services file system features:

- External Links
- Hard and Symbolic Links
- Auditing flags
- HFS Extended Attributes
- Unix owners and permissions
- Case sensitivity

The FDR/UPSTREAM Unix Systems Services product has similar operational characteristics as the other UNIX versions of the FDR/UPSTREAM product.

FDR/UPSTREAM Unix Systems Services can be licensed separately from other FDR/UPSTREAM components, or can be licensed as an option to FDR/UPSTREAM or FDR/UPSTREAM/SOS.

FDR/UPSTREAM UNIX Systems Services requires OS/390 V2R6 or above.

1.1 System Overview

What is FDR/ UPSTREAM?

FDR/UPSTREAM is an unattended PC/LAN to MVS Mainframe Backup and Recovery product for Personal Computers, LAN File Servers and UNIX systems connected to the Mainframe. Currently supported platforms are Novell ® NetWare ® , Windows NT/2000 ® , WINDOWS 95/98®, Banyan ® VINES ® , AIX/6000, HP/UX, UNIX Systems Services for OS/390, Digital Tru64®, Sun Solaris, OS/2 ® , and MS/PC/DOS.

FDR/UPSTREAM performs the same sort of backup for Unix Systems Services files residing in HFS (Hierarchical File System) data sets under OS/390. Individual files are backed up and restored. This section of the FDR/UPSTREAM user guide is for those needing to use FDR/UPSTREAM for Unix Systems Services.

How Does FDR/ UPSTREAM Work?

FDR/UPSTREAM was created to accomplish the following design goals:

Unattended Operation

Through the use of its integrated scheduler or your own mainframe job scheduler, you can configure FDR/UPSTREAM to run system functions at any combination of times. Backups and restores can be timed to run daily, weekly, monthly, or in virtually unlimited numbers of combinations.

High Performance

FDR/UPSTREAM USS uses TCP/IP, and due to its unique, efficient architecture, FDR/UPSTREAM is the fastest micro-to-mainframe communications facility available today. FDR/UPSTREAM on MVS is an application written entirely in assembler language, which interfaces to VTAM and TCP/IP natively. This provides the fastest possible data transfer speeds as well as outstanding CPU efficiency.

Merge Backups

The Full Merge Backup facility drastically reduces the elapsed time of full backups, by utilizing already existing mainframe backups of files which have not changed. Instead of transmitting all files from the remote system, it uses sophisticated techniques to construct a complete full backup without having to process or transmit the vast majority of the files. This results in extraordinary performance for full backups.

MERGE backups also include the optional capability for duplicate file support. When many files are duplicated across many workstations or servers, such as the files associated with operating systems, word processors, and other software packages, you can improve the efficiency of the backups by transmitting those files to the FDR/UPSTREAM-MVS host from one remote system once, and they can then be included in the backup image on the host for each of those systems automatically.

Reporting

Comprehensive reporting facilities are available that allow you to design and produce reports suited to your specific needs. These tailored reports can be saved and recalled for later use. This facility is fully described in the ”Reporting on System Activity” section beginning on page 134.

Secure

UPSTREAM interfaces to all major mainframe security systems such as RACF, ACF2, TOP SECRET or any security system which supports the MVS SAF Router interface.

Safe

With FDR/UPSTREAM your mission critical data is saved on the most safe and secure repository in your company, your IBM OS/390 mainframe.

1.2 System Component Overview

When envisioning the total picture of all aspects of the FDR/UPSTREAM system, as they relate to activities involving the FDR/UPSTREAM UNIX Systems Services product, it is helpful to keep in mind that the product and operating system prerequisite components can be divided into five logical categories:

1) OS/390 Unix Systems Services Environment Components
2) OS/390 MVS Environment Components
3) FDR/UPSTREAM Unix Systems Services Components
4) FDR/UPSTREAM MVS Components
5) FDR/UPSTREAM Client Components

The following diagram and subsequent paragraphs provide a basic description and outline the interrelationships between these components.

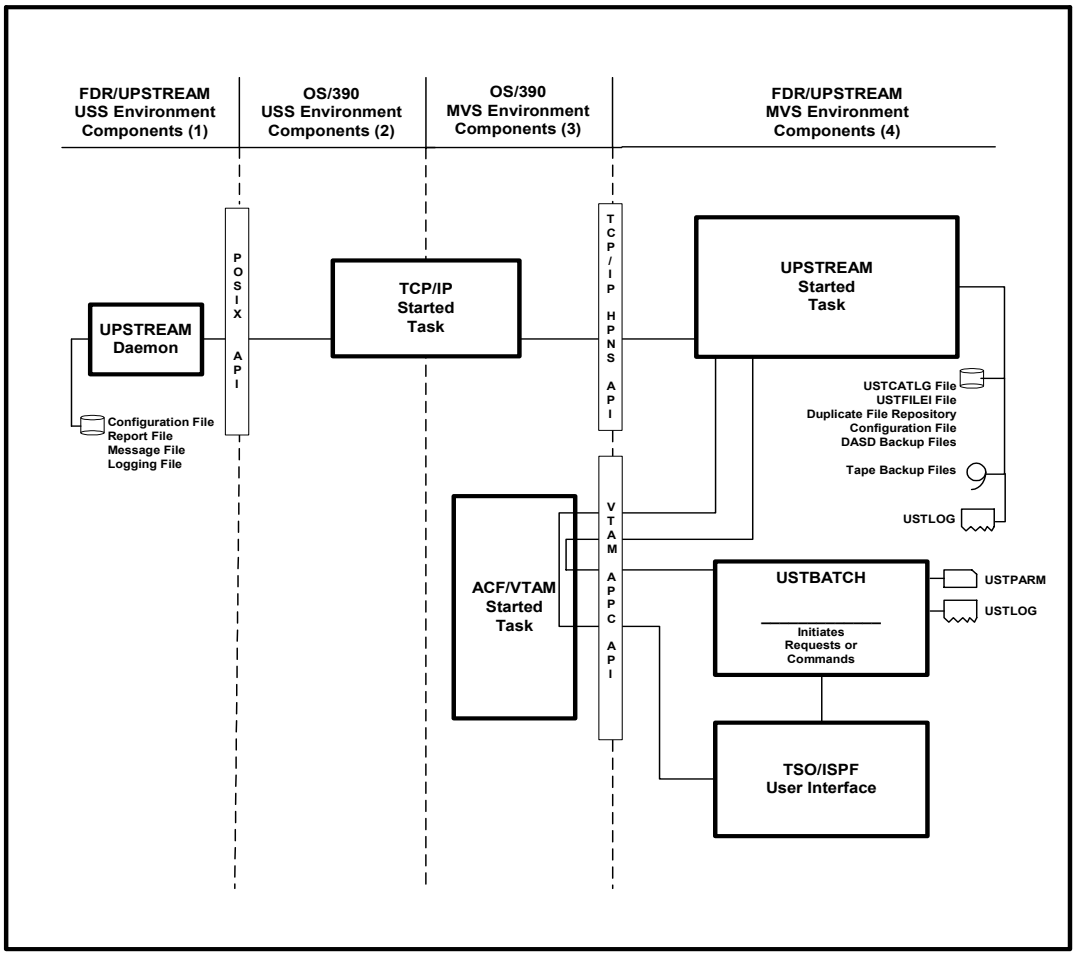


Figure 1 - FDR/UPSTREAM USS Component Interrelationships

1.2.1 FDR/UPSTREAM USS Components

FDR/UPSTREAM Daemon

The Daemon is the FDR/UPSTREAM Unix Systems Services process. It is a long running process that sits and waits for requests and then processes them. It is suggested that this process be initiated via either an MVS BATCH JOB/Started Task or via the Unix Systems Services system INITTAB.

Daemon Configuration File

The FDR/UPSTREAM USS configuration file contains the product specific definitions required for the USS Daemon. These configuration parameters control the processing of the Daemon from when it is started till it ends. These parameters are discussed in depth in the “USS Process Configuration Parameter Reference” section that begins page 195.

Daemon Logging File

The FDR/UPSTREAM USS logging file contains all the messages that have been issued by the FDR/UPSTREAM USS components while it has been operating. This file is named “upstream.log” and is located in the directory that FDR/UPSTREAM is started from by default.

Daemon Message File

This file contains all the FDR/UPSTREAM system messages that it can issue. The messages have a specified format and can be modified, if so desired, by the customer to include additional information. This information will then be displayed when the system message is issued and logged to the logging file.

Daemon Report File

This file contains all of the reporting output based upon the selection criteria specified for the reporting options for a particular FDR/UPSTREAM USS function request. The default file name is “us.rpt”. The file is also located by default in the directory from which FDR/UPSTREAM is started.

1.2.2 OS/390 USS Environment Components

The components and subsystems outlined below belong to the OS/390 UNIX Systems Services (USS) components.

TCP/IP Subsystem

The TCP/IP subsystem provides telecommunications access method services to the FDR/UPSTREAM USS components. This subsystem is an integrated component of the OS/390 Unix Systems Services feature of the operating system. It must be installed and minimally configured prior to FDR/UPSTREAM use. The FDR/UPSTREAM USS components interact with the TCP/IP components via the POSIX API, which is a standards based C language Application Program Interface for UNIX applications.

Hierarchical File System (HFS) and zSeries File System (zFS) Subsystem

The HFS and zFS subsystem provides DASD access methods services to the FDR/UPSTREAM USS components. This subsystem is an integrated component of the OS/390 Unix Systems Services feature of the operating system. The FDR/UPSTREAM USS product files that are outlined above reside within this file system. It must be installed, defined, and configured prior to FDR/UPSTREAM use. The FDR/UPSTREAM USS components interact with the HFS components via the POSIX API, which is standards based C language Application Program Interface for UNIX applications.

1.2.3 OS/390 MVS Environment Components

The components and subsystems outlined below are the OS/390 non-USS components of the FDR/UPSTREAM system. These components are more fully described in the FDR/UPSTREAM MVS sections of this manual. Refer to those sections of this manual for additional information on the required installation, customization, and management tasks.

IBM ACF/VTAM Subsystem

The ACF/VTAM Subsystem provides Systems Network Architecture (SNA) communications facilities to the FDR/UPSTREAM OS/390 MVS components. In particular the TSO/ISPF User Interface and USTBATCH JCL Interface utilize the APPC (LU 6.2) API of ACF/VTAM to communicate with the FDR/UPSTREAM Started Task. A minimum level of ACF/VTAM 3.2 is required for the FDR/UPSTREAM system.

TCP/IP Subsystem

The TCP/IP subsystem provides telecommunications access method services to the FDR/UPSTREAM components. This subsystem is an integrated component of the OS/390 operating system and must be installed and configured prior to FDR/UPSTREAM use. The FDR/UPSTREAM Started Task utilizes the High Performance Native Sockets (HPNS) API to interact with the TCP/IP system.

1.2.4 FDR/UPSTREAM MVS Environment Components

FDR/UPSTREAM Started Task

The FDR/UPSTREAM Started Task is a long running server type task which manages the FDR/UPSTREAM system database and records all backup and activity data for the system. All requests for backups, restores, and inquiries are at least partially processed by the Started Task.

USTLOG Logging File

This is the main file used by the FDR/UPSTREAM Started Task to log its activities. Any requests, errors encountered, responses to operator commands, and startup/shutdown messages are reflected here. In general, this file is sent to an MVS SYSOUT queue. It can however be sent to an MVS dataset if so desired. This file is crucial to performing even the most minor problem debugging so it should not be deleted or specified as DD DUMMY.

USTCATLG Database

The USTCATLG file is a key sequenced direct access file that contains the primary control records from the functions of the FDR/UPSTREAM system. Compared to the other FDR/UPSTREAM Database files, the USTCATLG file contains a small number of records. The following types of records are added to the USTCATLG Database for a given request type:

- Backups: history records, backup control records, and file specification records
- Restores: history records
- Vaulting Operations: history records and vault control records

USTFILEI Database

The USTFILEI file is a key sequenced direct access file that contains a single FILEINFO record for each file processed by a backup request. This record contains information about the file backed up such as its actual name, creation date and time, location on the backup dataset, and sequence. File Information records are purged along with their associated USTCATLG Backup records when the USTMAINT utility program is run.

Duplicate File Repository

The USTFILEC, Duplicate File Repository, file contains the data records created by the Duplicate File processing functions of the FDR/UPSTREAM system. This facility allows for the one time transmission and storage for files that are identical across multiple remote systems. This “copy” of these files is then used during subsequent backup processing instead of re-transmitting the files over and over.

The Duplicate File Repository file contains only one type of control record, the Duplicate File Data Record. These records contain the actual backup data selected and transmitted by the FDR/UPSTREAM Client component. They are initially placed within this database file, either through manual or automatic processing, to allow UPSTREAM to avoid their retransmission upon subsequent discovery during the backup of different systems. These records are, optionally, later copied from this database file to the backup tape in lieu of their transmission from the UPSTREAM Client during backup processing.

Configuration File

The Configuration File is generally a Partitioned Dataset (PDS) and contains the FDR/UPSTREAM systemwide options (MAIN options) as well as the user defined System Profiles.

Backup Profile

The Backup Profile is used to describe the capabilities enabled and dataset naming standards to be used by FDR/UPSTREAM when processing product function requests. This Backup Profile is stored within the FDR/UPSTREAM MVS configuration file associated with the Started Task, not within the USS file system.

Registered Name Facility

The FDR/UPSTREAM Registered Name Facility allows for the assignment of a logical name to the FDR/UPSTREAM USS Process. This specification takes the place of the actual IP Address and TCP Port Number in function requests. This makes the request independent of the actual network address and allows these values to dynamically change such as when using DHCP or a similar scheme.

This facility is enabled by either a FDR/UPSTREAM USS configuration file setting or via a manual entry of the required information via the TSO/ISPF Interface.

Task Scheduling Facility

FDR/UPSTREAM MVS includes a scheduler program (USTSCHED) which can schedule the automatic execution of any MVS console command based on a very flexible schedule. The scheduler operates as a subtask of the FDR/UPSTREAM online task.

The schedule itself is stored as one or more members of a PDS. The name of the schedule PDS and the default schedule member name are specified in the FDR/UPSTREAM-MVS Started Task JCL. The schedule members are defined and maintained using the TSO/ISPF Interface.

TSO/ISPF User Interface

The TSO/ISPF User Interface is used to provide USTBATCH JCL and parameter generation, status monitoring, configuration management, operator control, and auditing services. These services are provided via the USTALLOC CLIST command.

USTBATCH Interface

The USTBATCH Interface is provided by the USTBATCH program and is available via either JCL or via direct execution from TSO/ISPF. The most common method of use involves using the TSO/ISPF Interface to construct the FDR/UPSTREAM request (i.e. Backup, Restore, etc.), issuing the GENERATE command to create an OS/390 BATCH jobstream, and then saving or submitting this request for OS/390 BATCH processing.

USTPARM Input Parameters

These parameters are either constructed by the TSO/ISPF interface or created by the user from the list of applicable parameters discussed later in this manual. Each parameters identification, range of values, default settings, and description are specified in the “USTBATCH Parameter Reference” section located on page 190. **Until the user develops**

a familiarity for the parameters, it is a good idea to use the TSO/ISPF Interface to do the creation.

USTLOG Logging Dataset

The USTLOG Logging Dataset is created by the execution of the USTBATCH Interface program. This file, which is normally directed to SYSOUT, contains an activity log of the execution of the request specified by the USTPARM Input Parameters. This log file is distinct from the USTLOG Logging File, which has the same name, created and maintained by the FDR/UPSTREAM Started Task.

1.2.5 FDR/UPSTREAM Client Based Components

UPSTREAM Director

Written as a Java application, the UPSTREAM Director provides a user friendly “Windows” like graphical user interface that can run on any platform that provides a Java Virtual Machine and TCP/IP support – covering almost every substantial operating system in use today. The FDR/UPSTREAM Director is capable of: specifying backups and restores, checking the status of all Client FDR/UPSTREAM systems, managing your host stored backups, Defining, modifying and deleting host stored backup profiles and more.

End User Restore Interface

The End-User Restore Interface of FDR/UPSTREAM is separate program, written as a Java application, which provides a Windows Explorer-like interface for the selection and monitoring of restores for administrators, help-desk operators and most other end users. This facility greatly reduces training and administrative configuration tasks when you wish to allow for user specified restores.

Client User Interface

The Client User Interface of FDR/UPSTREAM is a separate program that runs on a supported remote system. This interface is intended primarily to control and administer FDR/UPSTREAM functions on supported Open Systems platforms not the FDR/UPSTREAM USS system. It can however be used to perform some FDR/UPSTREAM USS administrative functions. The TSO/ISPF is the recommended user interface for controlling the FDR/UPSTREAM USS product.

1.3 System Environmental Requirements

The FDR/UPSTREAM USS product uses operating system support components that exist only in IBM OS/390 V2.6 and later versions of the operating system. There is no version of FDR/UPSTREAM USS that operates on versions prior to this support level. Client platform support for environments other than USS are supported on levels prior to OS/390 V2.6.

Communications between the various components of the FDR/UPSTREAM system are performed via the standard OS/390 TCP/IP C language Sockets interface for the USS components and via the High Performance Native Sockets (HPNS) interface for the MVS side components. The installation and proper configuration of these prerequisite facilities is required prior to the first use of the FDR/UPSTREAM system.

1.4 System Storage Requirements

There are two categories of DASD space requirements that need to be considered when planning for system storage.

First is the actual product distribution files. After the installation has been completed these files reside within the USS HFS file system. These product distribution files will occupy approximately 3 megabytes of DASD storage. Please see the **System Distribution Files** section below for a brief description of each file contained within the distribution package.

The second category is the operational storage requirements of the FDR/UPSTREAM USS product. The amount of DASD used by the system when operating is dependent upon the number and length of the file names specified to be processed by a particular FDR/UPSTREAM function request. The following formula will allow you to roughly calculate the necessary prerequisite DASD storage requirements for a backup request. A backup request is by far the largest consumer of DASD resources by any of the FDR/UPSTREAM USS functions.

Formula:

$$((O + M) * N) + H$$

Where:

O = Overhead bytes/file - 68 for UNIX systems

M = setting for environment variable MAXFILENAMESIZE - UNIX default = 230

N = Number of files to be backed up or restored

H = Overhead bytes per backup/restore function - 857 bytes

So for example: a user wishes to perform a complete backup of their USS file system and it contains 100,000 files. Assuming the defaults for MAXFILENAMESIZE, we get the following approximation for the DASD space requirements for this backup request:

((68 + 230) * 100,000) + 857 = 29,800,000 bytes or approximately 30 megabytes

1.5 System Files

1.5.1 System Distribution Files

The following files can be found on the distribution media:

File #	Tape File Name	USS File System Name	Description and Usage
1	**UPSTREAM.INSTALL**	N/A	OS/390 Executable program which is used to unload the files from tape to disk.
2	**LOAD**	N/A	IEBCOPY-unloaded PDS containing the FDR/UPSTREAM OS/390 load modules.
3	**[empty file]**	N/A	This file is no longer used.
4	**ICL**	N/A	IEBCOPY-unloaded PDS containing the FDR/UPSTREAM-MVS Installation Control Library (ICL). This is a library of JCL, control statements, and other useful information relating to the installation of UPSTREAM/USS.
5	**CLIST**	N/A	IEBUPDTE-format file containing OS/390 TSO/E CLISTs for the UPSTREAM/USS ISPF interface.
6	**PANELS**	N/A	IEBCOPY-unloaded PDS containing ISPF panels for the UPSTREAM/USS ISPF interface.
7	**MESSAGES**	N/A	IEBCOPY-unloaded PDS containing ISPF messages for the UPSTREAM/USS ISPF interface.
8	**SKELETON**	N/A	IEBCOPY-unloaded PDS containing ISPF skeletons for the UPSTREAM/USS ISPF interface.
9	**TABLES**	N/A	IEBCOPY-unloaded PDS containing ISPF tables for the FDR/UPSTREAM-MVS ISPF application.
10	**USS.INSTALL.JCL**	n/a	JCL to Download Files 2 - 10
11	**USS.RMTPARM.DAT**	rmtparm.dat	Sample FDR/UPSTREAM USS remote initiation parameter file.
12	**USS.SERIAL.DAT**	serial.dat	A required file that is used in modifying the system personalization options.
13	**USS.UPSTREAM.CFG**	upstream.cfg	System configuration file. Read at startup to determine the configuration for this run of FDR/UPSTREAM.
14	**USS.UPSTREAM.MSG**	upstream.msg	System message file. This file contains the system messages that are logged and displayed.
15	**USS.US.SER**	us.ser	System Personalization file. Required but unused by FDR/UPSTREAM for USS.
16	**USS.USCMD**	uscmd	FDR/UPSTREAM command line main program. All functions are required to be unattended, either through PC parameter file control or host control. The screen display is the same information as written to the log or report.
17	**USS.USCMD260**	uscmd260	Executable for use with UNIX System Services version 2.6 or higher
18	**USS.USDAEMON**	usdaemon	FDR/UPSTREAM daemon.
19	**USS.USLOGCLR**	uslogclr	FDR/UPSTREAM log and report file maintenance program. The FDR/UPSTREAM logging and reporting output files are appended to continuously, so this program has been provided to remove entries older than a specified number of days.
20	**USS.NOTES.PLUGIN**	plugin260notesr5	FDR/UPSTREAM Lotus Notes R5 Plugin interface program.

Figure 2 - FDR/UPSTREAM Distributed Files

1.5.2 System Operational Files

The following files are created by the FDR/UPSTREAM USS product based upon selected request types, processing options, and USS platform requirements.

File Name	Description and Usage
upstream.log	Default System logging File. This file contains the system messages that are produced while the system is running. This file can be managed via the uslogclr utility program.
us.rpt	Default System Reporting File. This file contains the reporting output that is produced while the system is running. The output to this file is controlled by the reporting options. This file can be managed by the uslogclr utility program.
us.bkp	Backup File. This file is dynamically created and subsequently deleted when ever a backup request is received. This file contains the file names and some associated data for all the files selected for a particular backup request.
*.rpm	Remote Parameter File. Files with this extension are dynamically created and subsequently deleted when ever a remotely initiated request is received.
*.inc	Incremental Tracking File. This file records the last backup date for a file. This facilitates incremental backups due to the lack of an “Archive Bit” type facility on the UNIX platforms. This file

Figure 3 - FDR/UPSTREAM Operational Files

1.6 System Restrictions

The following items outline the main differences between FDR/UPSTREAM USS and FDR/UPSTREAM for other operating systems as well as implementation restrictions of the product:

- OS/390 version 2.6 or greater is required.
- Only TCP/IP communications are supported between the FDR/UPSTREAM USS process and the FDR/UPSTREAM for MVS Started Task. SNA communications are not supported.
- FDR/UPSTREAM USS is intended for backup, restore, and management of application and user files resident within the USS HFS and zFS file systems. FDR/UPSTREAM USS is not a replacement for your operating system backup utility such as Innovation’s FDR. Utilizing FDR to backup your USS File System requires V5.3L40 as a minimum if your USS File System exists on non-SMS controlled volumes.
- FDR/UPSTREAM USS does not backup certain special file types (see below for the actual list of restrictions). It requires that the OS/390 operating system with operational host communications be present before any restore request can be processed. We recommend that you formulate a recovery plan to utilize your existing backup mechanism to create backups of the critical operating system related components of the USS file system required for minimal system recovery. This would mean at a minimum the recovery of the OS/390 HFS file allocations as well as TCP/IP and USS system components that are contained within the HFS file system.
- When running multiple, simultaneously active copies of FDR/UPSTREAM USS on a single system, each copy must be configured to have a unique inbound port number (INPORT parameter).
- File and directory names must use proper UNIX naming conventions.
- Sparse files are not supported. The inclusion of a sparse file in the backup will cause UPSTREAM to backup the file as if it were a normal file. This might cause the backup to be extremely large for the given amount of data that actually exists in the sparse file.

- Incremental backups are performed by checking the file's last modification date not the setting of the files archive bit. The archive bit concept does not exist for the UNIX file system.
- There is no user specifiable non-file data. Owner IDs, access dates, and all additional non-file data attributes are stored automatically by the FDR/UPSTREAM system.
- The backup or restore of UNIX Access Control Lists (ACLs) are not supported.
- If there are errors in starting a remotely requested job, these errors are stored in the file **usjob.out** in the subdirectory indicated by the WORKPATH environment variable.
- Be aware that attempting to back up an auto-mounted file system which is not mounted at the time the backup begins, will not cause the auto-mount to occur and the data will not be backed up. See the HOLDUSERDIRS parameter to determine how auto-mounting can be forced to occur for user file systems.

2

2 Installation and Customization

The installation and customization of FDR/UPSTREAM for Unix Systems Services consists of the following steps:

Step	Page #	Description
1	**24**	Install the OS/390 components of the FDR/UPSTREAM system.
2	**24**	Download the FDR/UPSTREAM USS Product Distribution Files from the supplied mainframe tape.
3	**25**	Customize the FDR/UPSTREAM USS upstream.cfg file (Optional)
4	**28**	Install the FDR/UPSTREAM JAVA End User Restore User Interface on appropriate administrative client systems.(Optional)
5	Error! Bookmark not defined.	Install the FDR/UPSTREAM Workstation User Interface on appropriate administrative client systems. (Optional)
6	**30**	Create the FDR/UPSTREAM USS Process script file
7	**32**	Start the FDR/UPSTREAM USS Process
8	**39**	Create a Backup Profile
9	**47**	Create a VAULT Profile (Optional)
10	**34**	Refresh the Active FDR/UPSTREAM MVS Started Task Configuration
11	**66**	Construct and Submit a Backup Request

Figure 4 – UPSTREAM/USS Installation and Customization Checklist

2.1 Step # 1 - Install the OS/390 MVS Components

The installation of these components is described in the FDR/UPSTREAM MVS sections of this manual. Go to these sections and install, configure, and start the FDR/UPSTREAM MVS Started Task.

2.2 Step # 2 - Download the FDR/UPSTREAM USS Product Distribution Files

The basic product distribution files will occupy approximately 3 megabytes of DASD storage within the USS file system. Please see the **System Distribution Files** section above for a brief description of each file contained within the distribution package.

The download process consists of the following steps:

- Download the sample installation JCL file from File #1 of the supplied product installation tape.

- Edit the downloaded JCL and submit it to download the remaining USS components located on files 2 through 10 of the installation tape.

The following sample JCL should be modified to meet installation specifications to perform the download from the mainframe tape into a PDS member or flat file on your MVS system. This JCL is also supplied in the UPSTREAM MVS Installation Control Library (ICL) supplied on the installation tape in member USSLOAD. The ICL dataset was created in Step # 1 above when FDR/UPSTREAM MVS was installed.

```
//USSLOAD  JOB  (acct,info),'LOAD USS TAPE',CLASS=A,
//          MSGCLASS=X,MSGLEVEL=(1,1),NOTIFY=xxxxxx
//*
//*     Download the JCL to Download Files 2 thru 10
//*
//STEP1    EXEC PGM=IEBGENER
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   DISP=SHR,
//       DSN=xxxxxx.UPSTREAM.ICL(USSTLOAD)
//SYSUT1   DD   DISP=SHR,LABEL=(1,SL,EXPDT=98000),
//       UNIT=(CART,,DEFER),VOL=(,RETAIN,,,SER=USSTAP),
//       DSN=USS.INSTALL.JCL
//SYSIN    DD   DUMMY
```

Figure 5 - USS Installation JCL Download Sample

Once the downloaded JCL has been modified, submit it and it will download the sample installation JCL from file # 1 of the installation tape.

Edit the resulting member, specified as USSTLOAD in the example JCL above, and replace the following:

- “xxxxxx” character strings with the name of a valid high level qualifier for the MVS DASD work datasets that will be created.
- "yyyyyy" character strings with the name of a valid MVS DASD UNIT Name for the datasets that will be created.
- "zzzzzz" character strings with the name of a valid MVS TAPE UNIT Name containing the datasets to be downloaded.

You should also review and possibly modify the “/usr/lpp/fdrupstream” USS directory names specified in the last step of the JCL since this is where the FDR/UPSTREAM USS product files will be installed within the USS file system. This subdirectory must exist on the USS file system prior to running the installation JOB.

Once this JCL has been modified, submit it and it will download the USS components. Upon successful completion of this JOB, proceed to the next step of the installation process.

2.3 Step # 3 - Customize the Product Configuration File

For most users there are no product configuration file alterations necessary. The product comes supplied with a default configuration file, file “upstream.cfg”, which should operate reliably in most host environments.

However, if for example, FDR/UPSTREAM MVS is running on a different CPU than this copy of FDR/UPSTREAM USS you should modify the TCPADDRESS parameter to point to the IP address of the system you wish to connect to.

If you desire to utilize the UPSTREAM Director which depends on the Registered Name facility, then you should edit the configuration file and modify:

- USETARGETNAME Y

- TARGETNAME system name

You can specify any value for “system name” that helps you identify this system (typically this is your system’s host name).

You can always edit the product configuration file to modify or add any of the configuration parameters. The standard method to edit this file is to use the TSO/ISPF OEDIT command and specify the full pathname of the directory into which the FDR/UPSTREAM USS software was downloaded and a filename of “upstream.cfg”.

A table of product configuration file parameters that are applicable to FDR/UPSTREAM USS is located in the “USS Process Configuration Parameter Reference” section on page 195. A complete list of all parameters, for all supported platforms, is located within the FDR/UPSTREAM Client manual.

2.4 Step #4 – Install the UPSTREAM Director User Interface (Optional)

The UPSTREAM Director creates a new third tier which inter-operates with the existing FDR/UPSTREAM Services and FDR/UPSTREAM Repository components providing system-wide distributed control and operations monitoring.

Written as a Java application, it provides a user friendly “Windows” like graphical user interface that can run on any platform that provides a Java Virtual Machine and TCP/IP support – covering almost every substantial operating system in use today.

The FDR/UPSTREAM Director is capable of:

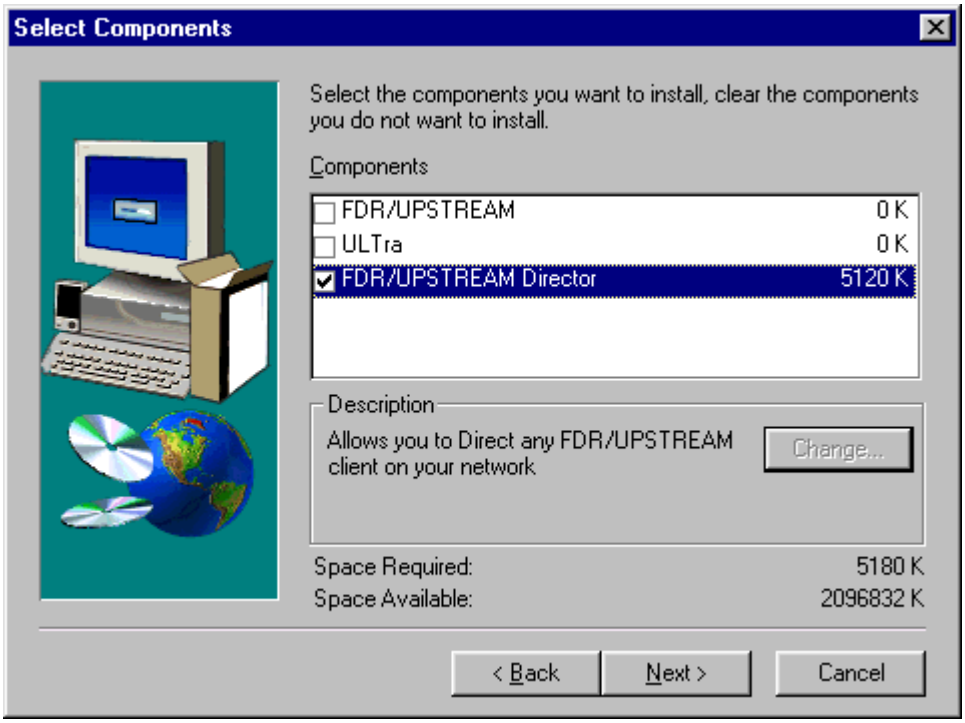
- Specifying backups and restores. Virtually all options available for backups and restores can be specified graphically in the Director.
- Checking the status of all Client FDR/UPSTREAM systems. This includes determining if they’re active, checking logs, performance tests and more.
- Manage your host stored backups. This includes viewing details on backups and deleting complete backups.
- Define, modify and delete host stored backup profiles.
- UPSTREAM/SOS Local Backup administration. Using the Director for FDR/UPSTREAM/SOS Local Backup administration is described in the FDR/UPSTREAM/SOS chapter of the UPSTREAM Client User’s Guide.

The FDR/UPSTREAM Director requires a Java Runtime Engine (JRE) be installed on your machine and that it be compliant with version 1.3.0 of the Java specifications. The Sun version of the JRE for Windows is included on the FDR/UPSTREAM CD and you will be prompted for its installation if necessary when you install the FDR/UPSTREAM Director.

If you wish to run the FDR/UPSTREAM Director on a system other than Windows, contact FDR/UPSTREAM; the following instructions assume a Windows installation. If you are not interested in a Windows client, proceed to section 2.6 on page 30.

On a Windows system, insert the UPSTREAM CD and run the SETUP program. You will see a banner and then be asked for your Name and Company. FDR/UPSTREAM does not use this information, but it is required. Press the **Next>** button to continue.

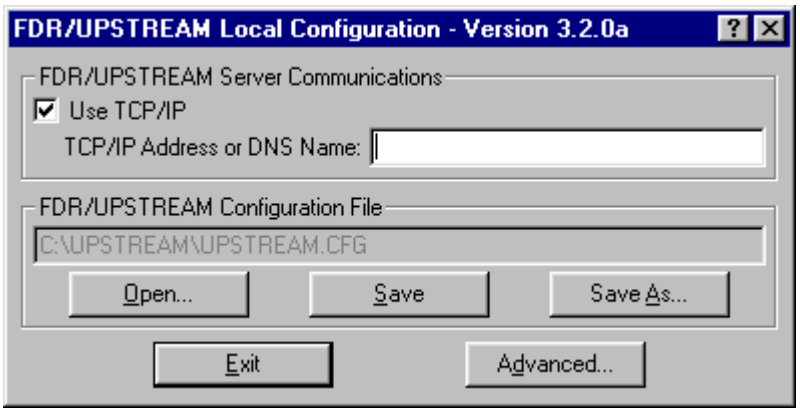
You will then be asked to Choose Destination Location. If you do not wish to use the default directory of C:\UPSTREAM, press the Browse button to specify a different directory. Installing a new version of FDR/UPSTREAM over an existing version is safe as configuration, parameter and other important files are preserved. Press the **Next>** button when you are satisfied with the directory for FDR/UPSTREAM. This will display the Select Components dialog.



Check the FDR/UPSTREAM Director checkbox and press the Next> button. UPSTREAM will attempt to detect a Java installation. FDR/UPSTREAM is able to detect a v1.3 or greater Java Run-time Environment (JRE); if it finds one it will use it. If you have a prior version of the JRE and wish to preserve it, press No. Most users will press **Yes** to be prompted to install the JRE 1.3 from the FDR/UPSTREAM CD. After several confirmations, the JRE will install in the background. Wait until it has completed before continuing.

Here you can select the Program Group that FDR/UPSTREAM will be installed into. The default is FDR_UPSTREAM. Press the **Next>** button to install the selected software. When the software has been installed, press **Finish** to end the installation process. You do not need to reboot your computer.

You will be asked if you wish to run the UPSTREAM Configurator. Press the Yes button, as an UPSTREAM configuration is required.



You must enter the TCP/IP address or DNS name of the MVS mainframe. Press the Save button to Save your configuration and the Exit button to exit the configurator.

You can now start the UPSTREAM Director on this machine. See the UPSTREAM Client User's Guide for a description of its use.

2.5 Step # 4 - Install the End User Restore (JAVA) Interface (Optional)

The End-User Restore Interface of FDR/UPSTREAM is separate program, written as a Java application, which provides a Windows Explorer-like interface for the selection and monitoring of restores for administrators, help-desk operators and most other end users. This facility greatly reduces training and administrative configuration tasks when you wish to allow for user specified restores.

End-User restores is the first in a whole new line of Java-based facilities. Taking advantage of the cross-platform nature of Java, this facility will run on many of the current UPSTREAM platforms including all workstation based UNIX systems (with X-Server support), Windows 95/98, Windows NT/2000 and Novell file server Java consoles or the Novell X-Client. **This feature does not run on OS/390 UNIX, it operates on a network attached workstation.** It directs inter-process communications between the UPSTREAM/USS process and the UPSTREAM/MVS server. Thus it can be used to specify restores locally, or on another machine.

As well as specifying restores, this facility also allows you to start the restore, monitor its progress with a number of informative display controls including graphs and progress bars, monitor UPSTREAM messages, and cancel the restore.

This program is a Java application, which means that it requires the Java run-time environment be installed on your workstation system to operate it (version 1.1.6 or higher). The Java runtime is included as an option in the FDR/UPSTREAM installation for 32-bit Windows platforms. It does not use or require web browser facilities.

Installation

During the FDR/UPSTREAM for Windows installation process there is an option to install the End-User Restore. This feature is not selected by default.

If the setup program does not find a Java Runtime Environment (JRE) version 1.3 installed, it will note that it is required for end-user restores and ask you if you have a prior version installed. If you do not, press the No button and you will be asked if you wish the Sun JRE v1.3 installed now. Pressing the Yes button will install the JRE.

If you are running the single file version of the Setup program, which you obtained from either the Innovation FTP site (FTP.INNOVATIONDP.FDR.COM) or via email from technical support, you will need to cancel the restore, retrieve the JRE single file install (jre13i-win32.exe) from the Sun or Innovation FTP site, install it and restart the UPSTREAM Setup program. If you have a 1.1.6 version or higher installed and you do not wish to add the 1.3 JRE, press the Yes button. The Setup program will warn you that you must obtain a number of jar files from technical support and continue the restore. Proceed to the Configuration section below.

For UNIX you must have a Java Runtime Environment (v1.1.6 or higher) installed. These are available from your operating system vendor.

To install the End-User Restore facility for UNIX you must:

- su or login as root.
- Copy from the **/upstream/unixjava** directory to your UPSTREAM directory the files: **usjinst** and **usjrest.ta**r.
- Change the mode on the installation script **(usjins**t) to make it executable and execute it with the command line option of **install**:

```
chmod 755 usjinst
./usjinst install
```

The installation script will untar the files into the UPSTREAM directory and then it will build the **usjrest** script. To do this it will attempt to find the Java runtime automatically. However, if it can not, you will need to know the directory where it is installed. You should not include the /bin part of the directory, as that is assumed (for example, enter /usr/java rather than /usr/java/bin). The directory you specify can not be a symbolic link but must actually be the directory where Java is installed. When the script completes, proceed to the Configuration section below.

You can always rerun **usjinst** (with no command line parameter) if it asks for information that you don't have at this time and wish to rerun the installation without reextracting the files.

Configuration

Configuration for end-user restores is done primarily within the UPSTREAM configurator. When you enter the configurator, you must enter the TCP/IP address or DNS name of the MVS mainframe:

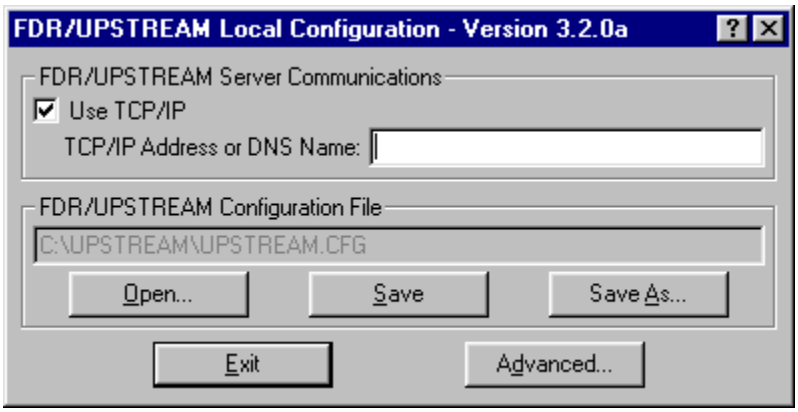


Figure 6 - End Usr Restore (JAVA) Configuration

Press the Advanced button and press the End-User Restore tab.

- **Start a FDR/UPSTREAM Local On This Machine:** If you select this radio button, UPSTREAM Java program will start UPSTREAM when necessary on your local machine. This is the default.
- **Connect to the Following FDR/UPSTREAM Local TCP/IP Addresses:** Select this radio button if you wish to connect to a running UPSTREAM. This is often used when you wish to connect to the UNIX daemon or UPSTREAM running on a Novell server. If you select this radio button you must enter one or more IP addresses of machines where UPSTREAM is running in the edit field below and press the Add button for each entry. The entries get added to the list below the edit field. You can delete the entries from the list by highlighting the address and pressing the Delete button.

The UPSTREAM advanced configuration option *Status Port* is used by the Java program to communicate with UPSTREAM. If you are running multiple copies of UPSTREAM, each copy should have its own Status Port. Status Ports should be separated by 2 numbers; UPSTREAM uses Status Port and the subsequent port number. When an UPSTREAM Java program starts, it initially searches for a CONFIGFILE=<configfile> on the command line. After that, it searches for the file **useui.cfg** and if that is not found, then **upstream.cfg**. For most environments you can save your configuration parameters to **upstream.cfg**.

End-User Restores require a template UPSTREAM parameter file. By default it will look for **useui.da**t,if it is not found it will use **upstream.da**t. The template parameter file allows you to

specify a variety of UPSTREAM parameters which can not be specified in the end-user restore facility.

To create a template end-user restore parameter file, use the standard version of UPSTREAM (the **us** executable) and set up a restore, specifying the specific UPSTREAM parameters that you wish to use, then save your parameters to **useui.dat**.

2.6 Step # 6 - Define the FDR/UPSTREAM USS Process Userid

The FDR/UPSTREAM USS Process runs under the authority of an OS/390 security system Userid. This Userid is usually defined expressly for use by only this process. This Userid will require that an OS/390 security system OMVS segment be defined for it and that a proper level of access authority be assigned to it for FDR/UPSTREAM USS processing to function. It is suggested that the Userid be given UNIX super-user authority to avoid lengthy administrative definitions to allow access to all the files to be accessed by normal FDR/UPSTREAM processing. The following RACF commands will assist you in defining such a Userid. If you are using another security system such as TOPSECRET or ACF2, consult the appropriate documentation from the vendor.

List Current OMVS Segment Information

LISTUSER userid NORACF OMVS

Add/Alter a Super-User OMVS Segment to An Existing Userid

ALTUSER userid OMVS(UID(0))

2.7 Step # 7 - Define the FDR/UPSTREAM USS Process

The FDR/UPSTREAM USS Process is generally started via a UNIX script file. This file is required to issue the appropiate UNIX system commands to establish the environment in which the USS Process will execute. The sample “usx” script file shown below should be modified to contain any preliminary commands that would properly establish the environment for the USS process at your site. It should then issue the command to start the USS process.

The most straightforward method of creating this script file is to use the TSO/ISPF OEDIT command. Create the script below in the directory that you installed FDR/UPSTREAM USS into. This directory by default is “/usr/lpp/fdrupstream”.

```
cd /usr/lpp/fdrupstream
/usr/lpp/fdrupstream/uscmd
```

Figure 7 - Sample FDR/UPSTREAM USS Script File

Once your startup script has been constructed, you will need to utilize one of the methods described in the Operation chapter to get the USS process started.

3

3 Operation

3.1 Starting the FDR/UPSTREAM USS Process

The FDR/UPSTREAM USS process can be started via one the following methods:

- OS/390 BATCH JOB or Started Task
- USS TELNET Command Line invocation
- /etc/rc USS system startup file

There is little difference in the actual command entered, just the methodology used to get a OS/390 USS process started on the system. Please refer to the **OS/390 UNIX Systems Services: Users Guide (SC28-1891)** for additional information on the various ways of starting a USS process.

3.2 Starting the USS Process via BATCH

The preferred way to start the FDR/UPSTREAM USS process is to have it run as an MVS BATCH JOB or Started Task and therefore is under the direct control of the OS/390 system operator. This will allow the operator to control the FDR/UPSTREAM USS process with commands that they are already familiar with.

The sample JCL below assumes that you will submit the USS process as an MVS BATCH JOB and that you have constructed a “usx” script file that contains any preliminary commands that would properly establish the environment for the USS process and then issues the command to start the USS process. The instructions for creating this script are outlined in “Step # 6 - Define the FDR/UPSTREAM USS Process Userid

The FDR/UPSTREAM USS Process runs under the authority of an OS/390 security system Userid. This Userid is usually defined expressly for use by only this process. This Userid will require that an OS/390 security system OMVS segment be defined for it and that a proper level of access authority be assigned to it for FDR/UPSTREAM USS processing to function. It is suggested that the Userid be given UNIX super-user authority to avoid lengthy administrative definitions to allow access to all the files to be accessed by normal FDR/UPSTREAM processing. The following RACF commands will assist you in defining such a Userid. If you are using another security system such as TOPSECRET or ACF2, consult the appropriate documentation from the vendor.

List Current OMVS Segment Information

LISTUSER userid NORACF OMVS

Add/Alter a Super-User OMVS Segment to An Existing Userid

ALTUSER userid OMVS(UID(0))

Step # 7 - Define the FDR/UPSTREAM USS Process" in section 2.6 on page 30 of this manual.

Once your startup script has been constructed, you will need to create either an MVS BATCH JCL JOB stream or a Started Task Procedure to start the FDR/UPSTREAM script created above. The JCL in Figure 8 below, is an example of an MVS BATCH JOB to start the "usx" script.

```
//jobname JOB  (Accounting,Information),'UPSTREAM PROCESS',CLASS=M,
//          MSGCLASS=X,MSGLEVEL=(1,1)
//*
//*     RUN UPSTREAM/USS AS AN MVS BATCH JOB VIA JCL
//*
//BPXBATCH  EXEC  PGM=BPXBATCH,
//    PARM='SH /usr/lpp/fdrupstream/usx'
//STDOUT   DD  PATH='/usr/lpp/fdrupstream/stdout',
//             PATHOPTS=(OWRONLY,OCREAT,OTRUNC),PATHMODE=SIRWXU
//STDERR   DD  PATH='/usr/lpp/fdrupstream/stderr',
//             PATHOPTS=(OWRONLY,OCREAT,OTRUNC),PATHMODE=SIRWXU
//
```

Figure 8 - Sample OS/390 USS Process BATCH JOB JCL

Once you have created the Batch JOB or Started Task, submit it to initiate the FDR/UPSTREAM USS process.

If you have chosen this method of initiating the FDR/UPSTREAM USS process, proceed to the "Constructing Profiles" section which begins on page 36.

3.3 Starting the USS Process via TELNET

If you wish to start the FDR/UPSTREAM USS process from a Telnet command line, you can enter the startup commands and parameters. This example is intended as a sample invocation and you may need to modify it for your environment. The sample below assumes that you have installed FDR/UPSTREAM in the /usr/lpp/fdrupstream directory.

/usr/lpp/fdrupstream/uscmd

The following is a sample of the output that should appear in the upstream.log file as the process starts:

```
Wed Mar 22 14:55:37 2000 User:...p: ALLUSERS, PID: 1056964645
   Msg #PC1275I Entering UPSTREAM v3.2.0 (USS)
Wed Mar 22 14:55:37 2000 User:...p: ALLUSERS, PID: 1056964645
   Msg #PC3131N Waiting for remote initiate
        UPSTREAM is waiting for the remote system to start
        a function.  Use CTRL-C or the kill command if
        running in the background to terminate.
```

If you have chosen this method of initiating the FDR/UPSTREAM USS process, proceed to the "Constructing Profiles" section which begins on page 36.

3.4 Starting the USS Process via /etc/rc

If you wish to have the FDR/UPSTREAM USS process automatically started when the OS/390 system comes up, you can enter the startup command and parameters in the USS file system file /etc/rc. The following is a sample invocation command to start the FDR/UPSTREAM USS daemon when the OS/390 system comes up. It is suggested that you add this line as the next to last line of /etc/rc. The sample below assumes that you have installed FDR/UPSTREAM in the /usr/lpp/fdrupstream directory. This line should be entered as one line in the /etc/rc file.

/usr/lpp/fdrupstream/uscmd

If you have chosen this method of initiating the FDR/UPSTREAM USS process, you will need to IPL the MVS system to get the FDR/UPSTREAM process to begin executing. Once you have the process executing, proceed to the "Constructing Profiles" section which begins on page 36.

3.5 Stopping the FDR/UPSTREAM USS Process

The methods to stop the FDR/UPSTREAM USS process depend on how it was started and what methods of command invocation you have access to. The following methods are available:

USS Process as an MVS Batch JOB/STC

Issue an OS/390 Operator CANCEL command for the JOB/STC that started the FDR/UPSTREAM USS Process.

USS Process Started from a TELNET Command Line

Enter the CONTROL-C key sequence into the TELNET command window that you started FDR/UPSTREAM USS from and wait for the following message to appear:

CEE5206S The signal SIGINT was received.

The TELNET command prompt should appear shortly thereafter. The return of the command prompt signifies that the FDR/UPSTREAM USS Process has ended.

USS Process Started from /etc/rc

Identify the USS Process via the MVS operator DISPLAY OMVS,A=ALL command and issue an MVS Operator "CANCEL address_space_name" command for the FDR/UPSTREAM USS process in question.

3.6 Activating a New or Modified Profile

Once you have created or altered a Profile, the FDR/UPSTREAM Started Task must be notified that you have changed the contents of the configuration dataset so that it may re-read the appropriate configuration dataset member. This can be done either by stopping and restarting the Started Task or by issuing the REFRESH Started Task Operator Console command. The simplest method of issuing this is via the following MVS MODIFY command issued from an MVS Operator Console or its equivalent:

F UPSTREAM,REFRESH

This command and its options are more fully documented in section 16 beginning on page 203.

4

4 Constructing Profiles

An FDR/UPSTREAM Profile is an identifier of a set of customized features and supporting configuration data that provide for the storage and retrieval of user data or in support of a system utility function. The most direct method of creating a profile is to utilize the FDR/UPSTREAM TSO/ISPF Interface. You can enter this interface via the supplied USTALLOC CLIST or a menu option that your systems programmer has supplied via one of the ISPF menus.

Profiles consist of four major types: Backup, File Transfer, PC File Migration, and Reserved Profiles. Backup Profiles are profiles that are created expressly for the purpose of being the target of backup and restore operations. Each USS File System will, in general, have a single backup profile that you will specify as the target for its backups. File Transfer Profiles are used to perform file transfer operations only. They can not be the target of backup or restore operations. A PC File Migration Profile is used as the target of a special file migration operation and can also not be used for backups. A restore operation is the method to get migrated workstation files from these profiles. Reserved Profiles are a set of special purpose profiles that have specific names. These profiles are used by the FDR/UPSTREAM system for special system functions and to control the processing of the system utility programs.

4.1 Reserved Profiles

There are a group of “reserved” profile names, which are used by FDR/UPSTREAM for utility program processing. Except for the GLOBAL Profile, they cannot be used as an actual profile name for performing backups or other functions other than the special purpose that they are intended for. Some of these reserved profiles are automatically generated with default values when the FDR/UPSTREAM MVS Configuration Dataset is first created. These defaults should be reviewed and possibly modified to meet your installation standards for dataset naming, unit names to be used, etc. The following sections outline the types of reserved profiles and their usage.

GLOBAL Profile

The configuration must contain a profile with a name of GLOBAL. The GLOBAL profile specifies options to be used for any profile name which is NOT defined in the configuration and is specified in a function request by a user. This allows requests to use any profile name, except where limited by security, even if it is not in the configuration.

USTCATLG Reorganization Profile

The reserved profile **USTCATLG** must be defined if you are going to use the USTREORG utility program to dynamically reorganize the FDR/UPSTREAM Catalog dataset. The USTCATLG profile name corresponds with the DDname that is present in the FDR/UPSTREAM MVS Started Task JCL for this component of the FDR/UPSTREAM system database. The profile must be enabled for either sequential disk or tape backups. The specified parameters will be used to

dynamically allocate an OS/390 sequential data set to hold a copy of the contents of the USTCATLG dataset being reorganized. This backup copy of the USTCATLG data set will be retained even if the reorganization is successful so it may be used for future recovery processing, should that become necessary.

The specification of the reorganization backup datasets as GDGs is strongly recommended so that older backup copies of the USTCATLG file will automatically be uncataloged and scratched as new reorganizations are performed. The GDG base should be defined with 2 or more generations to allow for the retention of several copies of the backup for safety.

If either the DASDGDG or TAPEGDG option is not specified, the DASDPREF or TAPEPREF values can be up to 26 characters long. USTREORG will add the date and time in the format ".Dmmyydd.Thhmmss" at the end of the generated dataset name to form a unique name. Also if you do not use GDGs, your normal system retention policies for these datasets will come into effect.

USTFILEI Reorganization Profile

The reserved profile **USTFILEI** must be defined if you are going to use the USTREORG utility program to dynamically reorganize the FDR/UPSTREAM FILEINFO dataset. The USTFILEI profile name corresponds with the DDname that is present in the FDR/UPSTREAM MVS Started Task JCL for this component of the FDR/UPSTREAM system database. This profile must be enabled for either disk or tape backups. The specified parameters will be used to dynamically allocate an OS/390 sequential data set to hold a copy of the contents of the USTFILEI file being reorganized. This backup copy of the USTFILEI data set will be retained even if the reorganization is successful so it may be used for future database recovery processing, should that become necessary.

The specification of the reorganization backup datasets as GDGs is strongly recommended so that older backup copies of the USTCATLG file will automatically be uncataloged and scratched as new reorganizations are performed. The GDG base should be defined with 2 or more generations to allow for the retention of several copies of the backup for safety.

If the either the DASDGDG or TAPEGDG option is not specified, the DASDPREF or TAPEPREF values can be up to 26 characters long. USTREORG will add the date and time in the format ".Dmmyydd.Thhmmss" at the end of the generated dataset name to form a unique name. Also if you do not use GDGs, your normal system retention policies for these datasets will come into effect.

USTFILEC Reorganization Profile

The reserved profile **USTFILEC** must be defined if you are going to use the USTREORG utility program to dynamically reorganize the FDR/UPSTREAM FILEDATA dataset. The USTFILEC profile name corresponds with the DDname that is present in the FDR/UPSTREAM MVS Started Task JCL for this component of the FDR/UPSTREAM system database. The profile must be enabled for either disk or tape backups. The specified parameters will be used to dynamically allocate an OS/390 sequential data set to hold a copy of the contents of the USTFILEC dataset being reorganized. This backup copy of the USTFILEC data set will be retained even if the reorganization is successful so it may be used for future database recovery processing, should that become necessary.

The specification of the reorganization backup datasets as GDGs is strongly recommended so that older backup copies of the USTCATLG file will automatically be uncataloged and scratched as new reorganizations are performed. The GDG base should be defined with 2 or more generations to allow for the retention of several copies of the backup for safety.

If the either the DASDGDG or TAPEGDG option is not specified, the DASDPREF or TAPEPREF values can be up to 26 characters long. USTREORG will add the date and time in

the format ".Dmmyydd.Thhmmss" at the end of the generated dataset name to form a unique name. Also if you do not use GDGs, your normal system retention policies for these datasets will come into effect.

USTARCH Profile

The reserved profile **USTARCH** is not utilized by FDR/UPSTREAM USS and should be left unaltered.

USTMIGxx Migration Profiles

The group of reserved profiles that begin with the prefix of "**USTMIG"** are defined if you wish to execute the USTMIGRT utility to migrate previously taken sequential disk backup data sets to tape. You must have at least one USTMIGxx profile if you plan to use the USTMIGRT utility program. Additional USTMIGxx profiles can be used to segregate migration processing for various backup profiles to provide more control over migration and allow multiple migration tasks to run concurrently. Assignment of a backup profile to a migration profile can be done with the GROUPID operand in the configuration entry of the backup profile in question or can be indicated in the PROFILE= operand of the actual migration operator command. Each USTMIGxx profile must be enabled for sequential tape backups. The tape backup parameters will be used to dynamically allocate an output tape to which the disk backups will be migrated. The TAPEPREF value will be used to create an empty data set as the first file on the tape, just as if LABEL=(1,SL) had been specified. Additional files will be added to the tape to contain the migrated backups using their original DASD backup dataset names.

If the TAPEGDG option is specified as NO, then the TAPEPREF value can be up to 26 characters long. USTMIGRT will add the date and time in the format ".Dmmyydd.Thhmmss" at the end of the generated dataset name to form a unique name.

Note that if the NEWTAPE option is specified on the console command which invokes USTMIGRT , the USTMIGxx profile will be checked to be sure it is enabled for sequential tape backups, but the parameters in the profile will not actually be used, since each backup is written to a unique tape according to the tape parameters in the workstation profile; no dummy file is written. The FORWARD console command option also causes no dummy file to be written.

USTMERxx Deferred Merge Profiles

The group of reserved profiles that begin with the prefix of "**USTMER"** (xx is any 2 alphanumeric characters) must be defined if you are going to perform DEFERRED MERGE BACKUPs. Deferred Merge Backups are taken for profiles with the MERGE=DEFER option set in their configuration entry. They are used during the execution of the USTMERGE utility which completes the MERGE BACKUPs. You must have at least one USTMERxx profile if you intend to perform DEFERRED MERGE BACKUPs. Additional USTMERxx profiles can be used to segregate deferred merge processing for various backup profiles to provide more control over merging and allow multiple merge tasks to run concurrently. Assignment of a backup profile to a merge profile can be done via the GROUPID operand in the configuration or can be assigned dynamically at execution time. Each USTMERxx profile must be enabled for sequential tape backups. The tape backup parameters will be used to dynamically allocate an output tape to which the completed MERGE BACKUPs will be written. The TAPEPREF value will be used to create an empty data set as the first file on the tape. Additional files will be added to the tape to contain the completed MERGE BACKUPs.

Note that if the NEWTAPE option is specified on the console command which invokes the USTMERGE utility, the USTMERxx profile will be checked to be sure it is enabled for sequential tape backups, however the parameters in the profile will not actually be used since each backup

is written to a unique tape. No dummy file is written to the tapes created just the USTMERGE output files.

USTVLTxx VAULT Profiles

The reserved profiles **USTVLTxx** (xx is any 2 alphanumeric characters) must be defined if you are going to execute the USTVAULT utility to create secondary copies of sequential backups on tape for disaster recovery. You must have at least one USTVLTxx profile if you plan to use USTVAULT. Additional USTVLTxx profiles can be used to segregate vault processing for various backup profiles to provide more control over the vaulting operation and allow multiple vaulting tasks to run concurrently. Assignment of a backup profile to a vault profile can be done via the GROUPID operand in the configuration or can be assigned dynamically at execution time. Each USTVLTxx profile must be enabled for **both** sequential disk and sequential tape backups. The tape backup parameters will be used to dynamically allocate an output tape on which the secondary backups will be created. The TAPEPREF value will be used to create an empty data set as the first file on the tape. TAPEPREF **must** have a value that is different from the TAPEPREF or DASDPREF specification in the original profiles.

Additional files will be added to the tape to contain the secondary backups using their original names (except that the copy number, specified by a ? in the DASDPREF=/TAPEPREF= in the backup profile) is changed from '1' to another copy number from '2' to ‘9’ (2 is used by default).

The DASDPREF value in the USTVLTxx profile is used to create a “control” file which is temporarily stored on disk and is copied as the last file on the tape at the end of USTVAULT processing. If the DASDGDG/TAPEGDG option is not specified as YES, the DASDPREF/TAPEPREF value can be up to 26 characters long. USTVAULT will add the date and time in the format "Dmmyydd.Thhmmss" at the end of the dataset name to form a unique name. Specification of GDGs are recommended for USTVLTxx profiles. DASDPREF and TAPEPREF cannot specify the same value. The TAPEPREF= and DASDPREF= values in the USTVLTxx profile may also contain a ? within the name, just like the TAPEPREF and DASDPREF values in the backup profiles processed by vaulting. It is optional, but if present, USTVAULT will substitute the copy number (2 to 9) in the name of the dummy file and the control file. This is strongly recommended if you plan to create vault copies other than the default of copy 2.

USTDUPFL Profile

The reserved profile **USTDUPFL** can optionally be used with MERGE BACKUPs to reduce the overhead of backing up files which are duplicated on many USS File Systems such as those associated with the USS operating system components and other software packages. If you include USTDUPFL in your configuration, it must be enabled for keyed backups (ONLINE=1 or more) and should not be enabled for any other type of backup. A USTDUPFL profile, enabled for keyed with DUPLICATE=NOCOPY set , will be automatically included in any new or updated configuration by USTCONFG. This feature is likely to be of little use to FDR/UPSTREAM USS users, however if you feel you have a need for it, contact Innovation Technical Support for assistance in the configuration of this Reserved Profile.

4.2 Creating a Backup Profile

A Backup Profile is the identifier of a set of customized features and supporting configuration data that provides for the storage and retrieval of user data. The most direct method of creating a backup profile is to utilize the FDR/UPSTREAM TSO/ISPF Interface. You can enter this interface via the supplied USTALLOC CLIST or a menu option that your systems programmer has supplied via one of your installations primary ISPF menus.

In the following example we will construct a Backup Profile with the following important attributes:

- Its name will be TEST.
- It will allow DASD and TAPE type backups and specify where they should be placed.
- It will utilize GDGs to store the data and provide for retention control.

To get started, enter the FDR/UPSTREAM TSO/ISPF Interface via your installation defined method. From the main menu specify option number 5, “PROFILE”, and press ENTER.

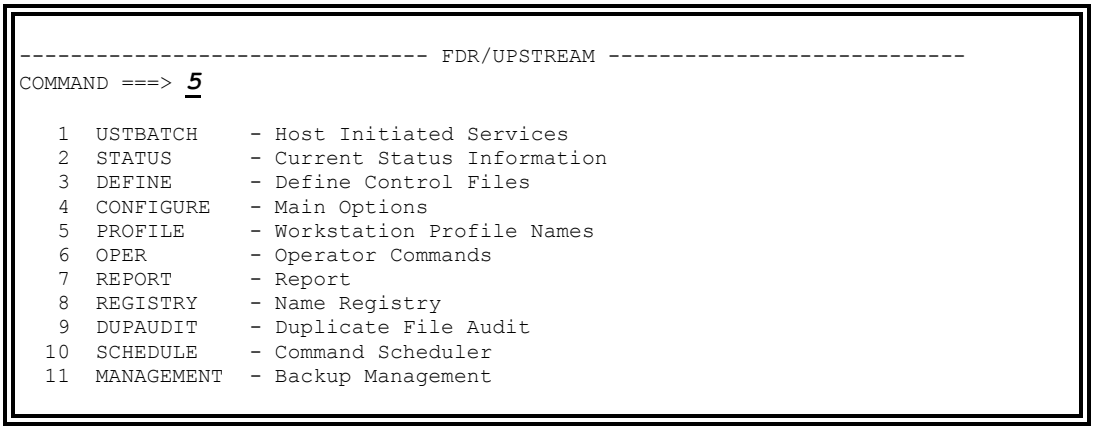


Figure 9 - Backup Profile -Selecting the PROFILE Definition Option

The next menu to appear requires you to specify the input and output configuration dataset and member names for the configuration operations you are going to perform. The input dataset and member name specified must previously exist. The output dataset must previously exist but the member will be created if it does not already exist. It is generally suggested that you “update in place” by specifying the input and output names as the same. This makes configuration management easier since you must inform the FDR/UPSTREAM Started Task about updated output members. Since the dataset and member names are hard-coded in the Started Task JCL, this makes it difficult to change profiles easily.

You can also specify a Profile Name or Profile Mask on this panel to limit the list of Profiles to be display on the subsequent menu. A Profile Mask is zero to seven initial characters followed by the asterisk (“*”) character. An example would be UST* to list all the Profile Names that start with the three characters “UST”.

When you have completed entering all the fields on this menu press the ENTER key.

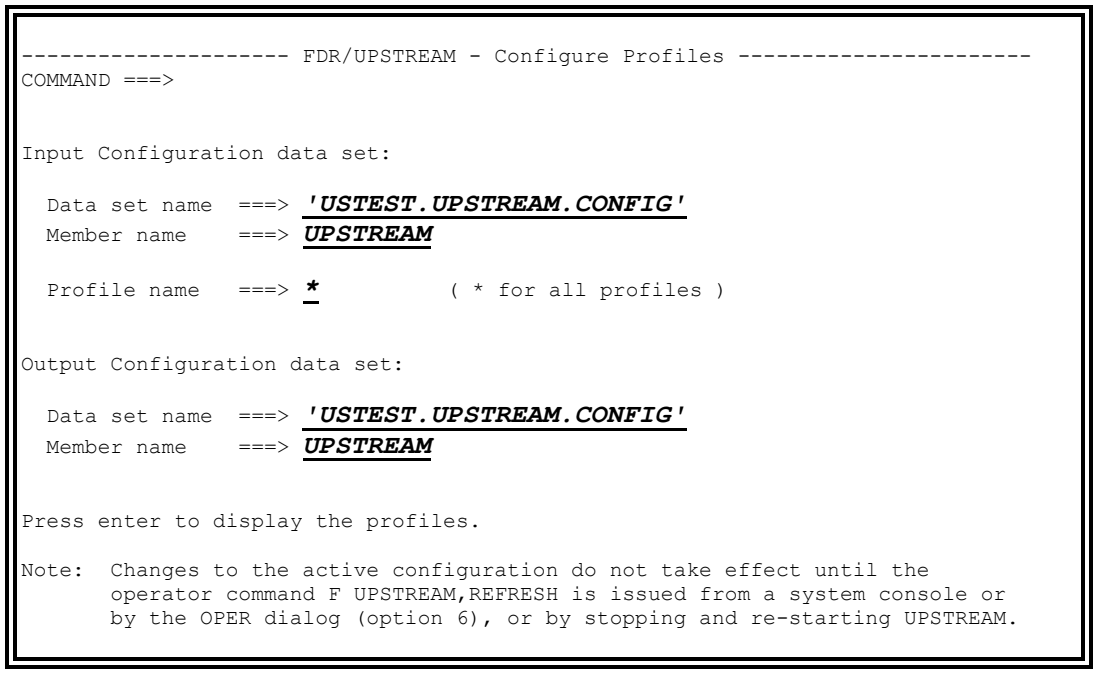


Figure 10 - Backup Profile - Configuration File Specification Menu

The next menu to appear allows you to perform the following actions:

ADD - Add an entirely new profile from scratch or by using an existing Profile as a template. In order to add a new profile from scratch, type “ADD” on the “COMMAND” line of the panel and press the ENTER KEY. To add a new Profile but utilize an existing Profile as a template, type “ADD” in the command prefix column adjacent to the Profile you wish to utilize as a template.

COMPRESS - This allows you to run the IEBCOPY utility program in the TSO foreground to compress the previously specified output configuration dataset. This is useful if you are attempting to update a configuration dataset member but the PDS dataset has filled up.

L - Displays the USTLOG output from the USTCONFG configuration program execution. This is a debugging feature that may be utilized to get additional problem determination information about errors encountered in updating the configuration dataset via the menus.

In our example here we will be adding a new Profile from scratch. Enter the “ADD” keyword on the command line and press the ENTER key to proceed to the next panel.

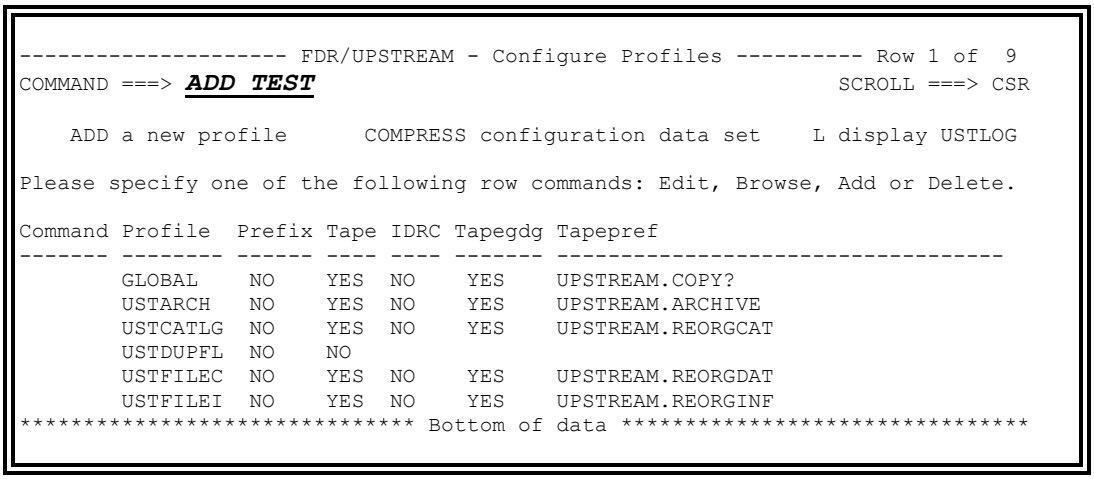


Figure 11 - Backup Profile - List of Profiles Menu

The next menu to appear contains the actual Profile options that can be specified. The following text provides a brief description of each field that needs to be specified for the sample profile we want to build. Additional information on these options and the other options not covered here are described in “USTCONFG Profile Options Parameter Reference” beginning on page 183.

PROFILE

Specifies the profile name to be defined. It may be 1-8 characters, and it must start with an alphabetic or national character (the remainder may be any alphanumeric or national characters). Every remote system which will communicate with FDR/UPSTREAM should be assigned a unique profile name. All backups and restores in FDR/UPSTREAM are keyed to this profile name.

In our example we will set this to **“TEST”**.

PREFIX

This option indicates that this Profile is a prefix type profile. When enabled, the parameters specified for this profile will be used when the exact profile name specified in an FDR/UPSTREAM operation does not exist in the configuration but yet matches all characters specified for this Profile’s name.

In our example we will specify **“NO”**.

TAPE

Specifies that this profile will be permitted to perform backups directly to MVS sequential tape (BSAM) datasets. When enabled for a given profile, the TAPEPREF and the TUNIT or TAPESTORCLAS options must also be enabled.

In our example we will specify **“YES”**.

IDRC

This option only applies to 3480/3490 cartridge drives and causes FDR/UPSTREAM to specify the TRTCH=COMP parameter when dynamically allocating the tape backup to request hardware (IDRC) compaction of the tape dataset. IDRC compaction may be used even if compaction is your system default.

In our example we will specify **"YES"**.

TAPEGDG

Applies to profiles where TAPE backups are enabled, and specifies that any backup datasets are to be allocated as new generations of a GDG. TAPEGDG is recommended since GDG processing will automatically delete old generations. GDG bases must be predefined in the appropriate system catalog before they can be used by FDR/UPSTREAM-MVS. Be sure you define sufficient generations in the GDG base to retain all required backups.

In our example we will specify **"YES"**.

TAPEPREF

Specifies the high level qualifiers of the dataset name to be used for sequential tape backups if the TAPE option is enabled. See the DASDPREF= description for details of the dataset name that will be created by FDR/UPSTREAM for these backups. Specially reserved profiles: USTCATLG, USTFILEI, USTFILEC, USTARCH, USTMIGxx, and USTVLTxx have specific values that need to be entered for this field. Refer to the section entitled "Reserved Profiles" beginning on page 36.

In our example we will specify **"UPSTREAM.TEST.COPY?"**.

TUNIT

Specifies an MVS tape unit name for the datasets specified by this profile to be dynamically allocated on.

In our example we will specify **"TAPE"**.

EXPDT

Specifies the Julian format expiration date of the datasets created when using this profile. The meaning of this value is identical to the JCL parameters EXPDT. EXPDT only accepts a 2-digit year number. Year values less than 70 are assumed to be in the 21st century (20xx). This parameter is mutually exclusive with RETPD.

In our example we will specify **"99000"** to indicate catalog retention control by the tape management system.

NEWTAPEF

Specifies if a new MVS dataset should be created on a new tape volume when processing FIRST TIME FULL or FULL MERGE backups. This option only applies to backups to sequential tape.

In our example we will specify **"YES"**.

NEWTAPEI

Specifies if a new MVS dataset should be created on a new tape volume when processing INCREMENTAL MERGE type backups. This option only applies to backups to sequential tape.

In our example we will specify **"NO"**.

DASD

Specifies that this profile will be permitted to perform backups directly to MVS sequential disk (BSAM) datasets. When DASD is enabled for a given profile, the DASDPREF and one of the DUNIT, VOL, or STORCLAS options must also be specified.

In our example we will specify **"YES"**.

DASDBLK

Applies only to profiles where DASD (sequential disk) backups are enabled, and specifies the blocksize to be used when allocating those backups. It is not used as the actual blocksize of the backup data set but in performing space allocation calculations. In our example we will leave this field blank and the system use the value specified in the DASDBLK systemwide options keyword.

DASDGDG

Specifies that any DASD datasets that are created with this profile are to be allocated as new generations of a GDG. DASDGDG is recommended since GDG processing will automatically delete old generations. GDG bases must be predefined in the appropriate system catalog before they can be used by FDR/UPSTREAM-MVS. Be sure you define sufficient generations in the GDG base to retain all required backups.

In our example we will specify **"YES"**.

DASDPREF

Specifies the high level qualifiers of the dataset name to be used for sequential DASD backups if the DASD option is enabled. Specially reserved profiles: USTCATLG, USTFILEI, USTFILEC, USTARCH, USTMIGxx, and USTVLTxx have specific values that need to be entered for this field. Refer to the section entitled "Reserved Profiles" beginning on page 36 for additional information. For the exact coding details of this field refer to the "USTCONFG Profile Options Parameter Reference" section describing the DASDPREF keyword in more detail on page 183.

In our example we will specify **"UPSTREAM.TEST.COPY?"**.

DUNIT

Specifies the MVS disk unit name to be used when dynamically allocating the DASD datasets associated with this profile. Either DUNIT, VOL, or STORCLAS is required when the DASD option is enabled. DUNIT and VOL cannot both be specified on the same profile.

In our example we will specify **"SYSDA"** as the esoteric unit name for newly allocated DASD datasets created by this profile.

MERGE

MERGE=YES specifies that this profile is enabled for MERGE BACKUP processing. The profile must also be enabled for DASD (sequential disk) or TAPE (sequential tape) backups. **MERGE=NO** indicates that this profile can NOT be used for MERGE processing. **MERGE=DEFER** enables the profile for MERGE BACKUPs but indicates that those backups will be performed with the "deferred merge" processing option.

In our example we will specify **"YES"** to enable this feature.

COPYINCR

For profiles that only specify the MERGE=YES option, COPYINCR will cause a FULL MERGE backup to copy all incremental backups that are stored in separate locations to the full backup dataset. Incremental backups that are already on the same tape as the full backup will not be copied, but incrementals that are on different tapes or on DASD will be copied. Incrementals that are successfully copied will be deleted and uncataloged. All FDR/UPSTREAM database records of their location will be updated to point to the new full backup dataset.

In our example we will specify **"NO"** to disable this feature.

VAULT

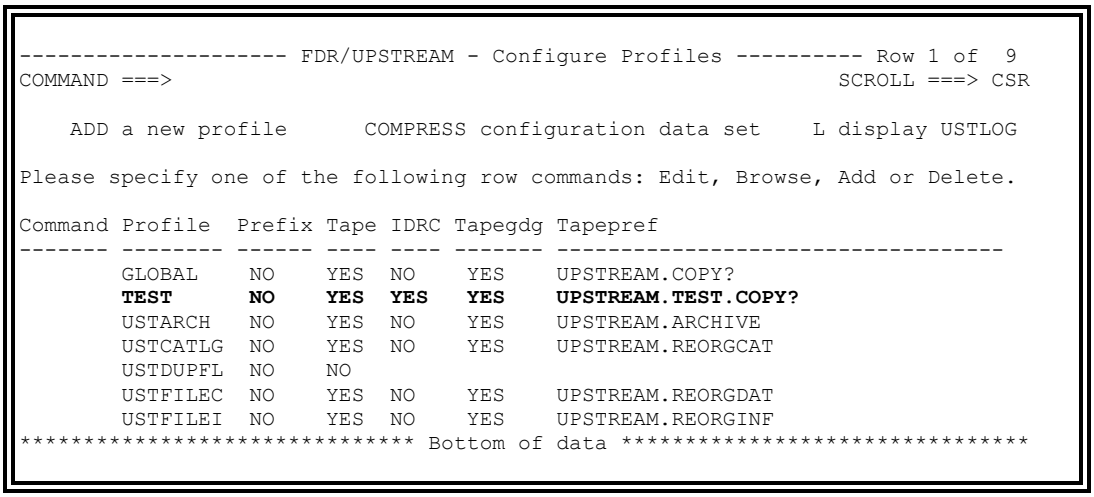
Specifies if this profile is enabled for the vaulting facility. If this option is enabled, special dataset naming requirements take effect. See the TAPEPREF and DASDPREF fields for additional information.

In our example we will specify **"YES"** to enable the creation of alternate copies of backup datasets.

```
---------------------- FDR/UPSTREAM - Configure Profile -----------------------
 COMMAND ===>  SAVE                                              SCROLL ===> CSR

       SAVE profile         REPLACE profile         CANCEL changes
 ------------------------------------------------------------------------------

 PROFILE.. ===> TEST      (Profile name or prefix)
 PREFIX... ===> NO        (Yes- profile name is a prefix  No- not a prefix)

 Tape Backup options:
 TAPE..... ===> YES       (Yes- allow sequential tape backups  No- disallow)
 IDRC..... ===> YES       (Yes- use IDRC compression No- no IDRC compression)
 TAPEGDG.. ===> YES       (Yes- Use GDG for sequential tape backups No- non-GDG)
 TAPEPREF. ===> UPSTREAM.TEST.COPY?            (dsname prefix)
 TUNIT.... ===> TAPE      (tape unit name)
  or TSTOR ===>           (tape SMS storage class)
 UNITCNT.. ===> 1         (tape unit count: 1 or 2)
 RETPD.... ===>           (retention period)
  or EXPDT ===> 99000    (yyddd - expiration date)
 NEWTAPEF. ===> YES       (Yes- mount new tape for full merge bkp  No-piggyback)
 NEWTAPEI. ===> NO        (Yes- mount new tape for incr. merge bkp No-piggyback)

 DASD Backup options:
 DASD..... ===> YES       (Yes- allow sequential disk backups  No- disallow)
 DASDBLK.. ===>           (Blocksize for sequential disk backups)
 DASDGDG.. ===> YES       (Yes- Use GDG for sequential disk backups No- non-GDG)
 DASDPREF. ===> UPSTREAM.TEST.COPY?            (dsname prefix)
 DUNIT.... ===> SYSDA     (disk unit name)
  or VOL.. ===>           (volume serial)
 MGMTCLAS. ===>           (SMS management class)
 STORCLAS. ===>           (SMS storage class)
 DRETPD... ===>           (retention period)
 MAXSIZE.. ===>           (Maximum size in kb of disk backup)

 File Data Backup options:
 KEYED.... ===> 0         (Number of keyed backups retained)
 ARCHIVE.. ===> 0         (Number of Archived (non-keyed) backups retained)

 Other options:
 MERGE.... ===> YES       (Merge Backup: Yes, No, Defer)
 COPYINCR. ===> NO        (Yes- copy incrementals to full merge No- do not copy)
 MIGTHRESH ===>           (Number of sequential disk backups to retain on disk)
 VAULT.... ===> YES       (Yes- allow vaulting  No-disallow vaulting)
 GROUPID.. ===>           (nn - 2 character group id for utility execution)
 DUPLICATE ===> COPY      (Copy- copy duplicate files  Nocopy- do not copy dups)
 TRANSFER. ===> NO        (Profile is for PC file transfers only: Yes, No)
 PCMIGRATE ===> NO        (Profile is for PC file migration only: Yes, No)
```

Figure 12 - Backup Profile - Configure Profile Options Menu

Once you have entered all these options into the menu, type "SAVE" on the command line and press the ENTER key. You have now created and saved a new FDR/UPSTREAM Backup Profile. The menu pictured below will reappear and contain your newly defined profile in the list of system profiles.



```
---------------------- FDR/UPSTREAM - Configure Profiles ---------- Row 1 of  9
COMMAND ===>                                                    SCROLL ===> CSR

    ADD a new profile      COMPRESS configuration data set    L display USTLOG

Please specify one of the following row commands: Edit, Browse, Add or Delete.

Command Profile  Prefix Tape IDRC Tapegdg Tapepref
------- -------- ------ ---- ---- ------- ----------------------------------
        GLOBAL    NO    YES  NO    YES    UPSTREAM.COPY?
        TEST      NO    YES  YES   YES    UPSTREAM.TEST.COPY?
        USTARCH   NO    YES  NO    YES    UPSTREAM.ARCHIVE
        USTCATLG  NO    YES  NO    YES    UPSTREAM.REORGCAT
        USTDUPFL  NO    NO
        USTFILEC  NO    YES  NO    YES    UPSTREAM.REORGDAT
        USTFILEI  NO    YES  NO    YES    UPSTREAM.REORGINF
****************************** Bottom of data ********************************
```

Figure 13 - Backup Profile - List of Profiles Menu

You should now refer to the section **"Activating a New or Modified Profile"** on page 34 for the steps necessary to enable your newly created Backup Profile. This step must be performed before using your new Backup Profile.

4.3 Creating a VAULT Profile

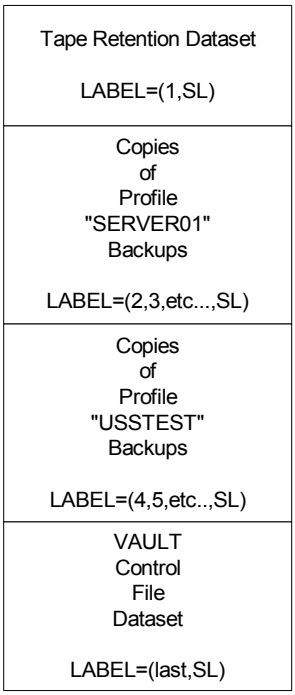
A VAULT Profile is a set of user specified parameters that the FDR/UPSTREAM system utilizes to create secondary copies of previously taken backup datasets. These backup datasets can be resident on either tape or DASD. When the USTVAULT utility is invoked, see the “Performing A VAULT” section beginning on page 114, a VAULT Profile is used to establish the name, location, and other allocation related data for the supporting datasets that are placed on the VAULT tapes. There are two supporting datasets created for each VAULT request:

- The VAULT Retention Dataset
- The Vault Control File

The Vault Retention Dataset created as the first file on the tape set is used to establish the retention period for all tape volumes that will make up the VAULT tape set. This dataset is always empty and contains no records. Certain OS/390 tape management systems control the retention of all the files on a multi-file tape volume set by the retention period specified on the first file of the tape set, hence the need for the existence of this dataset. You should review your OS/390 tape management system documentation to determine if this is the methodology that your system uses.

The VAULT Control File is created as the last file on the tape set and contains just the extracted FDR/UPSTREAM Database control records. This dataset allows you to quickly reload the FDR/UPSTREAM MVS Database control records for all backup datasets that are contained on this VAULT tape set without having to read through all of the backup tapes and data. Since a Profile Grouping type operation can be applied to a USTVAULT request, a tape set can consist of many, many actual tape volumes and consume a large amount of time to read through all the tapes. Having the control records in a separate file solves this problem.

For example, performing a VAULT of the Backup Profiles “SERVER01” and “USSTEST” would result in a VAULT tape set logically laid out as follows:



In the following example we will construct a VAULT Profile with the following important attributes:

- Its name will be USTVLTAA.
- It will specify the dataset name and attributes of a special Tape Retention Dataset that will be placed on the VAULT tape set.
- It will specify the dataset name and attributes of a special VAULT Control File that will initially be allocated on DASD, all control features to allow secondary copies to be made and specify where they will be placed.
- It will utilize GDGs to store the data and provide for retention control.

To get started, enter the FDR/UPSTREAM TSO/ISPF Interface via your installation defined method. From the main menu specify option number 5, “PROFILE”, and press ENTER.

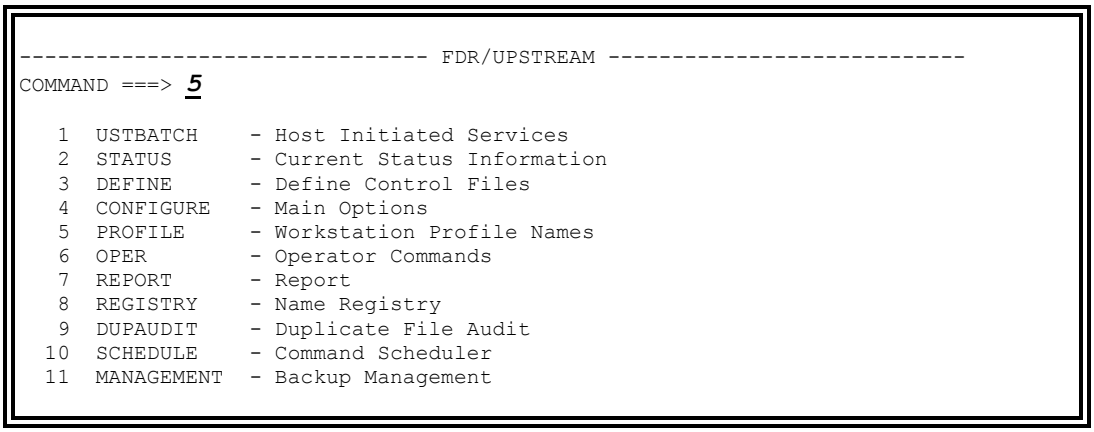


Figure 14 - VAULT Profile -Selecting the PROFILE Definition Option

The next menu to appear requires you to specify the input and output configuration dataset and member names for the configuration operations you are going to perform. This panel and its individual fields is described in the “Creating a Backup Profile” section on page 39.

When you have completed entering all the fields on this menu press the ENTER key.

```
---------------------- FDR/UPSTREAM - Configure Profiles -----------------------
COMMAND ===>


Input Configuration data set:

  Data set name  ===> 'USTEST.UPSTREAM.CONFIG'
  Member name    ===> UPSTREAM

  Profile name   ===> *          ( * for all profiles )


Output Configuration data set:

  Data set name  ===> 'USTEST.UPSTREAM.CONFIG'
  Member name    ===> UPSTREAM


Press enter to display the profiles.

Note:  Changes to the active configuration do not take effect until the
       operator command F UPSTREAM,REFRESH is issued from a system console or
       by the OPER dialog (option 6), or by stopping and re-starting UPSTREAM.
```

Figure 15 - VAULT Profile - Configuration File Specification Menu

The next menu to appear allows for the selection of a previously created Profile or creation of a new profile. We will utilize this menu to add a new Profile called USTVLT01. Enter “ADD USTVLT01’ on the command line of the ISPF panel and then press the ENTER key to proceed to the next panel.

```
---------------------- FDR/UPSTREAM - Configure Profiles ---------- Row 1 of  9
COMMAND ===> ADD USTVLTAA                                        SCROLL ===> CSR

    ADD a new profile      COMPRESS configuration data set    L display USTLOG

Please specify one of the following row commands: Edit, Browse, Add or Delete.

Command Profile  Prefix Tape IDRC Tapegdg Tapepref
------- -------- ------ ---- ---- ------- ----------------------------------
        GLOBAL    NO    YES  NO    YES    UPSTREAM.COPY?
        USTARCH   NO    YES  NO    YES    UPSTREAM.ARCHIVE
        USTCATLG  NO    YES  NO    YES    UPSTREAM.REORGCAT
        USTDUPFL  NO    NO
        USTFILEC  NO    YES  NO    YES    UPSTREAM.REORGDAT
        USTFILEI  NO    YES  NO    YES    UPSTREAM.REORGINF
****************************** Bottom of data ********************************
```

Figure 16 - VAULT Profile - List of Profiles Menu

The next menu to appear contains the actual VAULT Profile options that can be specified. The following text provides a brief description of each field that needs to be specified for the sample VAULT profile we want to build. Additional information on these options and the other options not covered here are described in “USTCONFG Profile Options Parameter Reference” beginning on page 183.

PROFILE

Specifies the VAULT profile name to be defined. It must be 8 characters in length and must begin with the characters “USTVLT”. The remaining 2 suffix characters provide differentiation to the VAULT Profile name or relate this VAULT Profile to a series of one or more Backup Profiles specified with the Profile Grouping Feature. Please consult the “xxx” section on page xx for additional information on the Profile Grouping Feature.

This value is already entered as **“USTVLTAA”** from our previous menu entries.

IDRC

This option only applies to 3480/3490 cartridge drives and causes FDR/UPSTREAM to specify the TRTCH=COMP parameter when dynamically allocating the VAULT tape to request hardware (IDRC) compaction of the tape retention dataset. IDRC compaction may be used even if compaction is your system default.

In our example we will specify **“YES”**.

TAPEGDG

TAPEGDG=YES indicates that the creation of the VAULT Tape Retention Dataset are to be as new generations of a GDG. TAPEGDG=YES is recommended since GDG processing will automatically delete old generations. GDG bases must be predefined in the appropriate system catalog before they can be used by FDR/UPSTREAM-MVS. Be sure you define sufficient generations in the GDG base to retain all required VAULT copies.

In our example we will specify **“YES”.**

TAPEPREF

Specifies the high level qualifiers of the dataset name to be used for the VAULT Retention Dataset. If the TAPEGDG option is not specified as YES, the TAPEPREF value can be up to 26 characters long. USTVAULT will add the date and time in the format "Dmmyydd.Thhmmss" at the end of the dataset name to form a unique name. . If the TAPEGDG option is specified as YES, then the TAPEPREF value can be up to 35 characters long and will have the standard GDG type suffix of “.GnnnnV00” appended.

This value may contain a ? within the name, just like the similar fields in the backup profiles processed by vaulting. USTVAULT will substitute the copy number (2 to 9) for the ? character in the name of the VAULT Retention dataset name.

In our example we will specify **“UPSTREAM.USTVLTAA”**.

TUNIT

Specifies an MVS tape unit name for the datasets processed by this VAULT Profile to be dynamically allocated on.

In our example we will specify **“TAPE”**.

EXPDT

Specifies the Julian format expiration date of the Tape Retention Dataset created when using this profile. The meaning of this value is identical to the JCL parameter EXPDT. EXPDT only accepts a 2-digit year number. Year values less than 70 are assumed to be in the 21st century (20xx). This parameter is mutually exclusive with RETPD.

In our example we will specify **“99000”** to indicate catalog retention control by the tape management system.

DASDBLK

This field specifies the blocksize for the VAULT Control File dataset that is initially created on DASD and subsequently placed on tape as the final dataset on the VAULT tape. In our example we will leave this field blank and the system will use the value specified in the DASDBLK systemwide options keyword.

DASDGDG

Specifies that the VAULT Control File dataset created from this profile are to be allocated as new generations of a GDG. DASDGDG is recommended since GDG processing will automatically delete old generations. GDG bases must be predefined in the appropriate system catalog before they can be used. Be sure you define sufficient generations in the GDG base to retain the required number of copies of the VAULT Control File.

In our example we will specify **"YES"**.

DASDPREF

Specifies the high level qualifiers of the VAULT Control File dataset name. Keep in mind that this dataset is initially allocated on DASD and then moved to tape when VAULT processing is completed. If the TAPEGDG option is not specified as YES, this value can be up to 26 characters long. USTVAULT will add the date and time in the format "Dmmyydd.Thhmmss" at the end of the dataset name to form a unique name. Specification of GDGs are recommended for USTVLTxx profiles. This value may also contain a ? within the name, just like the similar fields in the backup profiles processed by vaulting. USTVAULT will substitute the copy number (2 to 9) for the ? character in the name of the VAULT Control File name.

In our example we will specify **"UPSTREAM.USTVLCAA"**.

DUNIT

Specifies the MVS disk unit name to be used when dynamically allocating the DASD dataset associated with this VAULT Control File. Either DUNIT, VOL, or STORCLAS is required when the DASD option is enabled. DUNIT and VOL cannot both be specified on the same profile.

In our example we will specify **"SYSDA"**.

```
---------------------- FDR/UPSTREAM - Configure Profile ------------------------
COMMAND ===>                                                  SCROLL ===> CSR
Top of data
      SAVE profile         REPLACE profile         CANCEL changes
--------------------------------------------------------------------------------

PROFILE.. ===> USTVLTAA  (Profile name)

Vault Retention File Specifications
IDRC..... ===> YES       (Yes- use IDRC compression No- no IDRC compression)
TAPEGDG.. ===> YES       (Yes- Use GDG for dummy file No- non-GDG)
TAPEPREF. ===> UPSTREAM.USTVLTAA                    (dsname of dummy file)
TUNIT.... ===> TAPE      (tape unit name)
 or TSTOR ===>           (tape SMS storage class)
UNITCNT.. ===> 1         (tape unit count: 1 or 2)
RETPD.... ===>           (retention period)
 or EXPDT ===> 99000     (yyddd - expiration date)

Vault Control File specifications:
DASDBLK.. ===>           (Blocksize for vault control file)
DASDGDG.. ===> YES       (Yes- Use GDG for vault control file No- non-GDG)
DASDPREF. ===> UPSTREAM.USTVLCAA                     (dsname prefix)
DUNIT.... ===> SYSDA     (disk unit name)
or VOL.. ===>            (volume serial)
MGMTCLAS. ===>           (SMS management class)
STORCLAS. ===>           (SMS storage class)
DRETPD... ===>           (retention period)
MAXSIZE.. ===>           (Number of cylinders for primary allocation)
```

Figure 17 - VAULT Profile - Configure Profile Options Menu

Once you have entered all these options into the menu, type “SAVE” on the command line and press the **ENTER** key. You have now updated the new FDR/UPSTREAM VAULT Profile.

You should now refer to the section **“Activating a New or Modified Profile”** on page 34 for the steps necessary to enable your newly created VAULT Profile.

Once you have activated your new VAULT Profile, you can use it to perform vaulting of existing FDR/UPSTREAM backups that have not yet been vaulted. Refer to the “Performing a VAULT” section beginning on page 114 for additional information on executing the utility function associated with this Profile type.

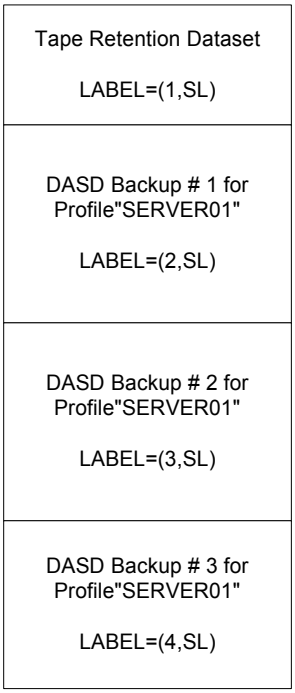
4.4 Creating a Backup Dataset Migration Profile

A special profile whose name begins with the prefix of "**USTMIG"** is defined if you wish to execute the USTMIGRT utility to migrate previously taken FDR/UPSTREAM sequential disk backup data sets to tape. The USTMIGRT utility utilizes the MIGTHRESH parameter specification in the selected Backup Profiles to select the appropiate number of DASD resident backup datasets to be moved. Additional USTMIGxx profiles can be used to segregate migration processing for various backup profiles to provide more control over migration and allow multiple migration tasks to run concurrently. Assignment of a particular Backup Profile or a group of Backup Profiles to a Migration Profile can be done with the GROUPID operand in the configuration entry of the Backup Profile(s) in question or can be indicated via the PROFILE= operand of the actual migration operator command.

The USTMIGxx Profile parameters will be used to dynamically allocate the initial output dataset to which the DASD backups will be migrated. The purpose of this dataset is to Additional files will then be added to the tape to contain the migrated backups using their original DASD backup dataset names.

Note: If the NEWTAPE option is specified on the console command which invokes USTMIGRT, the parameters in the USTMIGxx profile will not actually be used, since each backup will written to a unique tape according to the tape parameters in the Backup Profile and no Tape Retention Dataset will be created. The FORWARD keyword option has the same effect.

For example, performing a migration for the Backup Profile "SERVER01" for which the MIGTHRESH value is set to "1" and three previously taken DASD backups exist, would result in a Migration Tape Set logically laid out as follows with no backups remaining on DASD.



In the following example we will construct a File Migration Profile with the following important attributes:

- Its name will be USTMIG01.
- It will specify the appropriate dataset names and features to allow for the migration of existing DASD backup datasets to be migrated to tape.
- It will utilize GDGs to provide for retention control.

- It will cause the migration of all previously taken FDR/UPSTREAM backups for a particular Backup Profile to be moved from DASD to tape.

To get started, enter the FDR/UPSTREAM TSO/ISPF Interface via your installation defined method. From the main menu specify option number 5, “PROFILE”, and press **ENTER**.

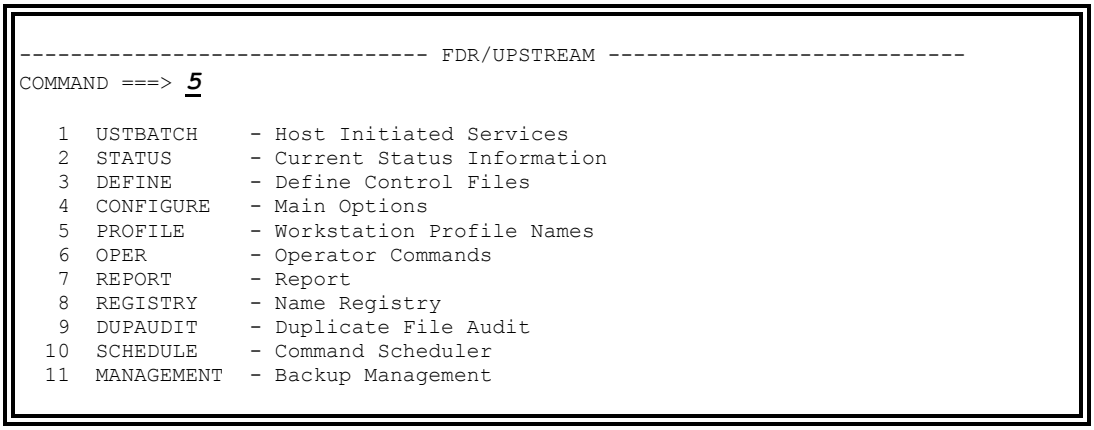


Figure 18 - Migration Profile -Selecting the PROFILE Definition Option

The next menu to appear requires you to specify the input and output configuration dataset and member names for the configuration operations you are going to perform. This panel is described in depth in the “Creating a Backup Profile” section on page 39.

When you have completed entering all the fields on this menu press the **ENTER** key.

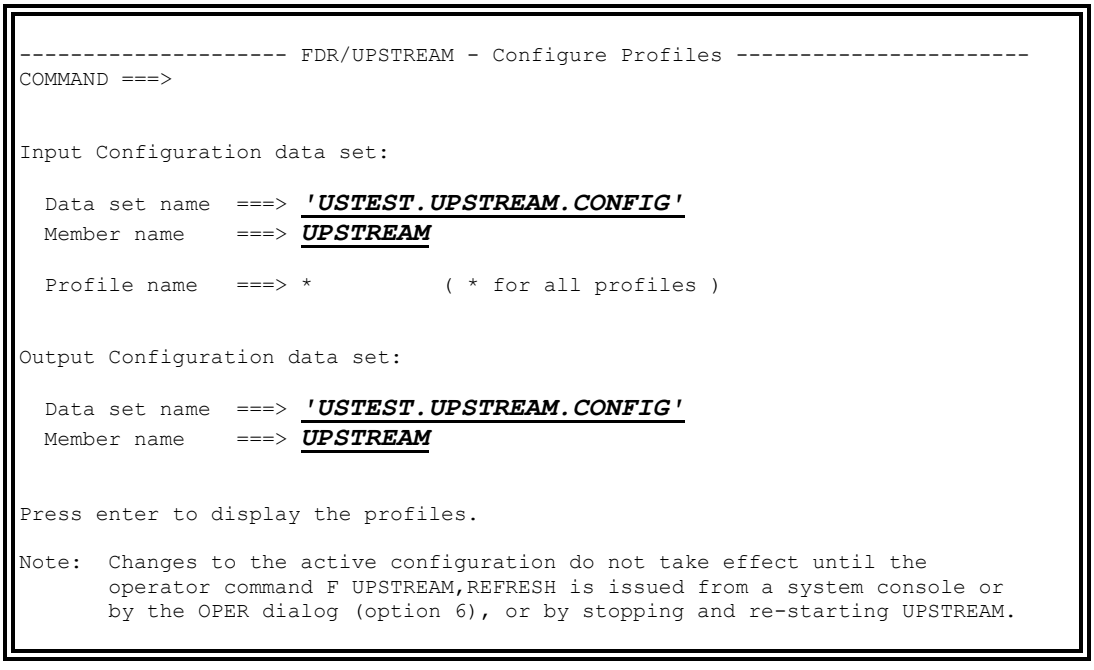
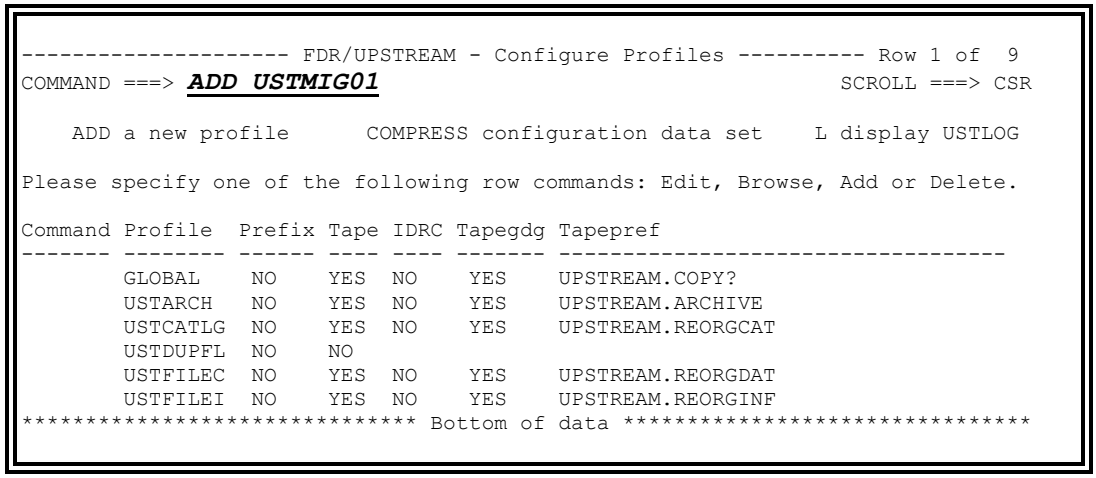


Figure 19 - Migration Profile - Configuration File Specification Menu

The next menu to appear allows for the selection of a previously created Profile. We will utilize this menu to add a new Profile called USTMIG01. Enter "**ADD USTMIG01**' on the command line of the ISPF panel and then press the **ENTER** key to proceed to the next panel.



```
---------------------- FDR/UPSTREAM - Configure Profiles ---------- Row 1 of  9
COMMAND ===> ADD USTMIG01                                        SCROLL ===> CSR

    ADD a new profile      COMPRESS configuration data set    L display USTLOG

Please specify one of the following row commands: Edit, Browse, Add or Delete.

Command Profile  Prefix Tape IDRC Tapegdg Tapepref
------- -------- ------ ---- ---- ------- ----------------------------------
        GLOBAL    NO    YES  NO    YES    UPSTREAM.COPY?
        USTARCH   NO    YES  NO    YES    UPSTREAM.ARCHIVE
        USTCATLG  NO    YES  NO    YES    UPSTREAM.REORGCAT
        USTDUPFL  NO    NO
        USTFILEC  NO    YES  NO    YES    UPSTREAM.REORGDAT
        USTFILEI  NO    YES  NO    YES    UPSTREAM.REORGINF
****************************** Bottom of data ********************************
```

Figure 20 - Migration Profile - List of Profiles Menu

The next menu to appear contains the actual Profile options that can be specified. The following text provides a brief description of each field that needs to be specified for the sample profile we want to build. Additional information on these options and the other options not covered here are described in "USTCONFG Profile Options Parameter Reference" beginning on page 183.

PROFILE

Specifies the Backup Dataset Migration Profile Name to be defined. It must begin with "USTMIG" and have a suffix of a two character alphanumeric identifier. This suffix is used as an identifier for FDR/UPSTREAM Grouping type Backup Dataset Migration operations or as just a unique identifier of the Backup Dataset Migration Profile.

In our example we will set the name to **"USTMIG01"** and we will not be using Grouping.

IDRC

This option only applies to 3480/3490 cartridge drives and causes FDR/UPSTREAM to specify the TRTCH=COMP parameter when dynamically allocating the Deferred Merge Tape Retention dataset as the first file of the created tape set. IDRC compaction may be used even if compaction is your system default.

In our example we will specify **"YES"**.

TAPEGDG

TAPEGDG=YES indicates that the creation of the Tape Retention Dataset is to be as a new generation of a GDG. TAPEGDG=YES is recommended since GDG processing will automatically delete old generations. GDG bases must be predefined in the appropriate system catalog before they can be used by FDR/UPSTREAM-MVS. Be sure you define sufficient generations in the GDG base to retain all required Deferred Merge Backups.

In our example we will specify **"YES"**.

TAPEPREF

Specifies the high level qualifiers of the dataset name to be used for the Tape Retention Dataset. If the TAPEGDG option is not specified as YES, the TAPEPREF value can be up to 26

characters long. USTMERGE will add the date and time in the format "Dmmyydd.Thhmmss" at the end of the dataset name to form a unique name. . If the TAPEGDG option is specified as YES, then the TAPEPREF value can be up to 35 characters long and will have the standard GDG type suffix of ".GnnnnV00" appended.

This value may contain a ? within the name, just like the similar fields in the backup profiles processed by vaulting. USTMERGE will substitute the copy number (2 to 9) for the ? character in the name of the Tape Retention Dataset.

In our example we will specify "**UPSTREAM.USTMIG01**".

TUNIT

Specifies an MVS tape unit name for the Tape Retention Dataset specified by this profile to be dynamically allocated on. This option is mutually exclusive with the TSTOR option.

In our example we will specify **"TAPE"**.

EXPDT

Specifies the Julian format expiration date of the Tape Retention Dataset created when using this profile. The meaning of this value is identical to the JCL parameters EXPDT. EXPDT only accepts a 2-digit year number. Year values less than 70 are assumed to be in the 21st century (20xx). This parameter is mutually exclusive with RETPD.

In our example we will specify **"99000"** to indicate catalog retention control by the tape management system.

```
---------------------- FDR/UPSTREAM - Configure Profile ------------------------
COMMAND ===>   SAVE                                              SCROLL ===> CSR
Top of data
      SAVE profile         REPLACE profile         CANCEL changes
--------------------------------------------------------------------------------

PROFILE.. ===> USTMER01  (Profile name)

Merge/Migrate Retention File specifications:
IDRC..... ===> YES       (Yes- use IDRC compression No- no IDRC compression)
TAPEGDG.. ===> YES       (Yes- Use GDG for sequential tape backups No- non-GDG)
TAPEPREF. ===> UPSTREAM.USTMIG01                  (dsname of dummy file)
TUNIT.... ===> TAPE      (tape unit name)
 or TSTOR ===>           (tape SMS storage class)
UNITCNT.. ===> 1         (tape unit count: 1 or 2)
RETPD.... ===>           (retention period)
 or EXPDT ===> 99000     (yyddd - expiration date)
```

Figure 21 - Migration Profile - Configure Profile Options Menu

Once you have entered all these options into the menu, type "SAVE" on the command line and press the **ENTER** key. You have now created and saved a new FDR/UPSTREAM File Migration Profile.

You should now refer to the section **"Activating a New or Modified Profile"** on page 34 for the steps necessary to enable your newly created File Migration Profile.

Once you have activated your Migration Profile, you can use it to perform migrations of existing DASD based FDR/UPSTREAM backups to tape. Refer to the FDR/UPSTREAM MVS manual "Migration Utility" section for additional information on executing the utility function associated with this Profile type.

4.5 Creating a Reorganization Profile

The FDR/UPSTREAM MVS System Database consists of three major components: The USTCATLG file, the USTFILEI file, and the USTFILEC(FILEDATA) file. The purpose and allocation requirements of each database file are outlined in the FDR/UPSTREAM MVS manual. The appropriate reserved profiles **USTCATLG, USTFILEI,** and **USTFILEC** must be defined if you are going to use the USTREORG utility program to dynamically reorganize the FDR/UPSTREAM Database datasets. The reserved profile names listed correspond with the matching DDname that is present in the FDR/UPSTREAM MVS Started Task JCL for that component of the FDR/UPSTREAM system database. A more complete overview of these profiles can be found in the "Reserved Profiles" profiles section beginning on page 36.

In the following example we will modify the USTFILEI Database Reorganization Profile that is predefined by the system at installation time, with the following important attributes:

- Its name will be USTFILEI.
- It will specify the appropriate dataset name and features to allow a backup dataset to be created and specify where it will be placed.
- It will utilize GDGs to store the data and provide for retention control.

To get started, enter the FDR/UPSTREAM TSO/ISPF Interface via your installation defined method. From the main menu specify option number 5, "PROFILE", and press the **ENTER** key.

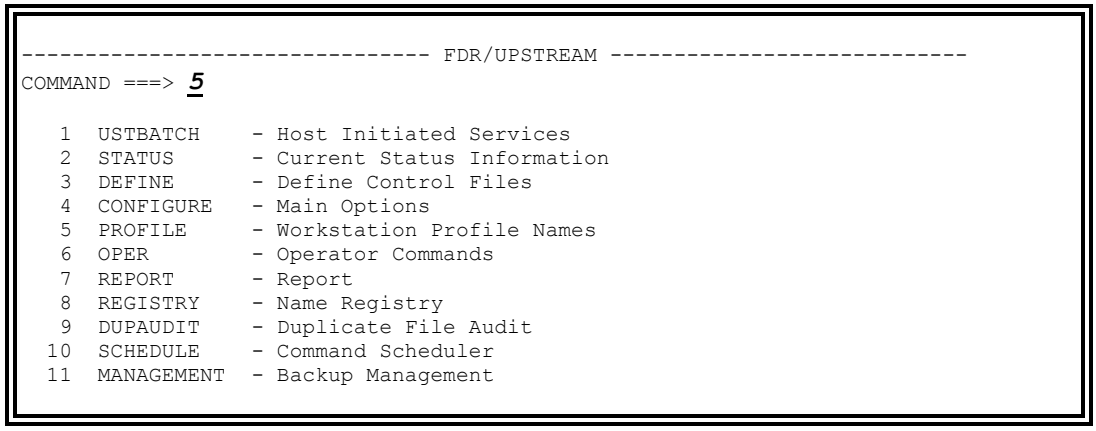


Figure 22 - Reorganization Profile -Selecting the PROFILE Definition Option

The next menu to appear requires you to specify the input and output configuration dataset and member names for the configuration operations you are going to perform. This panel is described in depth in the "Creating a Backup Profile" section on page 39.

When you have completed entering all the fields on this menu press the **ENTER** key.

```
---------------------- FDR/UPSTREAM - Configure Profiles -----------------------
COMMAND ===>


Input Configuration data set:

  Data set name  ===> 'USTEST.UPSTREAM.CONFIG'
  Member name    ===> UPSTREAM

  Profile name   ===> *          ( * for all profiles )


Output Configuration data set:

  Data set name  ===> 'USTEST.UPSTREAM.CONFIG'
  Member name    ===> UPSTREAM


Press enter to display the profiles.

Note:  Changes to the active configuration do not take effect until the
       operator command F UPSTREAM,REFRESH is issued from a system console or
       by the OPER dialog (option 6), or by stopping and re-starting UPSTREAM.
```

Figure 23 - Reorganization Profile - Configuration File Specification Menu

The next menu to appear allows for the selection of a previously created Profile. We will utilize this feature to select the system generated USTFILEI Reorganization Profile. This Profile reorganizes the FILEINFO database component file.

Enter “S” on the left-hand prefix entry area alongside the USTFILEI Profile and then press the **ENTER** key to proceed to the next menu.

```
---------------------- FDR/UPSTREAM - Configure Profiles ---------- Row 1 of  9
COMMAND ===>                                                   SCROLL ===> CSR

    ADD a new profile      COMPRESS configuration data set    L display USTLOG

Please specify one of the following row commands: Edit, Browse, Add or Delete.

Command Profile  Prefix Tape IDRC Tapegdg Tapepref
------- -------- ------ ---- ---- ------- ----------------------------------
        GLOBAL    NO    YES  NO    YES    UPSTREAM.COPY?
        USTARCH   NO    YES  NO    YES    UPSTREAM.ARCHIVE
        USTCATLG  NO    YES  NO    YES    UPSTREAM.REORGCAT
        USTDUPFL  NO    NO
        USTFILEC  NO    YES  NO    YES    UPSTREAM.REORGDAT
  S     USTFILEI  NO    YES  NO    YES    UPSTREAM.REORGINF
****************************** Bottom of data ********************************
```

Figure 24 - Reorganization Profile - List of Profiles Menu

The next menu to appear contains the actual Profile options that can be specified. The following text provides a brief description of each field that needs to be specified for the sample profile we want to build. Additional information on these options and the other options not covered here are described in “USTCONFG Profile Options Parameter Reference” beginning on page 183.

PROFILE

Specifies the profile name being modified. In this case it is USTFILEI. This is a reserved Profile name used solely to reorganize the USTFILEI (FILEINFO) Database component.

TAPE

Specifies that you want reorganizations of the USTFILEI file to occur to mainframe tape. When this option is enabled, the TAPEPREF and the TUNIT or TAPESTORCLAS options must also be specified.

In our example we will specify **"YES"**.

IDRC

This option only applies to 3480/3490 cartridge drives. Specifying "YES" causes FDR/UPSTREAM to specify the TRTCH=COMP parameter to request hardware (IDRC) compaction when dynamically allocating the reorganization dataset.

In our example we will specify **"YES"**.

TAPEGDG

This parameter causes the reorganization backup dataset to be allocated as a new generation of a GDG type dataset. TAPEGDG=YES is recommended since GDG processing will automatically delete old generations. GDG bases must be predefined in the appropriate system catalog before they can be used by FDR/UPSTREAM-MVS.

In our example we will specify **"YES"**.

TAPEPREF

Specifies the high level qualifiers of the dataset name that will be created to hold the backup of the USTFILEI Database component. If the TAPEGDG option is specified as NO, then the TAPEPREF value can be up to 26 characters long and the USTREORG utility program will aappend the date and time in the format ".Dmmyydd.Thhmmss" to the generated dataset name in order to form a unique name. If the TAPEGDG option is specified as YES, then the TAPEPREF value can be up to 35 characters long and will have the standard GDG type suffix of ".GnnnnV00" appended.

In our example we will specify "**UPSTREAM.REORG.USTFILEI**".

TUNIT

Specifies an MVS tape unit name that will be used to hold the reorganization backup dataset specified in the TAPEPREF field.

In our example we will specify **"TAPE"**.

EXPDT

Specifies the Julian format expiration date of the datasets created when using this profile. The meaning of this value is identical to the JCL parameters EXPDT. EXPDT only accepts a 2-digit year number. Year values less than 70 are assumed to be in the 21st century (20xx). This parameter is mutually exclusive with RETPD.

In our example we will specify **"99000"** to indicate catalog retention control by the tape management system.

DASD

Specifies that you want reorganizations of the USTFILEI file to occur to mainframe DASD. When this option is enabled, the DASDPREF and one of the DUNIT, VOL, or STORCLAS options must also be specified.

In our example we will specify **"YES"**.

DASDGDG

Specifies that any DASD datasets that are created with this profile are to be allocated as new generations of a GDG. DASDGDG is recommended since GDG processing will automatically delete old generations. GDG bases must be predefined in the appropriate system catalog before they can be used by FDR/UPSTREAM-MVS. Be sure you define sufficient generations in the GDG base to retain all required backups.

In our example we will specify **"YES"**.

DASDPREF

Specifies the high level qualifiers of the DASD dataset name that will be created to hold the backup of the USTFILEI Database component. If the TAPEGDG option is specified as NO, then the DASDPREF value can be up to 26 characters long and the USTREORG utility program will aappend the date and time in the format ".Dmmyydd.Thhmmss" to the generated dataset name in order to form a unique name. If the DASDGDG option is specified as YES, then the DASDPREF value can be up to 35 characters long and will have the standard GDG type suffix of ".GnnnnV00" appended.

In our example we will specify **"UPSTREAM.REORG.USTFILEI"**.

DUNIT

Specifies an MVS tape unit name that will be used to hold the reorganization backup dataset specified in the TAPEPREF field. The DUNIT and VOL fields are mutually exclusive.

In our example we will specify **"SYSDA"**.

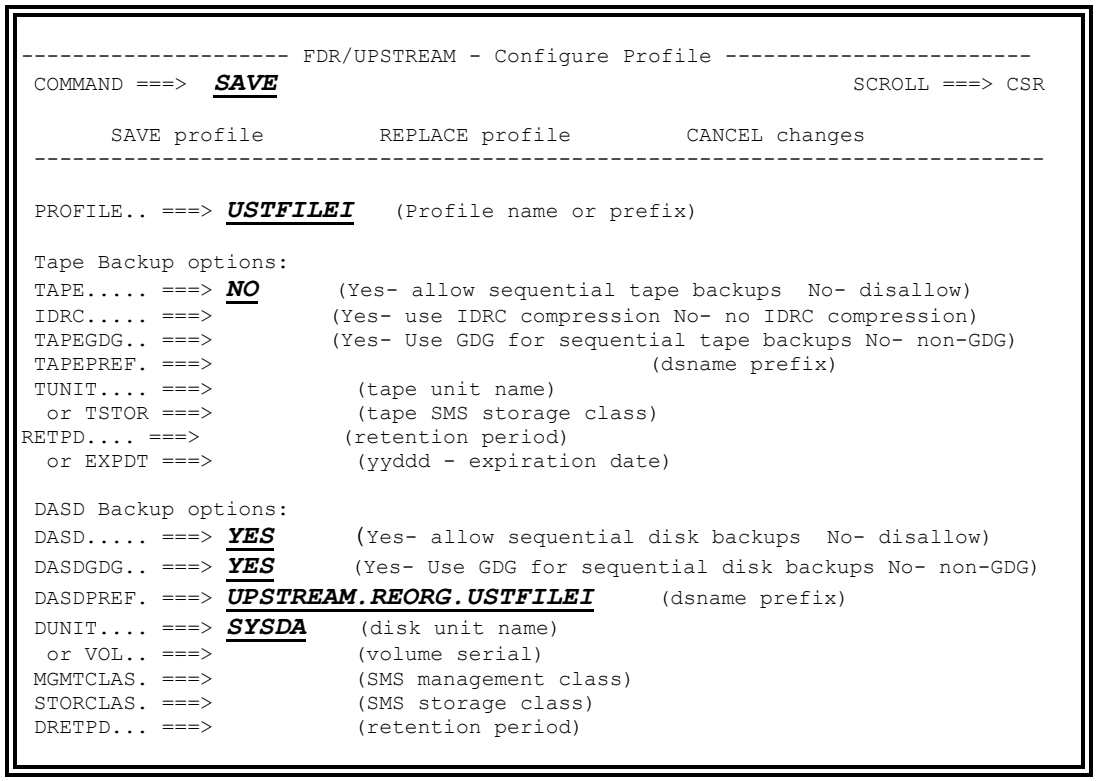


Figure 25 - Reorganization Profile - Configure Profile Options Menu

Once you have entered all these options into the menu, type “SAVE” on the command line and press the **ENTER** key. You have now created and saved a new FDR/UPSTREAM Database Reorganization Profile.

You should now refer to the section **“Activating a New or Modified Profile”** on page 34 for the steps necessary to enable your newly created Database Reorganization Profile.

Once you have activated your altered Reorganization Profile, you can use it to reorganize the appropriate FDR/UPSTREAM MVS Database component. Refer to the FDR/UPSTREAM MVS manual “UPSTREAM Database Management” section for additional information on maintaining the database.

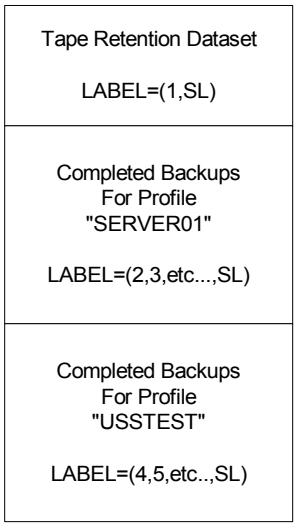
4.6 Creating a Deferred Merge Profile

The group of reserved profiles that begin with the prefix of "**USTMER"** (xx is any 2 alphanumeric characters) must be defined if you are going to perform DEFERRED MERGE BACKUPs. Deferred Merge Backups are taken for profiles with the MERGE=DEFER option set in their configuration entry. These profiles are used during the execution of the USTMERGE utility which completes the Deferred Merge Backups. You must have at least one USTMERxx profile if you intend to perform DEFERRED MERGE BACKUPs. Additional USTMERxx profiles can be used to segregate deferred merge processing for various backup profiles to provide more control over merging and allow multiple merge tasks to run concurrently. Assignment of a backup profile to a merge profile can be done via the GROUPID operand in the configuration or can be assigned dynamically at execution time. Each USTMERxx profile must be enabled for sequential tape backups. The tape backup parameters will be used to dynamically allocate an output tape to which the completed MERGE BACKUPs will be written. The TAPEPREF value will be used to create an empty data set as the first file on the tape. Additional files will be added to the tape to contain the completed MERGE BACKUPs.

Note: If the NEWTAPE option is specified on the console command which invokes the USTMERGE utility, the USTMERxx profile specified must exist however the parameters in the profile will not actually be used since each backup is written to a unique tape. No Retention File is written to the tapes created just the USTMERGE output files.

The USTMERGE Tape Retention Dataset is created as the first file on the tape set is used to establish the retention period for all tape volumes that will make up the tape set. This dataset is always empty and contains no records. Certain OS/390 tape management systems control the retention of all the files on a multi-file tape volume set by the retention period specified on the first file of the tape set, hence the need for the existence of this dataset. You should review your OS/390 tape management system documentation to determine if this is the methodology that your system uses. Subsequent files placed on the tape set are the completed Deferred Merge Backups.

For example, running the USTMERGE utility for the Backup Profiles "SERVER01" and "USSTEST" would result in tape set logically laid out as follows:



To get started, enter the FDR/UPSTREAM TSO/ISPF Interface via your installation defined method. From the main menu specify option number 5, "PROFILE", and press the **ENTER** key.

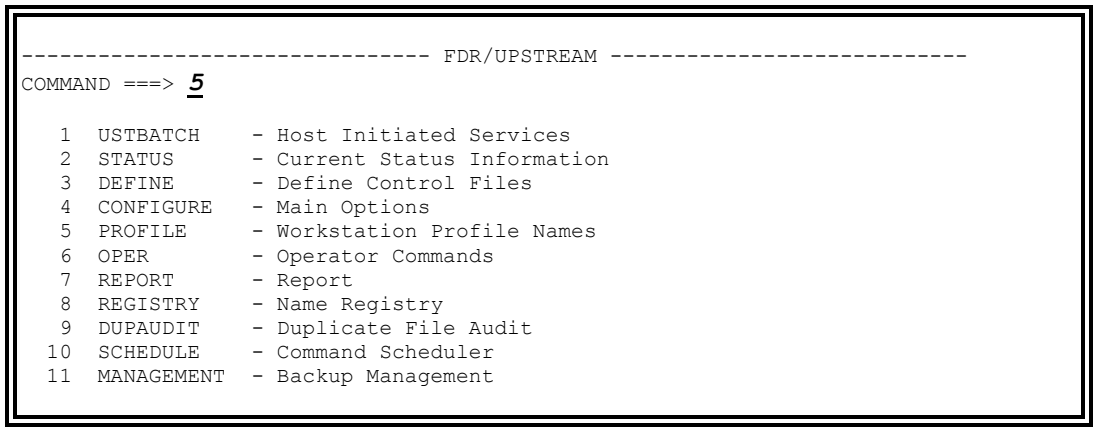


Figure 26 - Deferred Merge Profile -Selecting the PROFILE Definition Option

The next menu to appear requires you to specify the input and output configuration dataset and member names for the configuration operations you are going to perform. This panel is described in depth in the “Creating a Backup Profile” section on page 39.

When you have completed entering all the fields on this menu press the **ENTER** key.

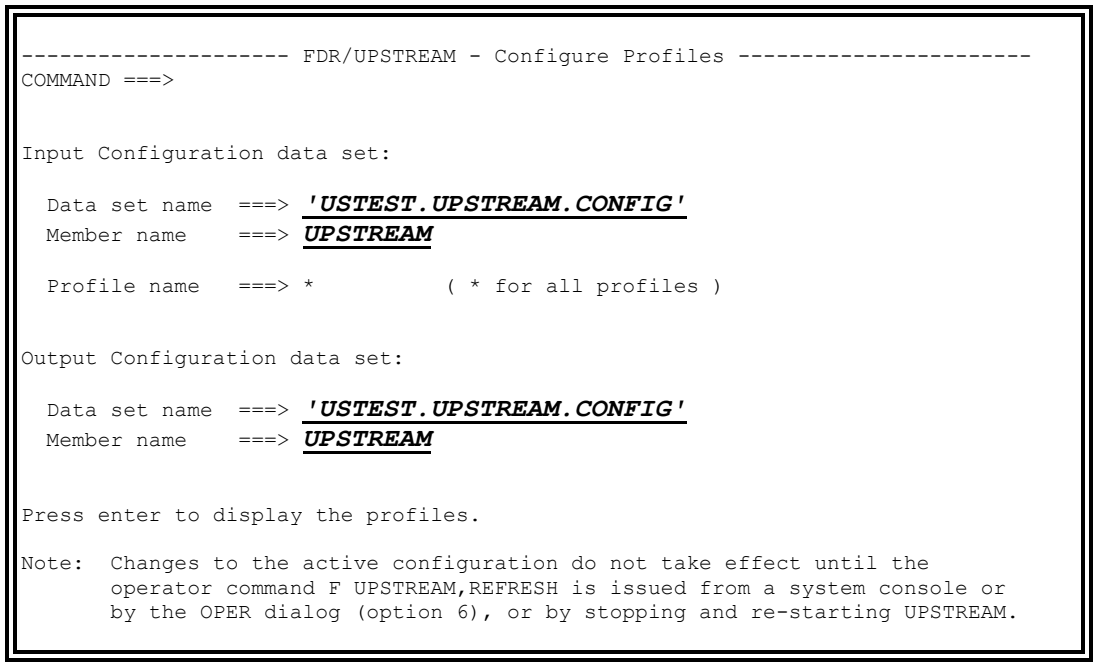


Figure 27 - Deferred Merge Profile - Configuration File Specification Menu

The next menu to appear allows for the selection of a previously created Backup Profile. We will utilize this feature to add a new Profile named USTMER01.

Enter “**ADD USTMER01**” on the command line of this panel and press the **ENTER** key to proceed to the next menu.

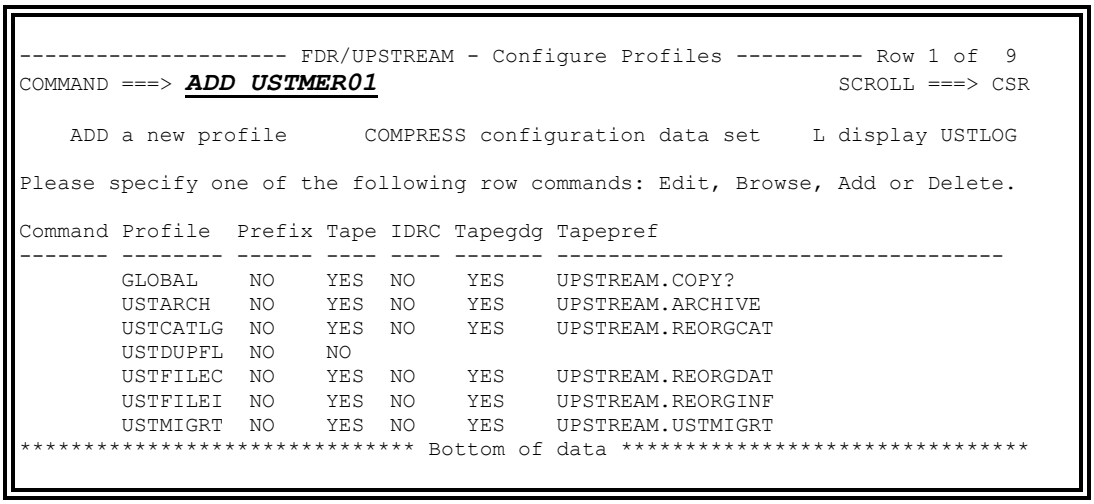


Figure 28 - Deferred Merge Profile - List of Profiles Menu

The next menu to appear contains the actual Profile options that can be specified. The following text provides a brief description of each field that needs to be specified for the sample profile we want to build. Additional information on these options and the other options not covered here are described in “USTCONFG Profile Options Parameter Reference” beginning on page 183.

PROFILE

Specifies the Deferred Merge Profile name to be defined. It must begin with “USTMER” and have a suffix of a two character alphanumeric identifier. This suffix is used as an identifier for FDR/UPSTREAM Grouping type Deferred Merge operations or as just a unique identifier of the Deferred Merge Profile.

In our example we will set the name to **“USTMER01”** and we will not be using Grouping.

IDRC

This option only applies to 3480/3490 cartridge drives and causes FDR/UPSTREAM to specify the TRTCH=COMP parameter when dynamically allocating the Deferred Merge Tape Retention dataset as the first file of the created tape set. IDRC compaction may be used even if compaction is your system default.

In our example we will specify **“YES”**.

TAPEGDG

TAPEGDG=YES indicates that the creation of the Tape Retention Dataset is to be as a new generation of a GDG. TAPEGDG=YES is recommended since GDG processing will automatically delete old generations. GDG bases must be predefined in the appropriate system catalog before they can be used by FDR/UPSTREAM-MVS. Be sure you define sufficient generations in the GDG base to retain all required Deferred Merge Backups.

In our example we will specify **“YES”**.

TAPEPREF

Specifies the high level qualifiers of the dataset name to be used for the Tape Retention Dataset. If the TAPEGDG option is not specified as YES, the TAPEPREF value can be up to 26 characters long. USTMERGE will add the date and time in the format "Dmmyydd.Thhmmss" at

the end of the dataset name to form a unique name. . If the TAPEGDG option is specified as YES, then the TAPEPREF value can be up to 35 characters long and will have the standard GDG type suffix of ".GnnnnV00" appended.

This value may contain a ? within the name, just like the similar fields in the backup profiles processed by vaulting. USTMERGE will substitute the copy number (2 to 9) for the ? character in the name of the Tape Retention Dataset.

In our example we will specify "**UPSTREAM.USTMER01**".

TUNIT

Specifies an MVS tape unit name for the Tape Retention Dataset specified by this profile to be dynamically allocated on. This option is mutually exclusive with the TSTOR option.

In our example we will specify **"TAPE"**.

EXPDT

Specifies the Julian format expiration date of the Tape Retention Dataset created when using this profile. The meaning of this value is identical to the JCL parameters EXPDT. EXPDT only accepts a 2-digit year number. Year values less than 70 are assumed to be in the 21st century (20xx). This parameter is mutually exclusive with RETPD.

In our example we will specify **"99000"** to indicate catalog retention control by the tape management system.

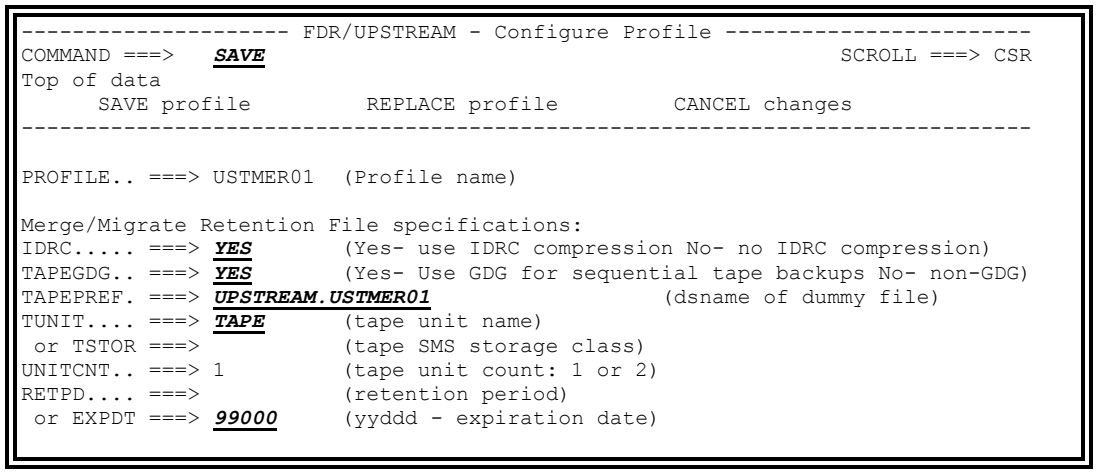


Figure 29 - Deferred Merge Profile - Configure Profile Options Menu

Once you have entered all these options into the menu, type "SAVE" on the command line and press the **ENTER** key. You have now created and saved a new FDR/UPSTREAM Deferred Merge Profile.

You should now refer to the section **"Activating a New or Modified Profile"** on page 34 for the steps necessary to enable your newly created Deferred Merge Profile.

5

5 Performing A Backup

FDR/UPSTREAM USS is designed have all functions initiated from an MVS BATCH JOB or the TSO/ISPF User Interface. The following sections describe initiating a backup of an entire USS file system from an OS/390 USTBATCH JOB by directly specifying the control cards or utilizing the FDR/UPSTREAM ISPF Interface to create the JCL and control cards for you.

5.1 Step # 1 - Build a Backup Profile

A Backup Profile is required to perform an FDR/UPSTREAM USS backup. Construction of a Backup Profile is covered in full detail in section “Creating a Backup Profile“ beginning on page 39. In our samples below we will utilize a Backup Profile named “TEST” for illustrative purposes. You should substitute a more appropriate name for the remote system you will be backing up. A good example of a Backup Profile name would be the name of the remote system or server that is the target of this backup. Remember that the Backup Profile Name is limited to eight (8) characters.

5.2 Step # 2 - Define Backup Dataset GDGs (Optional)

If you specified either TAPEGDG=YES or DASDGDG=YES when you constructed your Backup Profile, then you must build GDG Base definitions for that Backup Profile to use. The following sample JCL illustrates how to construct these definitions.

```
//*
//*      DEFINE GDG BASE TO USE WITH FDR/UPSTREAM
//*
//DEFINE   EXEC PGM=IDCAMS
//SYSPRINT DD   SYSOUT=*
//SYSIN    DD   *
    DEFINE GDG (NAME(UPSTREAM.TEST.COPY1) LIMIT(20) SCRATCH)
    DEFINE GDG (NAME(UPSTREAM.TEST.COPY2) LIMIT(20) SCRATCH)
/*
//
```

Figure 30 - Defining a GDG Base

5.3 Step # 3 - Select a Method of Initiation

There are two methods of initiating a backup that we will discuss here: Initiation via MVS BATCH JOB and Initiation via the TSO/ISPF Interface.

5.3.1 First Time Full Backup Initiation via MVS BATCH JOB

Using the sample JCL outlined in Figure 31 - First Time Full Backup Initiation via MVS BATCH JOB, below will allow a simple and quick way of getting started performing FDR/UPSTREAM backups of your USS files. The JCL will at a minimum require some customization for your particular site requirements for the JOB card and STEPLIB specifications. You should review the table of parameter descriptions that follow the sample JCL to review the meaning of the actual keywords specified.

The sample JCL as provided performs a First-Time FULL backup of all files in your USS file system ROOT directory and all subdirectories of the ROOT. Please review this specification carefully to determine that this is what you want to do.

When you have completed reviewing the JCL and parameters, submit the JCL and the backup will begin execution.

```
//jobname  JOB  (accounting,information),'UPSTREAM BACKUP',
//         MSGLEVEL=(1,1),CLASS=A,MSGCLASS=X
//*
//*  ********************************************************
//*  ***  BACKUP UNIX SYSTEMS SERVICES FILE SYSTEM TO TAPE  ***
//*  ********************************************************
//*
//BACKUP    EXEC PGM=USTBATCH
//STEPLIB   DD   DISP=SHR,DSN=your.upstream.load.library
//SYSUDUMP  DD   SYSOUT=*
//USTLOG    DD   SYSOUT=*
//USTPARM   DD   *
APPLPREF=UPSTR                      * VTAM APPL Prefix
USAPPL=UPSTREAM                     * Name of UPSTREAM Started TASK VTAM APPL
LOGMODE=#INTER                      * VTAM LOGMODE to use from USTBATCH to STC
CONV=WAIT                           * WAIT for Backup to complete before ending
*
TCPTARG=192.168.75.249..2972        * IP Address and Port of USS Daemon
ACTION=1                            * BACKUP
BACKUPPROFILE=TEST                  * Backup Profile to Use
MERGE=3                             * First Time Full Type Backup
STORAGETYPE=3                       * Sequential Tape
COMPRESSLEVEL=0                     * No Compression of Backup Data
RESTARTTYPE=0                       * Do Not Allow Restarts of This Backup
LOGNONFATAL=Y                       * Log All Errors
*
SPECNUMBER=1                        * Start of File Specification # 1
FILES=/*                            * Backup All Files in the ROOT
SPECTYPE=0                          * Include All Files in the "Files" Keyword
SUBDIRECTORIES=Y                    * Include All Subdirectories
HIDDENFILES=Y                       * Backup All Hidden Files as Well
ENDPARM                             * End of FDR/UPSTREAM USTBATCH Parameters
/*
//
```

Figure 31 - First Time Full Backup Initiation via MVS BATCH JOB

The following table outlines each parameter, its specified value, and what it means to the example backup request. The USTBATCH type parameters are more fully documented in the "USTBATCH Parameter Reference" section beginning on page 190. The USS Process type parameters are documented in the "USS Process Keyword Parameter Reference" section beginning on page 196.

Parameter	Value	Parameter Type	Description
APPLPREF	**UPSTR**	USTBATCH	VTAM APPL Prefix
USAPPL	**UPSTREAM**	USTBATCH	Name of UPSTREAM Started Task VTAM APPL
LOGMODE	**#INTER**	USTBATCH	VTAM LOGMODE to use from BATCH to STC
CONV	**WAIT**	USTBATCH	WAIT for Backup to complete before ending
TCPTARG	**(see text)**	USTBATCH	IP Address and Port of USS Process or Daemon
ACTION	**1**	USS Process	Backup
BACKUPPROFILE	**TEST**	USS Process	Backup Profile to Use
MERGE	**3**	USS Process	First Time Full Type Backup
STORAGETYPE	**3**	USS Process	Sequential Tape
COMPRESSLEVEL	**0**	USS Process	No Compression of Backup Data
RESTARTTYPE	**0**	USS Process	Do Not Allow Restarts of This Backup
LOGNONFATAL	**Y**	USS Process	Log All Errors
SPECNUMBER	**1**	USS Process	Start of File Specification # 1
FILES	**/***	USS Process	Backup All Files in the ROOT
SPECTYPE	**0**	USS Process	Include All Files in the “Files” Keyword
SUBDIRECTORIES	**Y**	USS Process	Include All Subdirectories of ROOT
HIDDENFILES	**Y**	USS Process	Backup All Hidden Files as Well
ENDPARM	**n/a**	USTBATCH	End of Parameters

Figure 32 - Backup Initiation via MVS BATCH JOB - USTBATCH Parameters

When you have completed reviewing the JCL and parameters, submit the JCL for OS/390 BATCH processing and the backup will begin execution. When the backup completes the output should be similar to the output illustrated below.

```
UST728  14:56:31 ACB USTST001 OPENED TO VTAM

UST729  14:56:33 APPC ALLOCATE TO USTSAPPL SUCCESSFUL
UST734  14:56:33 REQUEST SENT TO ONLINE INITIATOR FOR 192.168.75.253,2958
UST735  14:56:47 REQUEST CONFIRMED BY ONLINE INITIATOR


------- FDR/UPSTREAM -MVS TASK MESSAGES FOLLOW:
-UST197  14:56:33 C0A84BFD REMOTE INITIATION TO 192.168.75.253..2958   FROM USTS001 -
USTBATCH JOBNAME=US09752A USERID=UPSTR
-UST229  15:17:48 TEST001  REQUEST USING "TEST    " CONFIGURATION ENTRY
-UST233  15:17:48 TEST001  STARTING BACKUP PROCESS, TYPE=DASD LU=C0A84BFD BACKUP=FULLM
-UST234  15:17:48 TEST001  BACKUP DATE: 03/22/2000 - ESTIMATED SIZE:   550,300 KB
-UST001  15:17:54 TEST001  TO DSN: USTEST.T05090.COPY1.G0005V00
-UST078  15:53:30 TEST001  BACKUP STATISTICS (TOTALS RECEIVED):
-UST079  15:53:30 TEST001  VERSIONDATE: 000322145633;          19,308 FILES RECEIVED
245 DIRECTORIES RECEIVED
-UST080  15:53:30 TEST001           171,669 DATA-BLOCKS;     550,310,963 DATA-BYTES
RECEIVED
-UST173  15:53:30 TEST001  BACKUP FULL COMPLETED SUCCESSFULLY (LU=C0A84B2D)
-UST224  15:53:30 TEST001        24.748 CPU SECOND(S) USED IN BACKUP
-UST248  15:53:30 TEST001  C0A84BFD BACKUP   PROCESS DETACHED TASKID=0002
------- END OF FDR/UPSTREAM -MVS TASK MESSAGES


UST747E 15:53:31 PROCESS COMPLETED - RETURN CODE = 00, TARGET = 192.168.75.253,2958

UST717E 15:53:31 USTBATCH COMPLETED SUCCESSFULLY
```

Figure 33 - Backup Initiation via MVS BATCH JOB - USTBATCH Output

```
Wed Mar 15 15:58:28 2000 User: OMVSKERN, Group: ALLUSERS, PID: 50331682
   Msg #PC3101I Remote initiate received
        A remote initiated function will now be processed.
Wed Mar 15 15:17:48 2000 User: OMVSKERN, Group: ALLUSERS, PID: 50331682
   Msg #PC2050I Backup started
   Profile: TEST001, UPSTREAM v3.2.0 (USS)
Wed Mar 15 15:53:30 2000 User: OMVSKERN, Group: ALLUSERS, PID: 50331682
   Msg #PC2051D Backup successful
   19308 files 550,994,961 data bytes 990 symbolic links 12152 hard links 647,407 chars/sec
   551,310,963 bytes transferred file and non-file data
   Version date: 000315155825
```

Figure 34 - Backup Initiation via MVS BATCH JOB - USS “upstream.log” File Output

5.3.2 First Time Full Backup Initiation via TSO/ISPF Interface

This section describes the step by step process of generating all the USTBATCH parameters for your backup request via the TSO/ISPF Interface. This method is more time consuming and involved than using the sample JCL and parameters outlined in the “Backup Initiation via MVS BATCH JOB” section above, however it allows for a greater level of customization to the backup request. Be aware that a large number of the parameters available on these menus do not apply to the USS environment and are present to support the FDR/UPSTREAM specification for the backup of non-USS systems.

In the sample menu walkthrough we will be constructing the JCL and parameters for an FDR/UPSTREAM USS First Time FULL backup of your complete USS ROOT file system and all of the subdirectories of ROOT. Please review this specification carefully to determine that this is what you want to do.

Step # 1 - Select USTBATCH - Host Initiated Services

To get started, enter the FDR/UPSTREAM TSO/ISPF Interface via your installation defined method. From the main menu specify option number 1, “USTBATCH”, and press ENTER.

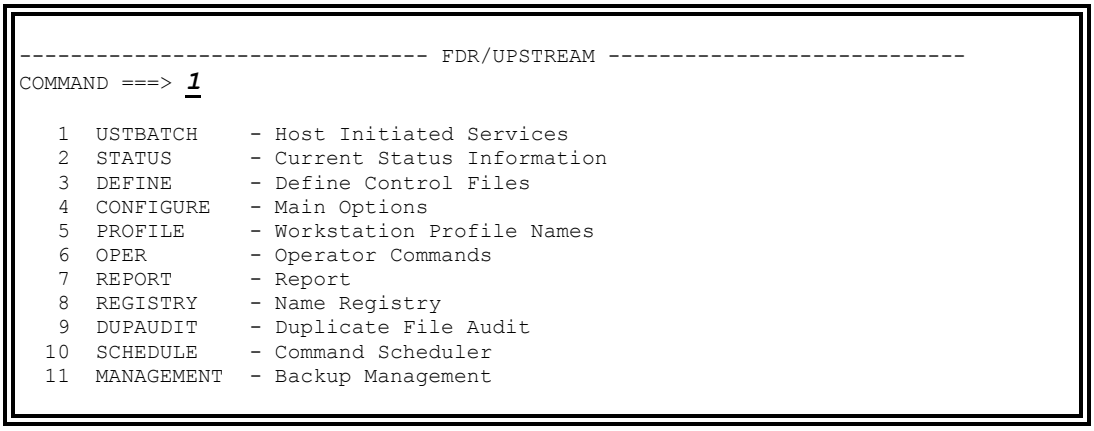


Figure 35 - First Time Full Backup via ISPF - Selecting the USTBATCH Option

Step # 2 - Specify USTBATCH Specific Parameters

The next menu to appear allows for the specification of the USTBATCH specific parameters required for the processing of the backup request. The menu items of the greatest interest are highlighted in the menu. A table follows the menu and briefly describes each highlighted menu field. Each value is discussed in greater detail in the “USTBATCH Parameter Reference” that begins on page 190.

For the purposes of this walkthrough, if you have selected the default setting for these fields during FDR/UPSTREAM MVS installation, you will only need to specify the “TCP/IP addr” and “port” fields to specify the IP address and TCP Port Number of your OS/390 system. If you do not know this value it can be located in the FDR/UPSTREAM MVS Started Task USTLOG output. Look for message number UST280 and the IP address will be located immediately after the “IPA=” field of this message.

Once you have completed entering all the fields of this menu, press the ENTER key to proceed to the next menu.

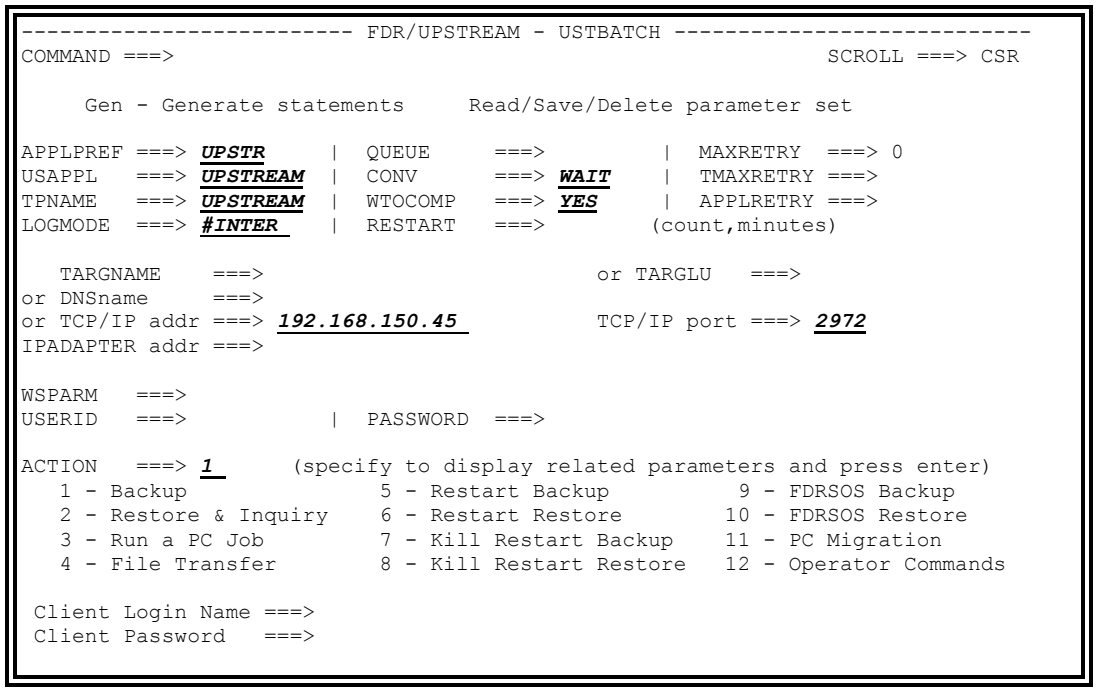


Figure 36 - Backup via ISPF - Setting USTBATCH Options

Menu Field	Description
APPLPREF	The 5 character prefix of the VTAM APPLID to be used by USTBATCH for its communications with the FDR/UPSTREAM MVS Started Task.
USAPPL	The VTAM APPLID of the FDR/UPSTREAM Started Task.
TPNAME	The Transaction Program Name to be used during LU 6.2 communications.
LOGMODE	The VTAM LOGMODE to be used for communicating with the FDR/UPSTREAM Started Task.
CONV	Whether or not the USTBATCH requesting JOB should wait for the completion of the request submitted to the Started Task or end immediately after the request is accepted.
WTOCOMP	Should a WTO Completion message be issued to the MVS system operator when this request finishes.
TCP/IP ADDR	The IP address of the OS/390 system running the USS files you wish to backup.
PORT	The TCP port number configured in the FDR/UPSTREAM USS process or daemon that it will receive requests on. 2972 is the default for the USS process but not for USTBATCH so it must be specifically coded here.
ACTION	Which function is to be performed by this set of generated statements.

Step # 3 - Specify USS Files to be Processed

The next menu to appear is the first in a series of four menus that allow for the specification of the USS file system related parameters for this backup request. The table following the menu below describes each parameter that will be important for the request we are constructing. Please review this table, enter the appropriate values into the menu, and press the ENTER key to proceed to the next menu.

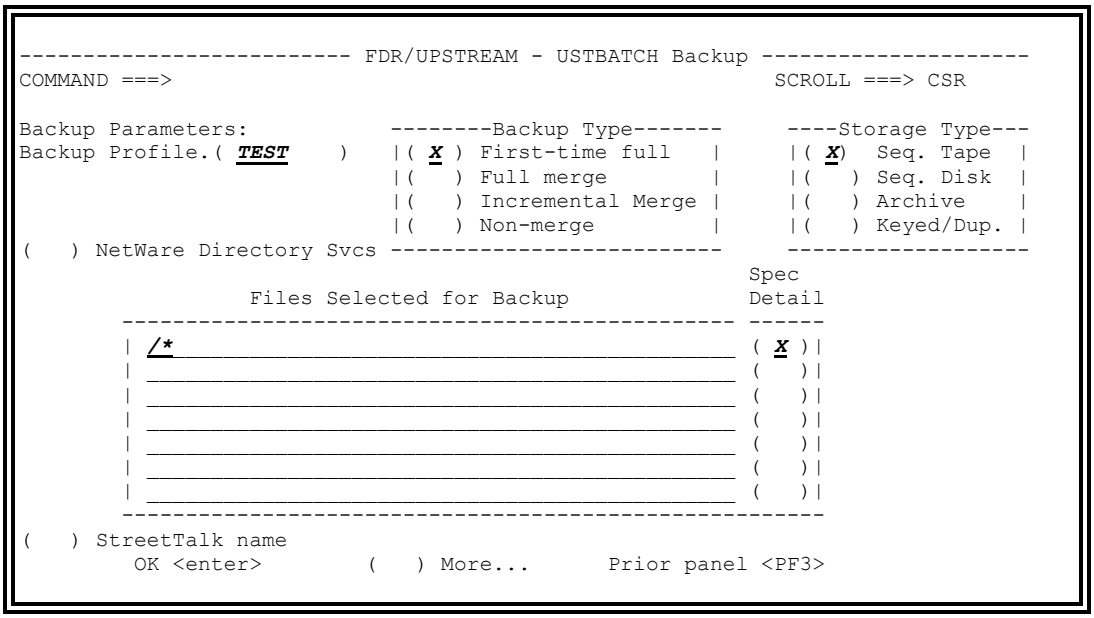


Figure 37 - Backup via ISPF - Specifying Files to be Backed Up

Menu Field	Description
Backup Profile	Specifies the Backup Profile Name to be used for this backup request
Backup Type	An initial First-Time Full type Backup is required to establish which files will be covered by this Backup Profile.
Storage Type	This backup will go directly to an MVS sequential dataset on tape.
Files Selected for Backup	The USS file specification for the directory to begin backing up from. In this case we will be starting with the ROOT of the file system.
Spec Detail	This indicates that we wish to display the “Spec Detail” menu options screen next so that we can specify additional information about our “/*” files specification.

Step # 4 - Specify Included File Specification Options

The next menu to appear is the second in a series of four menus that allow for the specification of the USS file system related parameters for this backup request. The table following the menu below describes each parameter that will be important for the request we are constructing. Please review this table, enter the appropriate values into the menu, and press the ENTER key to proceed to the next menu.

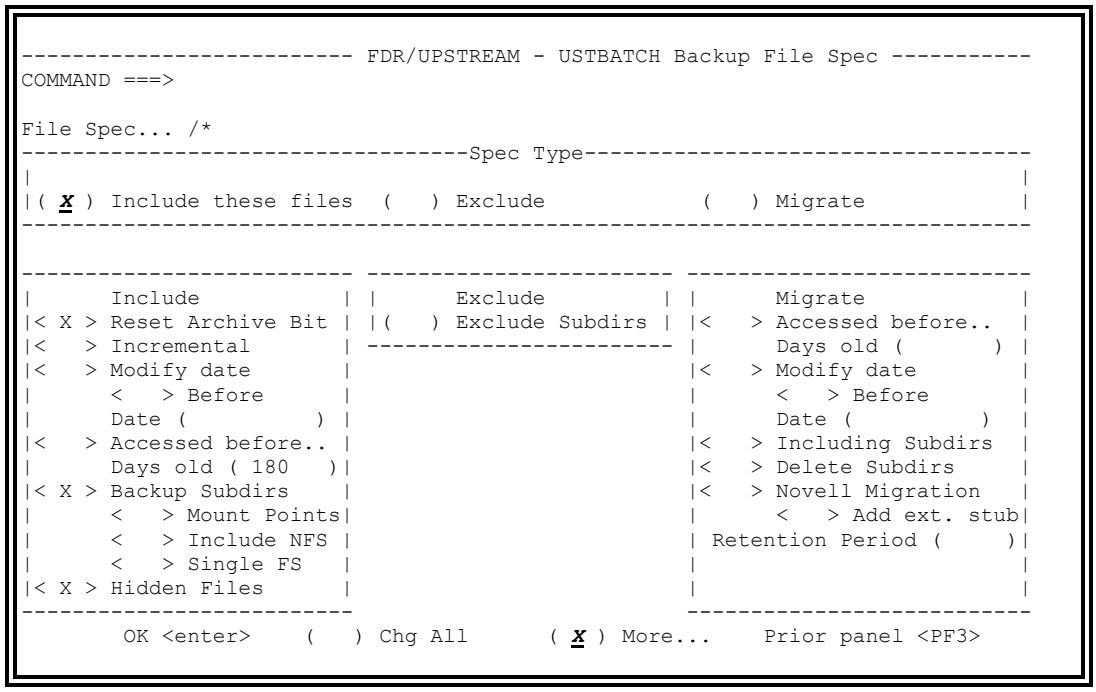


Figure 38 - Backup via ISPF - Specifying Included File Specification Options

Menu Field	Description
Include these files	Selection of this item indicates that only the options in the “Include” box on this screen will apply to this specification. The “Include These Files”, “Exclude”, and “Migrate” options are mutually exclusive for a single file specification.
Backup Subdirs	When selected this option indicates that the backup should recurse through all subdirectories of the file specification selecting all files and subdirectories found.
Hidden Files	All files that are marked as “Hidden” or “read-only” will be selected by this backup request.
More…	This menu option causes the display of the Non-File Data Specification Menu to occur when you press the ENTER key from this menu.

Step # 5 - Specify Non-File Data Attributes

The next menu to appear is the third in a series of four menus that allow for the specification of the USS file system related parameters for this backup request. The table following the menu below describes each parameter that will be important for the request we are constructing. Please review this table, enter the appropriate values into the menu, press the ENTER key, and then press the PF3 key to return to the previous menu.

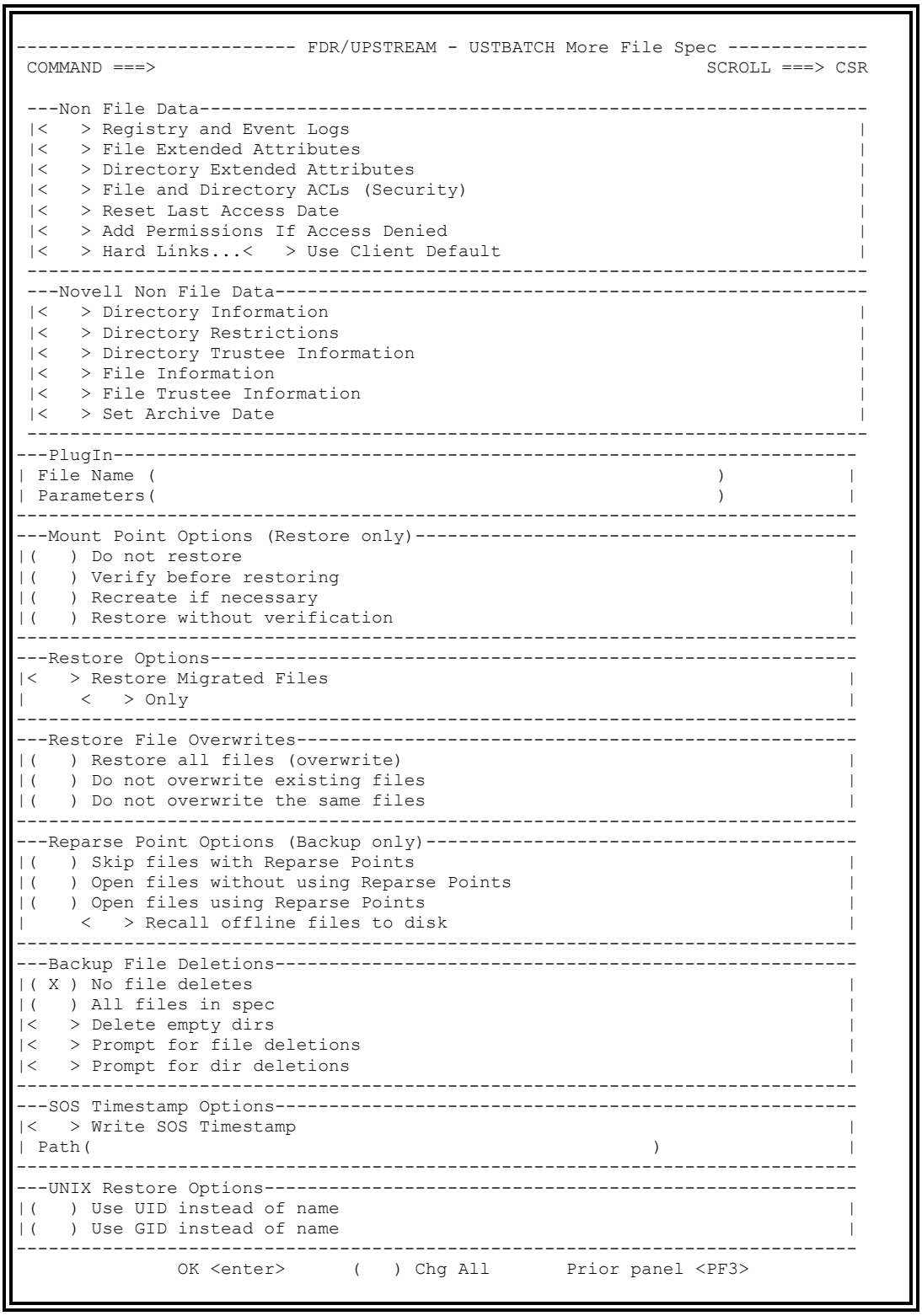


Figure 39 - Backup via ISPF - Specifying Non-File Data Attributes

Menu Field	Description
Non File Data	None of these options should be selected for the backup of a USS File System.
Backup File Deletions	Select the “No File Deletes” option to disable file deletions after they have been backed up.

Step # 6 - Specifying Compression, Restart, and Miscellaneous Attributes

The next menu to appear is the final in a series of four menus that allow for the specification of the USS file system related parameters for this backup request. The table following the menu below describes each parameter that will be important for the request we are constructing. Please review this table, enter the appropriate values into the menu, press the ENTER key, and then press the PF3 key **twice** to return to the initial backup specifications menu.

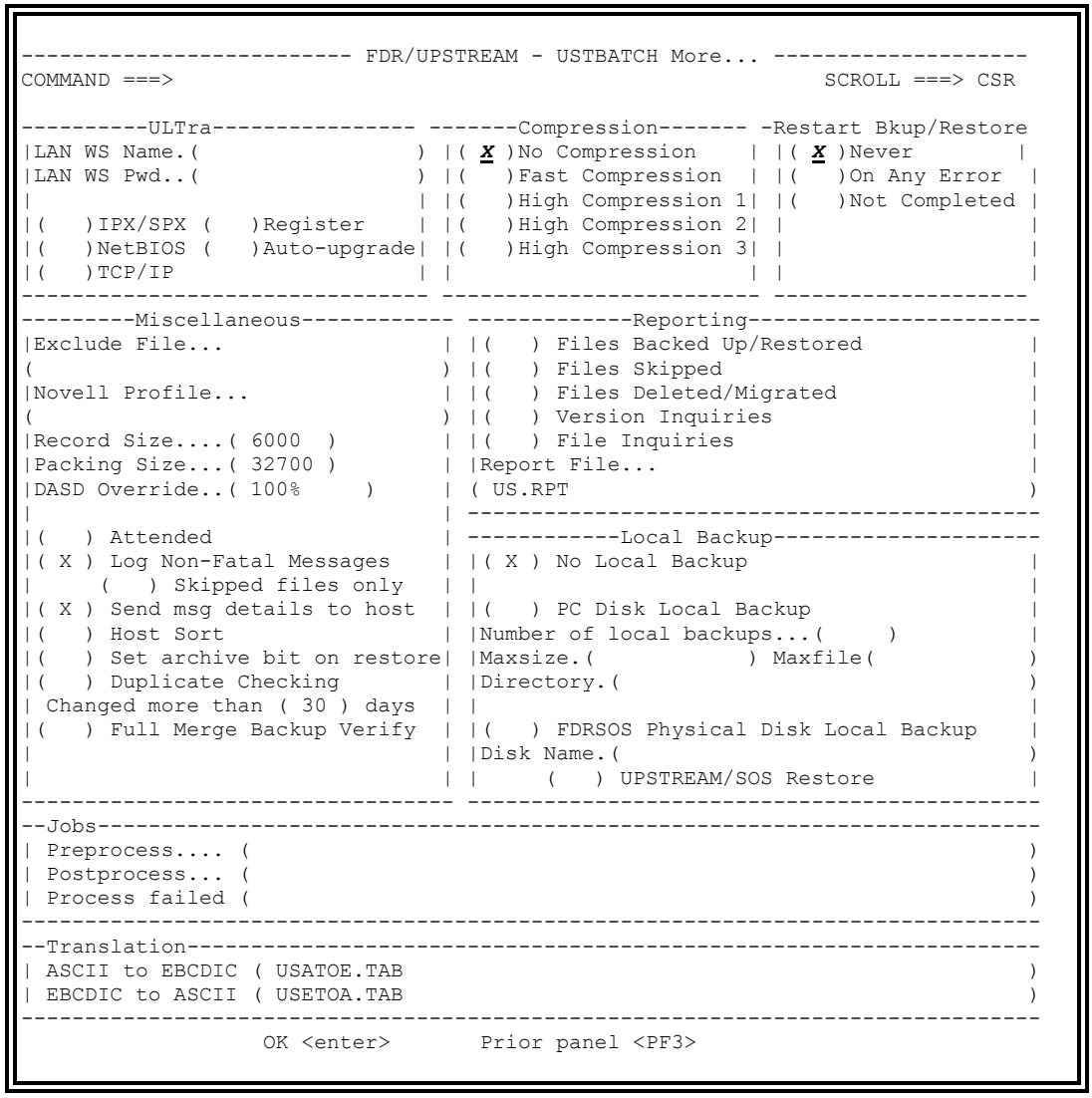


Figure 40 - Backup via ISPF - Selection of the MORE… Options

Menu Field	Description
Compression	**Compression is NOT recommended**. The FDR/UPSTREAM USS Process data compression routines will utilize significant System/390 CPU to compress the data prior to transmission to the FDR/UPSTREAM Started Task. The major advantage of compression is to reduce transmission time when communicating via a network. The USS Process communicates with the MVS Started Task on the same system without use of an external network.
Restart Bkup/Restore	Restarting failed backup requests involves specific actions to be performed. For

Menu Field	Description
	simplicity in this example we will not allow restarts.
Log Non-Fatal Messages	All messages that are issued by the FDR/UPSTREAM USS process will be recorded in the FDR/UPSTREAM MVS Started Task USTLOG.
Local Backup	We will not be using the EMC Local Backup Disk Options in this example.

Step # 7 - Generate the USTBATCH Control Cards

You have now completed the specification of the FDR/UPSTREAM USS parameters that will be required to perform a backup. The next step is to initiate the generation of the OS/390 JCL to be used to invoke the USTBATCH utility program which submits your backup request to the FDR/UPSTREAM MVS Started Task for processing. You do this by specifying **"GEN"** on the "COMMAND" line of the ISPF panel below and pressing the ENTER key.

```
------------------------- FDR/UPSTREAM - USTBATCH -----------------------------
COMMAND ===> GEN                                              SCROLL ===> CSR

     Gen - Generate statements     Read/Save/Delete parameter set

APPLPREF ===> UPSTR     |  QUEUE     ===>          |  MAXRETRY  ===> 0
USAPPL   ===> UPSTREAM  |  CONV      ===> WAIT     |  TMAXRETRY ===>
TPNAME   ===> UPSTREAM  |  WTOCOMP   ===> YES      |  APPLRETRY ===>
LOGMODE  ===> #INTER_   |  RESTART   ===>         (count,minutes)

   TARGNAME    ===>                            or TARGLU   ===>
or DNSname     ===>
or TCP/IP addr ===> 192.168.150.45             TCP/IP port ===> 2972
IPADAPTER addr ===>

WSPARM   ===>
USERID   ===>            |  PASSWORD  ===>

ACTION   ===> 1      (specify to display related parameters and press enter)
   1 - Backup               5 - Restart Backup          9 - FDRSOS Backup
   2 - Restore & Inquiry    6 - Restart Restore        10 - FDRSOS Restore
   3 - Run a PC Job         7 - Kill Restart Backup    11 - PC Migration
   4 - File Transfer        8 - Kill Restart Restore   12 - Operator Commands

 Client Login Name ===>
 Client Password   ===>
```

Figure 41 - Backup via ISPF - Generating the USTBATCH Control Cards

Step # 8 - Specifying the JCL for USTBATCH

The panel below allows for the entry of installation specific JCL statements and options that may be required for proper execution the USTBATCH JOB. At a minimum you should alter the JCL to provide:

- A Valid, Installation Specific OS/390 JOBCARD
- A Proper STEPLIB DD Specification for the UPSTREAM/MVS Load Library

Selecting option # 2 on the command line and then pressing the ENTER key will allow you to review via the ISPF EDIT command the generated UPSTREAM/MVS USTBATCH JCL and parameters.

```
------------------------- FDR/UPSTREAM - USTBATCH -------------------------
COMMAND ===> 2

 Please select one of the following options or press the END key to cancel

   1 - Browse the generated JCL stream
   2 - Edit   the generated JCL stream
   3 - Submit the generated JCL stream
   4 - Save   the generated JCL in a data set
   5 - Run    the generated USTBATCH statements in the TSO foreground

JCL statements:
 ( //jobname  JOB (job acct data),'job id data',NOTIFY=userid            )
 ( //*                                                                   )
 ( //*                                                                   )
 ( //*                                                                   )
 ( //USTBATCH EXEC PGM=USTBATCH                                         )
 ( //STEPLIB  DD   DISP=SHR,DSN=your.upstream.load.library              )
 ( //SYSUDUMP DD   SYSOUT=*                                              )
 ( //USTLOG   DD   SYSOUT=*                                              )
```

Figure 42 - Backup via ISPF - Altering the USTBATCH JCL

Menu Field	Description
COMMAND	Select “2” in order to edit the generated USTBATCH JCL and parameters.
JOB Card Information	This field must specify a valid OS/390 JOB Card in order for the JCL generation to work properly. Please specify all applicable information that is applicable to your installation standards.
STEPLIB DD DSN	This field is the dataset name of the FDR/UPSTREAM MVS LOADLIB. This library must have been previously APF authorized. This DD statement is not required if the LOADLIB has been placed in the OS/390 LINKLST concatenation.

Step # 9 - Edit and Submit the Generated USTBATCH JCL

The following panel shows the generated JCL and USTBATCH control cards. It is suggested that they be reviewed, saved to a member of PDS in case a rerun is necessary, and then subsequently submitted for OS/390 BATCH processing.

```
File  Edit  Confirm  Menu  Utilities  Compilers  Test  Help
------------------------------------------------------------------------------
 EDIT------ USER01.SPFTEMP2.CNTL--------------------------- Columns 00001 00072
 Command ===>                                                  Scroll ===> CSR
 ****** ***************************** Top of Data ******************************
 000001 //jobname  JOB (job acct data),'job id data',NOTIFY=userid
 000002 //*
 000003 //*
 000004 //*
 000005 //USTBATCH EXEC PGM=USTBATCH
 000006 //STEPLIB  DD DISP=SHR,DSN= your.upstream.load.library
 000007 //SYSUDUMP DD SYSOUT=*
 000008 //USTLOG   DD SYSOUT=*
 000009 //*
 000010 //USTPARM  DD *
 000011 APPLPREF=UPSTR
 000012 USAPPL=UPSTREAM
 000013 LOGMODE=#INTER
 000014 *
 000015 TCPTARG=192.168.75.45
 000016 ACTION 1
 000017 BACKUPPROFILE TEST
            . . . . .
            . . . . .
 000064 *
 000065 ENDPARM
/*
//
```

This completes the steps necessary to construct a and submit an OS/390 BATCH initiated backup operation. The executing backup request can be monitored via the UPSTREAM/MVS ISPF STATUS panel (Option #2) or via the UPSTREAM/MVS STATUS operator command.

5.3.3 Incremental Backup Initiation via MVS BATCH JOB

Using the sample JCL outlined in Figure 31 - First Time Full Backup Initiation via MVS BATCH JOB, below will allow a simple and quick way of getting started performing FDR/UPSTREAM backups of your USS files. The JCL will at a minimum require some customization for your particular site requirements for the JOB card and STEPLIB specifications. You should review the table of parameter descriptions that follow the sample JCL to review the meaning of the actual keywords specified.

The sample JCL as provided performs a First-Time FULL backup of all files in your USS file system ROOT directory and all subdirectories of the ROOT. Please review this specification carefully to determine that this is what you want to do.

When you have completed reviewing the JCL and parameters, submit the JCL and the backup will begin execution.

```
//jobname  JOB  (accounting,information),'UPSTREAM BACKUP',
//         MSGLEVEL=(1,1),CLASS=A,MSGCLASS=X
//*
//*  ********************************************************
//*  ***  BACKUP UNIX SYSTEMS SERVICES FILE SYSTEM TO TAPE  ***
//*  ********************************************************
//*
//BACKUP    EXEC PGM=USTBATCH
//STEPLIB   DD   DISP=SHR,DSN=your.upstream.load.library
//SYSUDUMP  DD   SYSOUT=*
//USTLOG    DD   SYSOUT=*
//USTPARM   DD   *
APPLPREF=UPSTR                      * VTAM APPL Prefix
USAPPL=UPSTREAM                     * Name of UPSTREAM Started TASK VTAM APPL
LOGMODE=#INTER                      * VTAM LOGMODE to use from USTBATCH to STC
CONV=WAIT                           * WAIT for Backup to complete before ending
*
TCPTARG=192.168.75.249..2972        * IP Address and Port of USS Daemon
ACTION=1                            * BACKUP
BACKUPPROFILE=TEST                  * Backup Profile to Use
MERGE=2                             * Incremental Type Backup
STORAGETYPE=3                       * Sequential Tape
COMPRESSLEVEL=0                     * No Compression of Backup Data
RESTARTTYPE=0                       * Do Not Allow Restarts of This Backup
LOGNONFATAL=Y                       * Log All Errors
*
SPECNUMBER=1                        * Start of File Specification # 1
FILES=/*                            * Backup All Files in the ROOT
SPECTYPE=0                          * Include All Files in the "Files" Keyword
SUBDIRECTORIES=Y                    * Include All Subdirectories
HIDDENFILES=Y                       * Backup All Hidden Files as Well
ENDPARM                             * End of FDR/UPSTREAM USTBATCH Parameters
/*
//
```

Figure 43 - Incremental Backup Initiation via MVS BATCH JOB

The following table outlines each parameter, its specified value, and what it means to the example backup request. The USTBATCH type parameters are more fully documented in the "USTBATCH Parameter Reference" section beginning on page 190. The USS Process type parameters are documented in the "USS Process Keyword Parameter Reference" section beginning on page 196.

When you have completed reviewing the JCL and parameters, submit the JCL for OS/390 BATCH processing and the backup will begin execution. When the backup completes the output should be similar to the output illustrated below.

```
UST728  14:56:31 ACB USTST001 OPENED TO VTAM

UST729  14:56:33 APPC ALLOCATE TO USTSAPPL SUCCESSFUL
UST734  14:56:33 REQUEST SENT TO ONLINE INITIATOR FOR 192.168.75.253,2958
UST735  14:56:47 REQUEST CONFIRMED BY ONLINE INITIATOR


------- FDR/UPSTREAM -MVS TASK MESSAGES FOLLOW:
-UST197  14:56:33 C0A84BFD REMOTE INITIATION TO 192.168.75.253..2958   FROM USTS001 -
USTBATCH JOBNAME=US09752A USERID=UPSTR
-UST229  15:17:48 TEST001  REQUEST USING "TEST    " CONFIGURATION ENTRY
-UST233  15:17:48 TEST001  STARTING BACKUP PROCESS, TYPE=DASD LU=C0A84BFD BACKUP=INCR
-UST234  15:17:48 TEST001  BACKUP DATE: 03/22/2000 - ESTIMATED SIZE:    50,300 KB
-UST001  15:17:54 TEST001  TO DSN: USTEST.T05090.COPY1.G0002V00
-UST078  15:53:30 TEST001  BACKUP STATISTICS (TOTALS RECEIVED):
-UST079  15:53:30 TEST001  VERSIONDATE: 000322145633;            398 FILES RECEIVED
42 DIRECTORIES RECEIVED
-UST080  15:53:30 TEST001             1,669 DATA-BLOCKS;       1,310,963 DATA-BYTES
RECEIVED
-UST173  15:53:30 TEST001  BACKUP INCR COMPLETED SUCCESSFULLY (LU=C0A84B2D)
-UST224  15:53:30 TEST001        24.748 CPU SECOND(S) USED IN BACKUP
-UST248  15:53:30 TEST001  C0A84BFD BACKUP   PROCESS DETACHED TASKID=0002
------- END OF FDR/UPSTREAM -MVS TASK MESSAGES


UST747E 15:53:31 PROCESS COMPLETED - RETURN CODE = 00, TARGET = 192.168.75.253,2958

UST717E 15:53:31 USTBATCH COMPLETED SUCCESSFULLY
```

Figure 44 - Backup Initiation via MVS BATCH JOB - USTBATCH Output

```
Wed Mar 15 15:58:28 2000 User: OMVSKERN, Group: ALLUSERS, PID: 50331682
   Msg #PC3101I Remote initiate received
        A remote initiated function will now be processed.
Wed Mar 15 15:17:48 2000 User: OMVSKERN, Group: ALLUSERS, PID: 50331682
   Msg #PC2050I Backup started
   Profile: TEST001, UPSTREAM v3.2.0 (USS)
Wed Mar 15 15:53:30 2000 User: OMVSKERN, Group: ALLUSERS, PID: 50331682
   Msg #PC2051D Backup successful
   398 files 1,994,961 data bytes 9 symbolic links     2 hard links   547,407 chars/sec
   2,110,963 bytes transferred file and non-file data
   Version date: 000315155825
```

Figure 45 - Backup Initiation via MVS BATCH JOB - USS “upstream.log” File Output

5.3.4 Incremental Backup Initiation via TSO/ISPF Interface

This section describes the step by step process of generating all the USTBATCH parameters for an Incremental backup request via the TSO/ISPF Interface. This method is more time consuming and involved than using the sample JCL and parameters outlined in the “Backup Initiation via MVS BATCH JOB” section above, however it allows for a greater level of customization to the backup request. Be aware that a large number of the parameters available on these menus do not apply to the Unix Systems Services environment and are present to support the FDR/UPSTREAM specification for the backup of non-USS systems.

In the sample menu walkthrough we will be constructing the JCL and parameters for an FDR/UPSTREAM USS Incremental backup of your complete USS ROOT file system and all of the subdirectories of ROOT. Please review this specification carefully to determine that this is what you want to do.

Step # 1 - Select USTBATCH - Host Initiated Services

To get started, enter the FDR/UPSTREAM TSO/ISPF Interface via your installation defined method. From the main menu specify option number 1, “USTBATCH”, and press ENTER.

```
--------------------------------- FDR/UPSTREAM ----------------------------
COMMAND ===> 1

   1  USTBATCH    - Host Initiated Services
   2  STATUS      - Current Status Information
   3  DEFINE      - Define Control Files
   4  CONFIGURE   - Main Options
   5  PROFILE     - Workstation Profile Names
   6  OPER        - Operator Commands
   7  REPORT      - Report
   8  REGISTRY    - Name Registry
   9  DUPAUDIT    - Duplicate File Audit
  10  SCHEDULE    - Command Scheduler
  11  MANAGEMENT  - Backup Management
```

Figure 46 - Backup via ISPF - Selecting the USTBATCH Option

Step # 2 - Specify USTBATCH Specific Parameters

The next menu to appear allows for the specification of the USTBATCH specific parameters required for the processing of the backup request. The menu items of the greatest interest are highlighted in the menu. A table follows the menu and briefly describes each highlighted menu field. Each value is discussed in greater detail in the “USTBATCH Parameter Reference” that begins on page 190.

For the purposes of this walkthrough, if you have selected the default setting for these fields during FDR/UPSTREAM MVS installation, you will only need to specify the “TCP/IP addr” and “port” fields to specify the IP address and TCP Port Number of your OS/390 system. If you do not know this value it can be located in the FDR/UPSTREAM MVS Started Task USTLOG output. Look for message number UST280 and the IP address will be located immediately after the “IPA=” field of this message.

Once you have completed entering all the fields of this menu, press the ENTER key to proceed to the next menu.

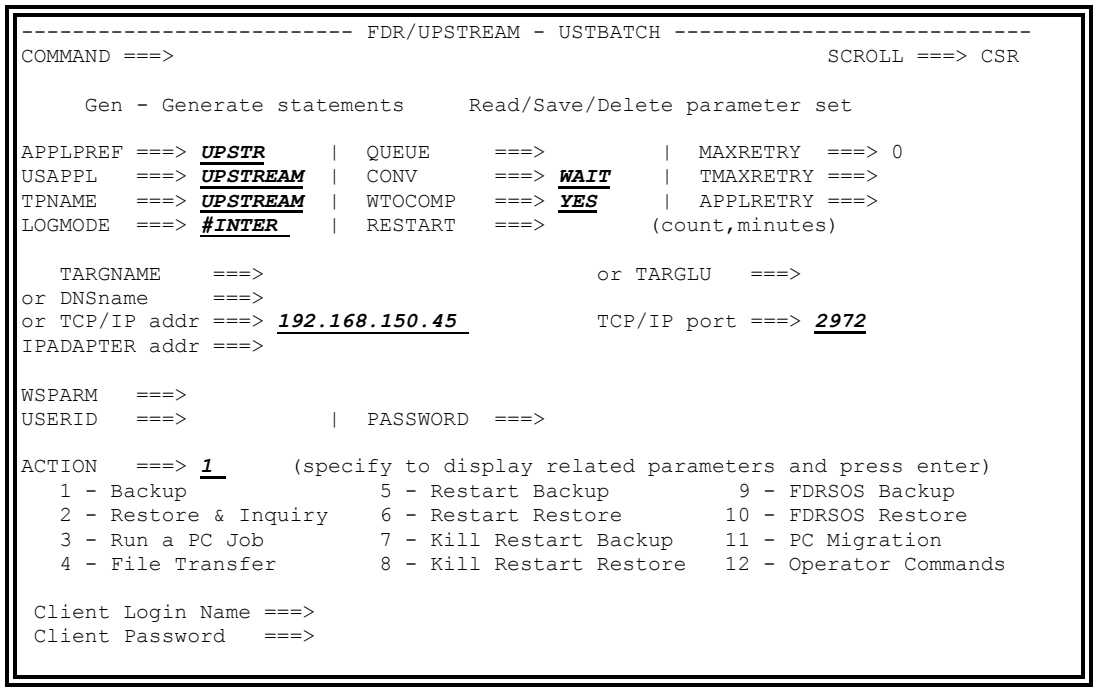


Figure 47 - Incremental Backup via ISPF - Setting USTBATCH Options

Menu Field	Description
APPLPREF	The 5 character prefix of the VTAM APPLID to be used by USTBATCH for its communications with the FDR/UPSTREAM MVS Started Task.
USAPPL	The VTAM APPLID of the FDR/UPSTREAM Started Task.
TPNAME	The Transaction Program Name to be used during LU 6.2 communications.
LOGMODE	The VTAM LOGMODE to be used for communicating with the FDR/UPSTREAM Started Task.
CONV	Whether or not the USTBATCH requesting JOB should wait for the completion of the request submitted to the Started Task or end immediately after the request is accepted.
WTOCOMP	Should a WTO Completion message be issued to the MVS system operator when this request finishes.
TCP/IP ADDR	The IP address of the OS/390 system running the USS files you wish to backup.
PORT	The TCP port number configured in the FDR/UPSTREAM USS process or daemon that it will receive requests on. 2972 is the default for the USS process but not for USTBATCH so it must be specifically coded here.
ACTION	Which function is to be performed by this set of generated statements.

Step # 3 - Specify USS Files to be Processed

The next menu to appear is the first in a series of four menus that allow for the specification of the USS file system related parameters for this backup request. The table following the menu below describes each parameter that will be important for the request we are constructing. Please review this table, enter the appropriate values into the menu, and press the ENTER key to proceed to the next menu.

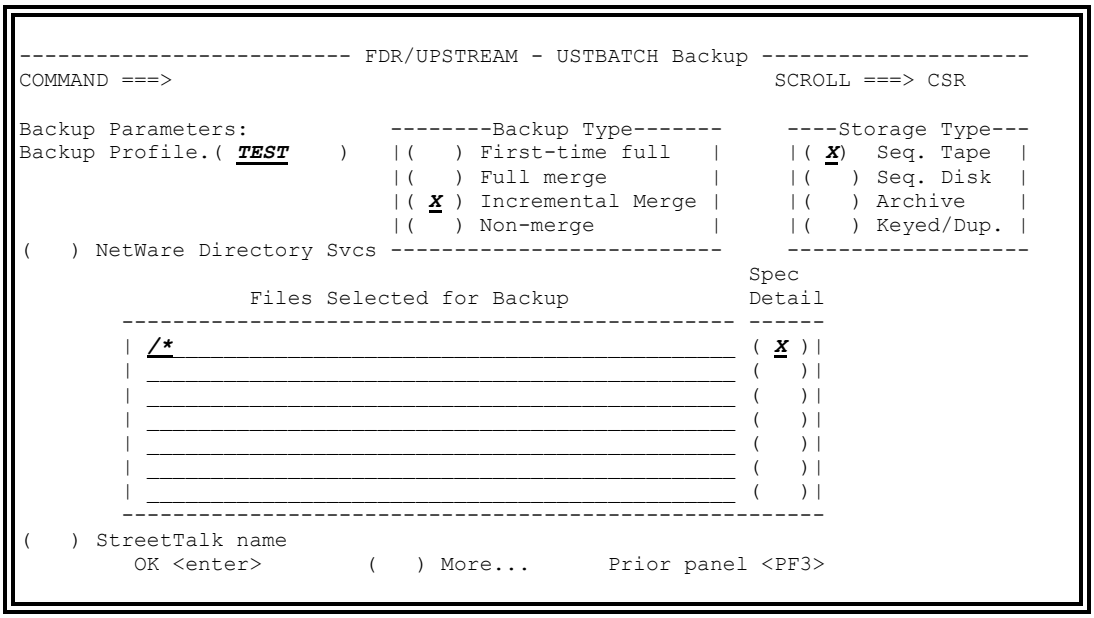


Figure 48 - Incremental Backup via ISPF - Specifying Files to be Backed Up

Menu Field	Description
Backup Profile	Specifies the Backup Profile Name to be used for this backup request
Backup Type	An Incremental type Backup is requested to backup just the files that have changed since the last backup request for this Backup Profile.
Storage Type	This backup will go directly to an MVS sequential dataset on tape.
Files Selected for Backup	The USS file specification for the directory to begin backing up from. In this case we will be starting with the ROOT of the file system.
Spec Detail	This indicates that we wish to display the “Spec Detail” menu options screen next so that we can specify additional information about our “/*” files specification.

Step # 5 - Generate the USTBATCH Control Cards

You have now completed the specification of the FDR/UPSTREAM USS parameters that will be required to perform a backup. The next step is to initiate the generation of the OS/390 JCL to be used to invoke the USTBATCH utility program which submits your backup request to the FDR/UPSTREAM MVS Started Task for processing. You do this by specifying **“GEN”** on the “COMMAND” line of the ISPF panel below and pressing the ENTER key.

```
------------------------- FDR/UPSTREAM - USTBATCH ----------------------------
COMMAND ===> GEN

     GEN - Generate statements     READ/SAVE/DELETE parameter set

APPLPREF ===> UPSTR      |  QUEUE     ===>          |  MAXRETRY  ===>
USAPPL   ===> UPSTREAM   |  CONV      ===> WAIT     |  TMAXRETRY ===>
TPNAME   ===> UPSTREAM   |  WTOCOMP   ===> YES      |  APPLRETRY ===>
LOGMODE  ===> #INTER     |  RESTART   ===>         (count,minutes)

   TARGNAME    ===>                          or TARGLU   ===>
or DNSname     ===>
or TCP/IP addr ===> 192.168.75.253           TCP/IP port ===> 2972

WSPARM   ===>
USERID   ===>            |  PASSWORD  ===>

ACTION   ===> 1       (specify to display related parameters and press enter)
   1 - Backup               5 - Restart Backup          9 - FDRSOS Backup
   2 - Restore & Inquiry    6 - Restart Restore        10 - FDRSOS Restore
   3 - Run a PC Job         7 - Kill Restart Backup    11 - PC Migration
   4 - File Transfer        8 - Kill Restart Restore   12 - Operator Commands

 Client Login Name ===>
 Client Password   ===>
```

Figure 49 - Incremental Backup via ISPF - Generating the USTBATCH Control Cards

Step # 6 - Specifying the JCL for USTBATCH

The panel below allows for the entry of installation specific JCL statements and options that may be required for proper execution the USTBATCH JOB. At a minimum you should alter the JCL to provide:

- A Valid, Installation Specific OS/390 JOBCARD
- A Proper STEPLIB DD Specification for the UPSTREAM/MVS Load Library

Selecting option # 2 on the command line and then pressing the ENTER key will allow you to review via the ISPF EDIT command the generated UPSTREAM/MVS USTBATCH JCL and parameters.

```
------------------------- FDR/UPSTREAM - USTBATCH -------------------------
 COMMAND ===> 2

  Please select one of the following options or press the END key to cancel

    1 - Browse the generated JCL stream
    2 - Edit   the generated JCL stream
    3 - Submit the generated JCL stream
    4 - Save   the generated JCL in a data set
    5 - Run    the generated USTBATCH statements in the TSO foreground

 JCL statements:
  ( //jobname  JOB (job acct data),'job id data',NOTIFY=userid            )
  ( //*                                                                   )
  ( //*                                                                   )
  ( //*                                                                   )
  ( //USTBATCH EXEC PGM=USTBATCH                                         )
  ( //STEPLIB  DD   DISP=SHR,DSN=your.upstream.load.library              )
  ( //SYSUDUMP DD   SYSOUT=*                                              )
  ( //USTLOG   DD   SYSOUT=*                                              )
```

Figure 50 - Incremental Backup via ISPF - Altering the USTBATCH JCL

Menu Field	Description
COMMAND	Select “2” in order to edit the generated USTBATCH JCL and parameters.
JOB Card Information	This field must specify a valid OS/390 JOB Card in order for the JCL generation to work properly. Please specify all applicable information that is applicable to your installation standards.
STEPLIB DD DSN	This field is the dataset name of the FDR/UPSTREAM MVS LOADLIB. This library must have been previously APF authorized. This DD statement is not required if the LOADLIB has been placed in the OS/390 LINKLST concatenation.

Step # 7 - Edit and Submit the Generated USTBATCH JCL

The following panel shows the generated JCL and USTBATCH control cards. It is suggested that they be reviewed, saved to a member of PDS in case a rerun is necessary, and then subsequently submitted for OS/390 BATCH processing.

```
File  Edit  Confirm  Menu  Utilities  Compilers  Test  Help
------------------------------------------------------------------------------
 EDIT------ USER01.SPFTEMP2.CNTL--------------------------- Columns 00001 00072
 Command ===>                                                  Scroll ===> CSR
 ****** **************************** Top of Data ******************************
 000001 //jobname  JOB (job acct data),'job id data',NOTIFY=userid
 000002 //*
 000003 //*
 000004 //*
 000005 //USTBATCH EXEC PGM=USTBATCH
 000006 //STEPLIB  DD DISP=SHR,DSN= your.upstream.load.library
 000007 //SYSUDUMP DD SYSOUT=*
 000008 //USTLOG   DD SYSOUT=*
 000009 //*
 000010 //USTPARM  DD *
 000011 APPLPREF=UPSTR
 000012 USAPPL=UPSTREAM
 000013 LOGMODE=#INTER
 000014 *
 000015 TCPTARG=192.168.75.45
 000016 ACTION 1
 000017 BACKUPPROFILE TEST
            . . . . .
            . . . . .
 000064 *
 000065 ENDPARM
/*
//
```

This completes the steps necessary to construct and submit an OS/390 BATCH initiated incremental backup operation. The executing backup request can be monitored via the UPSTREAM/MVS ISPF STATUS panel (Option #2) or via the UPSTREAM/MVS STATUS operator command.

5.3.5 Full Merge Backup Initiation via MVS BATCH JOB

Using the sample JCL outlined in Figure 31 - First Time Full Backup Initiation via MVS BATCH JOB, below will allow a simple and quick way of getting started performing FDR/UPSTREAM backups of your USS files. The JCL will at a minimum require some customization for your particular site requirements for the JOB card and STEPLIB specifications. You should review the table of parameter descriptions that follow the sample JCL to review the meaning of the actual keywords specified.

The sample JCL as provided performs a First-Time FULL backup of all files in your USS file system ROOT directory and all subdirectories of the ROOT. Please review this specification carefully to determine that this is what you want to do.

When you have completed reviewing the JCL and parameters, submit the JCL and the backup will begin execution.

```
//jobname  JOB  (accounting,information),'UPSTREAM BACKUP',
//         MSGLEVEL=(1,1),CLASS=A,MSGCLASS=X
//*
//*  ********************************************************
//*  ***  BACKUP UNIX SYSTEMS SERVICES FILE SYSTEM TO TAPE  ***
//*  ********************************************************
//*
//BACKUP    EXEC PGM=USTBATCH
//STEPLIB   DD   DISP=SHR,DSN=your.upstream.load.library
//SYSUDUMP  DD   SYSOUT=*
//USTLOG    DD   SYSOUT=*
//USTPARM   DD   *
APPLPREF=UPSTR                      * VTAM APPL Prefix
USAPPL=UPSTREAM                     * Name of UPSTREAM Started TASK VTAM APPL
LOGMODE=#INTER                      * VTAM LOGMODE to use from USTBATCH to STC
CONV=WAIT                           * WAIT for Backup to complete before ending
*
TCPTARG=192.168.75.249..2972        * IP Address and Port of USS Daemon
ACTION=1                            * BACKUP
BACKUPPROFILE=TEST                  * Backup Profile to Use
MERGE=1                             * Full Merge Type Backup
STORAGETYPE=3                       * Sequential Tape
COMPRESSLEVEL=0                     * No Compression of Backup Data
RESTARTTYPE=0                       * Do Not Allow Restarts of This Backup
LOGNONFATAL=Y                       * Log All Errors
*
SPECNUMBER=1                        * Start of File Specification # 1
FILES=/*                            * Backup All Files in the ROOT
SPECTYPE=0                          * Include All Files in the "Files" Keyword
SUBDIRECTORIES=Y                    * Include All Subdirectories
HIDDENFILES=Y                       * Backup All Hidden Files as Well
ENDPARM                             * End of FDR/UPSTREAM USTBATCH Parameters
/*
//
```

Figure 51 - Incremental Backup Initiation via MVS BATCH JOB

The following table outlines each parameter, its specified value, and what it means to the example backup request. The USTBATCH type parameters are more fully documented in the "USTBATCH Parameter Reference" section beginning on page 190. The USS Process type parameters are documented in the "USS Process Keyword Parameter Reference" section beginning on page 196.

When you have completed reviewing the JCL and parameters, submit the JCL for OS/390 BATCH processing and the backup will begin execution. When the backup completes the output should be similar to the output illustrated below.

5.3.6 Full Merge Backup Initiation via TSO/ISPF Interface

This section describes the step by step process of generating all the USTBATCH parameters for an Incremental backup request via the TSO/ISPF Interface. This method is more time consuming and involved than using the sample JCL and parameters outlined in the “Backup Initiation via MVS BATCH JOB” section above, however it allows for a greater level of customization to the backup request. Be aware that a large number of the parameters available on these menus do not apply to the Unix Systems Services environment and are present to support the FDR/UPSTREAM specification for the backup of non-USS systems.

In the sample menu walkthrough we will be constructing the JCL and parameters for an FDR/UPSTREAM USS Incremental backup of your complete USS ROOT file system and all of the subdirectories of ROOT. Please review this specification carefully to determine that this is what you want to do.

Step # 1 - Select USTBATCH - Host Initiated Services

To get started, enter the FDR/UPSTREAM TSO/ISPF Interface via your installation defined method. From the main menu specify option number 1, “USTBATCH”, and press ENTER.

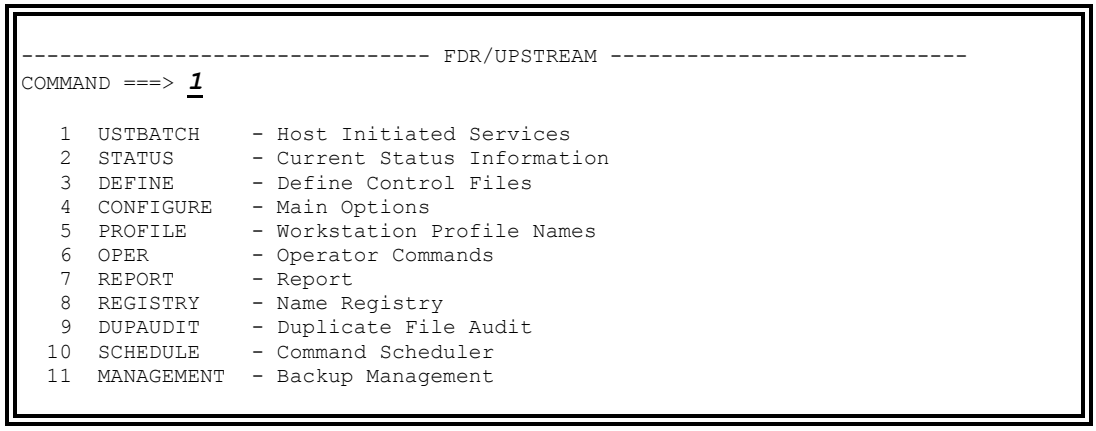


Figure 52 - Full Merge Backup via ISPF - Selecting the USTBATCH Option

Step # 2 - Specify USTBATCH Specific Parameters

The next menu to appear allows for the specification of the USTBATCH specific parameters required for the processing of the backup request. The menu items of the greatest interest are highlighted in the menu. A table follows the menu and briefly describes each highlighted menu field. Each value is discussed in greater detail in the “USTBATCH Parameter Reference” that begins on page 190.

For the purposes of this walkthrough, if you have selected the default setting for these fields during FDR/UPSTREAM MVS installation, you will only need to specify the “TCP/IP addr” and “port” fields to specify the IP address and TCP Port Number of your OS/390 system. If you do not know this value it can be located in the FDR/UPSTREAM MVS Started Task USTLOG output. Look for message number UST280 and the IP address will be located immediately after the “IPA=” field of this message.

Once you have completed entering all the fields of this menu, press the ENTER key to proceed to the next menu.

```
------------------------- FDR/UPSTREAM - USTBATCH ----------------------------
COMMAND ===>

     GEN - Generate statements     READ/SAVE/DELETE parameter set

APPLPREF ===> UPSTR      |  QUEUE     ===>          |  MAXRETRY  ===>
USAPPL   ===> UPSTREAM   |  CONV      ===> WAIT     |  TMAXRETRY ===>
TPNAME   ===> UPSTREAM   |  WTOCOMP   ===> YES      |  APPLRETRY ===>
LOGMODE  ===> #INTER     |  RESTART   ===>         (count,minutes)

   TARGNAME    ===>                          or TARGLU   ===>
or DNSname     ===>
or TCP/IP addr ===> 192.168.75.253           TCP/IP port ===> 2972

WSPARM   ===>
USERID   ===>            |  PASSWORD  ===>

ACTION   ===> 1       (specify to display related parameters and press enter)
   1 - Backup               5 - Restart Backup          9 - FDRSOS Backup
   2 - Restore & Inquiry    6 - Restart Restore        10 - FDRSOS Restore
   3 - Run a PC Job         7 - Kill Restart Backup    11 - PC Migration
   4 - File Transfer        8 - Kill Restart Restore   12 - Operator Commands

 Client Login Name ===>
 Client Password   ===>
```

Figure 53 - Backup via ISPF - Setting USTBATCH Options

Menu Field	Description
APPLPREF	The 5 character prefix of the VTAM APPLID to be used by USTBATCH for its communications with the FDR/UPSTREAM MVS Started Task.
USAPPL	The VTAM APPLID of the FDR/UPSTREAM Started Task.
TPNAME	The Transaction Program Name to be used during LU 6.2 communications.
LOGMODE	The VTAM LOGMODE to be used for communicating with the FDR/UPSTREAM Started Task.
CONV	Whether or not the USTBATCH requesting JOB should wait for the completion of the request submitted to the Started Task or end immediately after the request is accepted.
WTOCOMP	Should a WTO Completion message be issued to the MVS system operator when this request finishes.
TCP/IP ADDR	The IP address of the OS/390 system running the USS files you wish to backup.
PORT	The TCP port number configured in the FDR/UPSTREAM USS process or daemon that it will receive requests on. 2972 is the default for the USS process but not for USTBATCH so it must be specifically coded here.
ACTION	Which function is to be performed by this set of generated statements.

Step # 3 - Specify USS Files to be Processed

The next menu to appear is the first in a series of four menus that allow for the specification of the USS file system related parameters for this backup request. The table following the menu below describes each parameter that will be important for the request we are constructing. Please review this table, enter the appropriate values into the menu, and press the ENTER key to proceed to the next menu.

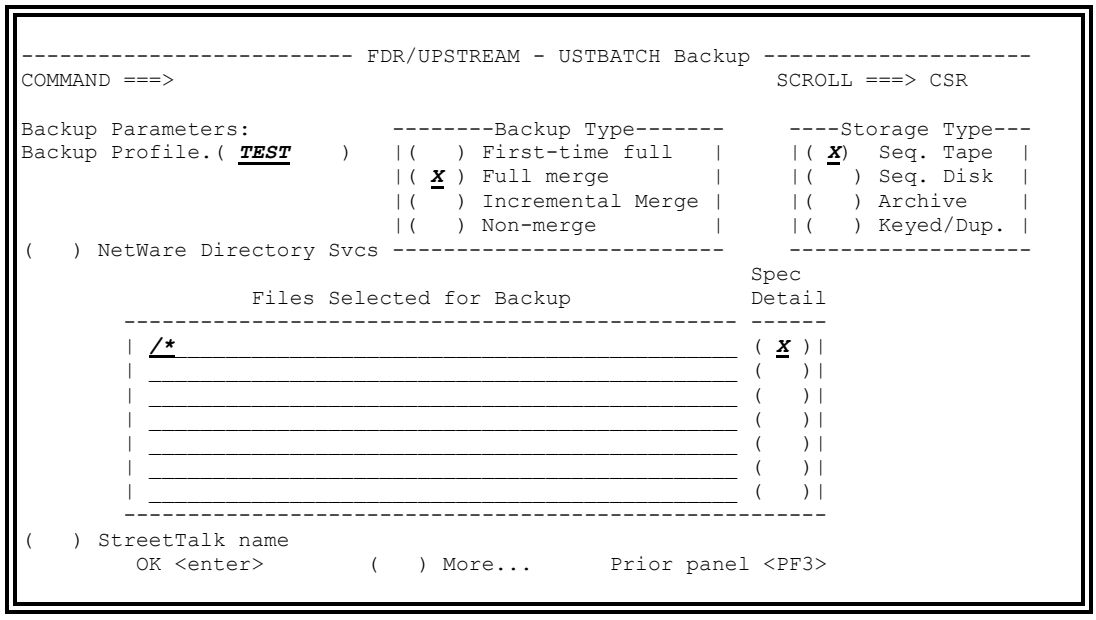


Figure 54 - Backup via ISPF - Specifying Files to be Backed Up

Menu Field	Description
Backup Profile	Specifies the Backup Profile Name to be used for this backup request
Backup Type	An Incremental type Backup is requested to backup just the files that have changed since the last backup request for this Backup Profile.
Storage Type	This backup will go directly to an MVS sequential dataset on tape.
Files Selected for Backup	The USS file specification for the directory to begin backing up from. In this case we will be starting with the ROOT of the file system.
Spec Detail	This indicates that we wish to display the “Spec Detail” menu options screen next so that we can specify additional information about our “/*” files specification.

Step # 5 - Generate the USTBATCH Control Cards

You have now completed the specification of the FDR/UPSTREAM USS parameters that will be required to perform a backup. The next step is to initiate the generation of the OS/390 JCL to be used to invoke the USTBATCH utility program which submits your backup request to the FDR/UPSTREAM MVS Started Task for processing. You do this by specifying **“GEN”** on the “COMMAND” line of the ISPF panel below and pressing the ENTER key.

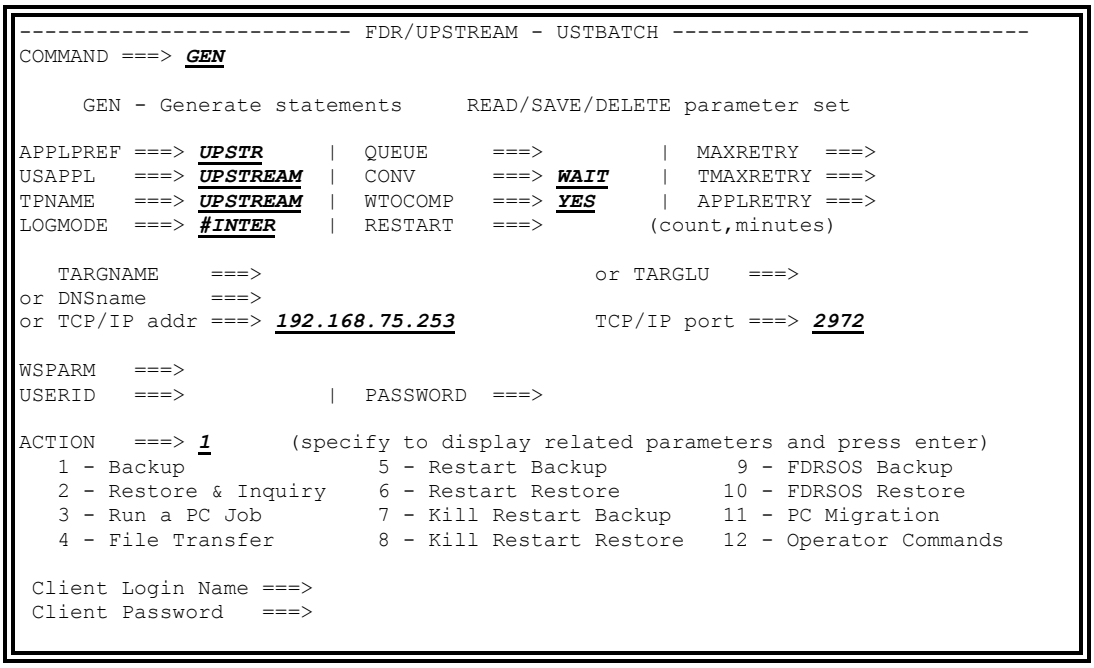


Figure 55 - Backup via ISPF - Generating the USTBATCH Control Cards

Step # 6 - Specifying the JCL for USTBATCH

The panel below allows for the entry of installation specific JCL statements and options that may be required for proper execution the USTBATCH JOB. At a minimum you should alter the JCL to provide:

- A Valid, Installation Specific OS/390 JOBCARD
- A Proper STEPLIB DD Specification for the UPSTREAM/MVS Load Library

Selecting option # 2 on the command line and then pressing the ENTER key will allow you to review via the ISPF EDIT command the generated UPSTREAM/MVS USTBATCH JCL and parameters.

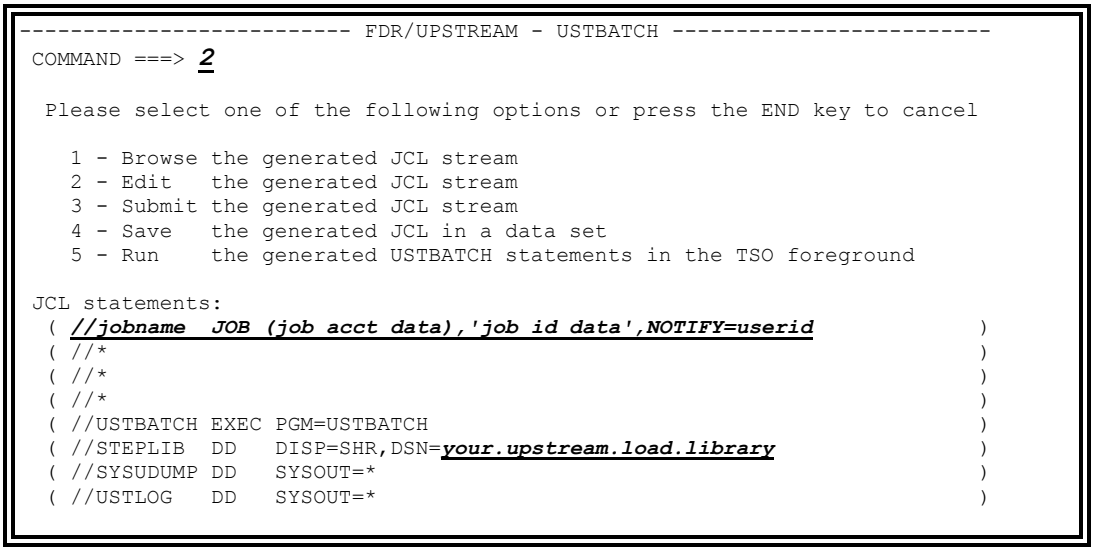


Figure 56 - Backup via ISPF - Altering the USTBATCH JCL

Menu Field	Description
COMMAND	Select “2” in order to edit the generated USTBATCH JCL and parameters.
JOB Card Information	This field must specify a valid OS/390 JOB Card in order for the JCL generation to work properly. Please specify all applicable information that is applicable to your installation standards.
STEPLIB DD DSN	This field is the dataset name of the FDR/UPSTREAM MVS LOADLIB. This library must have been previously APF authorized. This DD statement is not required if the LOADLIB has been placed in the OS/390 LINKLST concatenation.

Step # 7 - Edit and Submit the Generated USTBATCH JCL

The following panel shows the generated JCL and USTBATCH control cards. It is suggested that they be reviewed, saved to a member of PDS in case a rerun is necessary, and then subsequently submitted for OS/390 BATCH processing.

```
File  Edit  Confirm  Menu  Utilities  Compilers  Test  Help
------------------------------------------------------------------------------
 EDIT------ USER01.SPFTEMP2.CNTL--------------------------- Columns 00001 00072
 Command ===>                                                  Scroll ===> CSR
 ****** ***************************** Top of Data ******************************
 000001 //jobname  JOB (job acct data),'job id data',NOTIFY=userid
 000002 //*
 000003 //*
 000004 //*
 000005 //USTBATCH EXEC PGM=USTBATCH
 000006 //STEPLIB  DD DISP=SHR,DSN= your.upstream.load.library
 000007 //SYSUDUMP DD SYSOUT=*
 000008 //USTLOG   DD SYSOUT=*
 000009 //*
 000010 //USTPARM  DD *
 000011 APPLPREF=UPSTR
 000012 USAPPL=UPSTREAM
 000013 LOGMODE=#INTER
 000014 *
 000015 TCPTARG=192.168.75.45
 000016 ACTION 1
 000017 BACKUPPROFILE TEST
            . . . . .
            . . . . .
 000064 *
 000065 ENDPARM
/*
//
```

This completes the steps necessary to construct and submit an OS/390 BATCH initiated Full Merge backup operation. The executing backup request can be monitored via the UPSTREAM/MVS ISPF STATUS panel (Option #2) or via the UPSTREAM/MVS STATUS operator command.

6

6 Performing A Restore

FDR/UPSTREAM USS is designed have all restore functions initiated from an MVS BATCH JOB, the TSO/ISPF User Interface, or the JAVA End User Interface. There is no menu type user interface available from USS. A user with sufficient experience with the FDR/UPSTREAM parameters would however be able to construct a FDR/UPSTREAM USS parameter file and then invoke it via a command line request with the USS process. This type of action is not discussed in this manual.

The following types of Restore requests are described within this chapter:

- Initiation via MVS BATCH JOB
- Initiation via TSO/ISPF Menu
- Initiation via the UPSTREAM Director
- Initiation via the JAVA End User Interface

6.1 Restore Initiation via MVS BATCH JOB

```
//jobname  JOB  (accounting,information),'UPSTREAM BACKUP',
//        MSGLEVEL=(1,1),CLASS=A,MSGCLASS=X
//*
//*  ********************************************************
//*  ***  BACKUP UNIX SYSTEMS SERVICES FILE SYSTEM TO TAPE  ***
//*  ********************************************************
//*
//BACKUP    EXEC PGM=USTBATCH
//STEPLIB   DD   DISP=SHR,DSN=your.upstream.load.library
//SYSUDUMP  DD   SYSOUT=*
//USTLOG    DD   SYSOUT=*
//USTPARM   DD   *
APPLPREF=UPSTR                      * VTAM APPL Prefix
USAPPL=UPSTREAM                     * Name of UPSTREAM Started Task VTAM APPL
LOGMODE=#INTER                      * VTAM LOGMODE to use from USTBATCH to STC
CONV=WAIT                           * WAIT for Backup to complete before ending
*
TCPTARG=192.168.75.249..2972        * IP Address and Port of USS Daemon
ACTION=0                            * RESTORE
BACKUPPROFILE=TEST                  * Backup Profile to Use
LOGNONFATAL=Y                       * Log All Errors
*
SPECNUMBER=1                        * Start of File Specification # 1
FILES=/*                            * Backup All Files in the ROOT
SPECTYPE=0                          * Include All Files in the "Files" Keyword
SUBDIRECTORIES=Y                    * Include All Subdirectories
HIDDENFILES=Y                       * Backup All Hidden Files as Well
ENDPARM                             * End of FDR/UPSTREAM USTBATCH Parameters
/*
//
```

Figure 57 - Restore via USTBATCH JOB - Sample JCL

The following table outlines each parameter, its specified value, and what it means to the example restore request. The USTBATCH type parameters are more fully documented in the "USTBATCH Parameter Reference" section beginning on page 190. The USS Process type parameters are documented in the "USS Process Keyword Parameter Reference" section beginning on page 196.

Parameter	Parameter Type	Description
APPLPREF=UPSTR	USTBATCH	VTAM APPL Prefix
USAPPL=UPSTREAM	USTBATCH	Name of UPSTREAM Started TASK VTAM APPL
LOGMODE=#INTER	USTBATCH	VTAM LOGMODE to use from USTBATCH to STC
CONV=WAIT	USTBATCH	WAIT for Restore to complete before ending
TCPTARG=192.168.75.249..2972	USTBATCH	IP Address and Port of USS Process or Daemon
ACTION=0	USS Process	Perform a Restore
BACKUPPROFILE=TEST	USS Process	Backup Profile to Use
RESTARTTYPE=0	USS Process	Do Not Allow Restarts of This Restore
LOGNONFATAL=Y	USS Process	Log All Errors
SPECNUMBER=1	USS Process	Start of File Specification # 1
FILES=/u/wally/*	USS Process	Restore All Files in the /u/wally directory
SPECTYPE=0	USS Process	Include All Files in the "Files" Keyword
SUBDIRECTORIES=Y	USS Daemon	Restore all files in all subdirectories of the FILES specification
HIDDENFILES=Y	USS Process	Restore any Hidden Files as Well
ENDPARM	USTBATCH	End of FDR/UPSTREAM USTBATCH Parameters

6.2 Restore Initiation via ISPF Interface

Step # 1 - Select USTBATCH - Host Initiated Services

To get started, enter the FDR/UPSTREAM TSO/ISPF Interface via your installation defined method. From the main menu specify option number 1, "**USTBATCH**", and press **ENTER**.

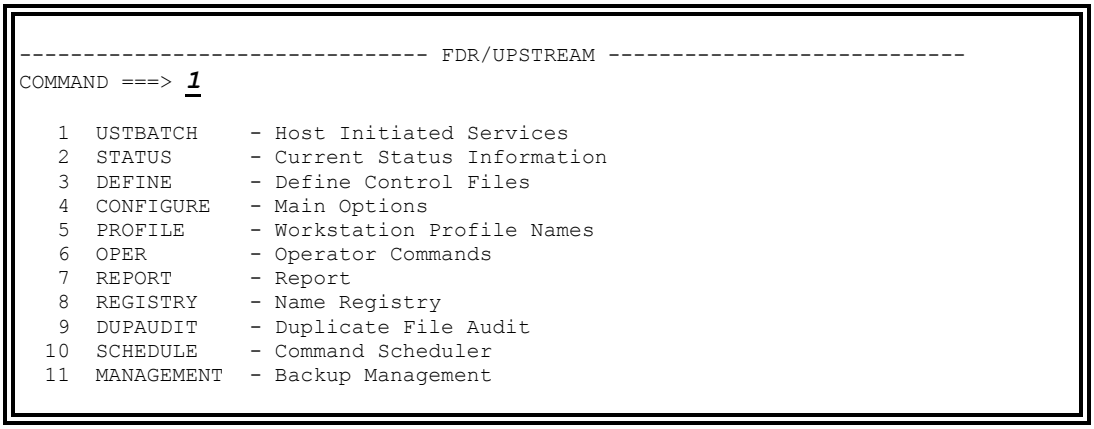


Figure 58 - Restore via ISPF - Selecting the USTBATCH Option

Step # 2 - Specify the USTBATCH Specific Parameters

The next menu to appear allows for the specification of the USTBATCH specific parameters required for the processing of the restore request. The menu items of the greatest interest are highlighted in the menu. A table follows the menu and briefly describes each highlighted menu field. Each value is discussed in greater detail in the "USTBATCH Parameter Reference" that begins on page 190.

For the purposes of this walkthrough, if you have selected the default setting for these fields during FDR/UPSTREAM MVS installation, you will only need to specify the "TCP/IP addr" and "port" fields to specify the IP address and TCP Port Number of your OS/390 system. If you do not know this value it can be located in the FDR/UPSTREAM MVS Started Task USTLOG output. Look for message number UST280 and the IP address will be located immediately after the "IPA=" field of this message.

Once you have completed entering all the fields of this menu, press the **ENTER** key to proceed to the next menu.

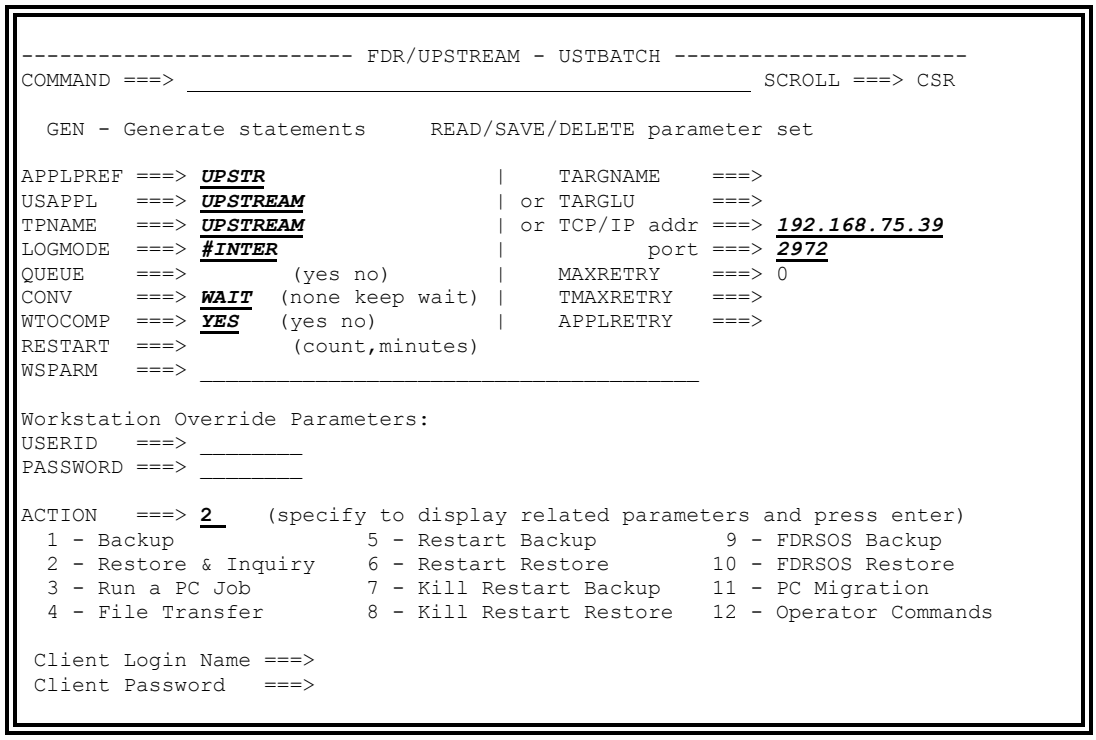


Figure 59 - Restore via ISPF - Specify the USTBATCH Specific Parameters

Menu Field	Description
APPLPREF	The 5 character prefix of the VTAM APPLID to be used by USTBATCH for its communications with the FDR/UPSTREAM MVS Started Task.
USAPPL	The VTAM APPLID of the FDR/UPSTREAM Started Task.
TPNAME	The Transaction Program Name to be used during LU 6.2 communications.
LOGMODE	The VTAM LOGMODE to be used for communicating with the FDR/UPSTREAM Started Task.
CONV	Whether or not the USTBATCH requesting JOB should wait for the completion of the request submitted to the Started Task or end immediately after the request is accepted.
WTOCOMP	Should a WTO Completion message be issued to the MVS system operator when this request finishes.
TCP/IP ADDR	The IP address of the OS/390 system running the USS files you wish to restore.
PORT	The TCP port number configured in the FDR/UPSTREAM USS process or daemon that it will receive requests on. 2972 is the default for the USS process but not for USTBATCH so it must be specifically coded here.
ACTION	Which function is to be performed by this set of generated statements.

Step # 3 - Obtaining a List of Previously Taken Backups

The next menu obtains a list of previously taken FDR/UPSTREAM USS backups in order for you to select the appropriate backup(s) for the restore request to process. The table following Figure 60 - Restore via ISPF - Obtaining a List of Backups below describes each selected field and its meaning. After filling in the menu, press the **ENTER** key to proceed to the next menu.

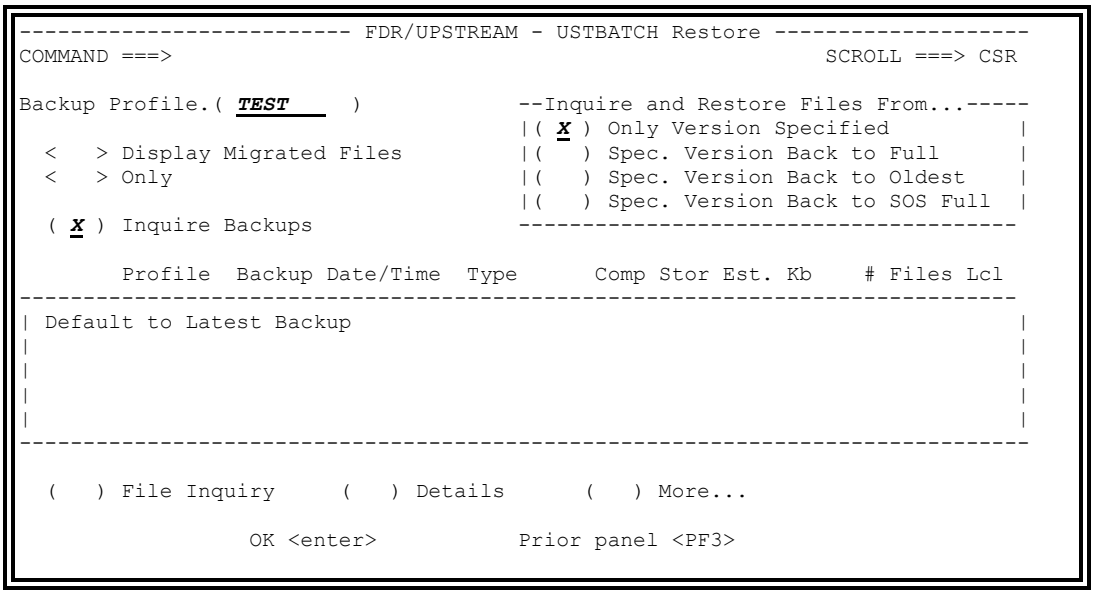


Figure 60 - Restore via ISPF - Obtaining a List of Backups

Menu Field	Description
Backup Profile	The name of the Backup Profile under which the backups in question were previously taken.
Inquire and Restore Files from	Select “Only version specified” so that just that version will be searched for the files we wish to list.
Inquire Backups	This indicates that we want a list of all backup versions that exist for this profile.

Step # 4 - Obtaining a List of Previously Backed Up Files

The next menu obtains a list of files contained on the previously selected backup. The table following Figure 61 - Restore via ISPF - Obtaining a List of Files below describes each selected field and its meaning. After filling in the menu, press the **ENTER** key to proceed to the next menu.

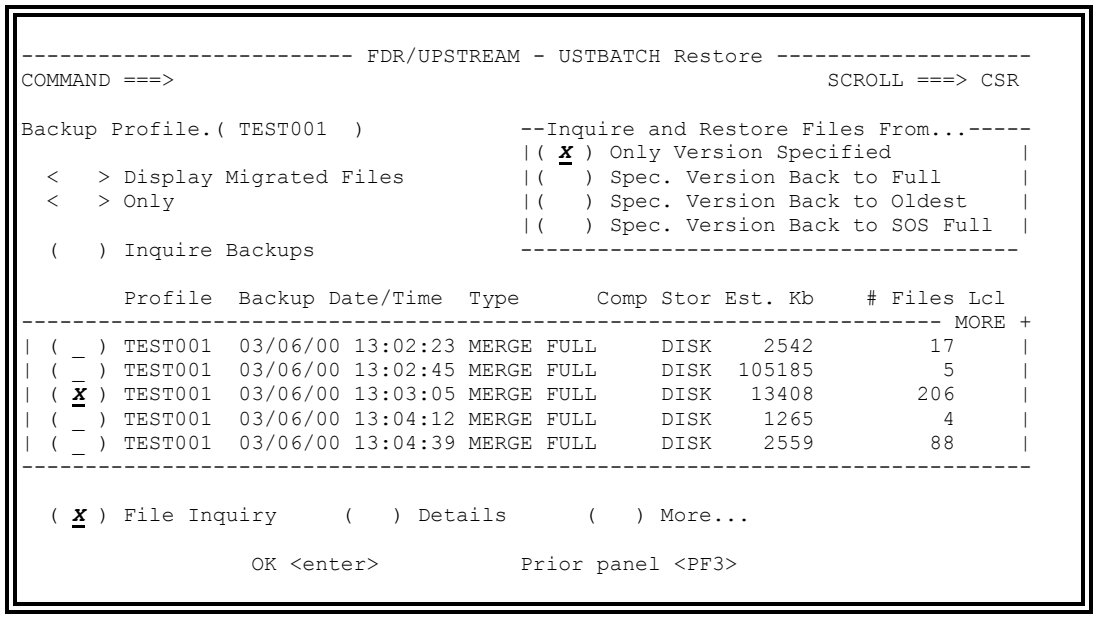


Figure 61 - Restore via ISPF - Obtaining a List of Files

Menu Field	Description
Inquire and Restore Files From…	Any character inserted here indicates to select the backup described immediately to its right for processing.
Backup Selection Area	Any character inserted here indicates to select the backup described immediately to its right for processing.
File Inquiry	This option indicates that we wish to see a list of files contained on the backup selected so that we can select the appropriate files to restore.

Step # 5 - Selecting Specific Files to be Restored

The next step involves selecting the specific files to be restored from the list of files supplied in the "**Inquire Files**" box on the menu. The "**UP**" and "**DOWN**" ISPF function keys (usually PFK7 and PFK8 respectively) can be used to scroll through the list of files on the selected backup. Only one file can be selected at a time from the "**Inquire Files**" box.

To **ADD** a file to the selection list displayed in the "**Files Selected for Restore**", do the following:

1) Place any character in the underlined prefix area immediately to the left of the file.

2) Place any character in the "**Add Spec**" selection field.

3) Press the **ENTER** key.

4) The file selected should now appear in the "**Files Selected for Restore**" box. Repeat this action once for each file you wish to add to the restore specification.

To **UPDATE** an previously existing specification line in the "**Files Selected for Restore**" box, do the following:

1) Place any character in the underlined prefix area immediately to the left of the file to be selected in the "**Inquire Files**" box.

2) Place any character in the underlined prefix area immediately to the left of the file specification to be updated in the "**Files Selected for Restore**" box.

3) Place any character in the "**Update Spec**" selection field.

4) Press the **ENTER** key.

5) The updated file specification should now appear in the "**Files Selected for Restore**" box. Repeat this action once for each file specification you wish to update for the restore specification.

To **DELETE** an entry from the selection list displayed in the "**Files Selected for Restore**" box, do the following:

1) Place any character in the underlined prefix area immediately to the left of the file specification to be updated in the "**Files Selected for Restore**" box.

2) Place any character in the "**Delete Spec**" selection field.

3) Press the **ENTER** key.

4) The file specification selected should no longer appear in the "**Files Selected for Restore**" box. Repeat this action once for each file you wish to delete from the restore specification.

In our example below, we will update a previously existing specification to restore a different single file. Fill in the menu as shown and then press the **ENTER** key.

```
--------------------------- FDR/UPSTREAM - USTBATCH Restore File Spec ----------
 COMMAND ===>                                                 SCROLL ===> CSR

 <   > StreetTalk name   <   > Exclusion   <   > Include Subdirs   <   > NDS

 Destination...(                                                            )
 Specification.( C:\WINNT\*.*                                               )
 (   ) Long names                                          ( X ) Update Spec
              Inquire Files                       Files Selected for Restore
----------------Row 1 of 205---------- MORE + ----------Row 1 of 1-------------
| ( _ ) 961230113831    27 ACROGRAF.INI      | ( X ) C:\WINNT\*.*              |
| ( X ) 981211114318  2522 ACROREAD.INI      | ( _ ) C:\TEST\*.*               |
| ( _ ) 990423163407 37504 Active Setup Log.B|                                 |
| ( _ ) 000120114037 43748 Active Setup Log.t|                                 |
| ( _ ) 971114103527 15928 Active Setup.Log  |                                 |
| ( _ ) 000120113100 34451 AdvpackExt.log    |                                 |
| ( _ ) 970730145201  817K ArtGalry.cag      |                                 |
| ( _ ) 960321205020 10656 BARCTL.DLL        |                                 |
------------------------------------------- ---------------------------------
          (   ) File Inquiry                (   ) Add Spec   (   ) Delete Spec
C:\WINNT
        OK <enter>                  (   ) More...          Prior panel <PF3>
```

Figure 62 - Restore via ISPF - Selecting a Specific File

The following figure illustrates the results after pressing the **ENTER** key.

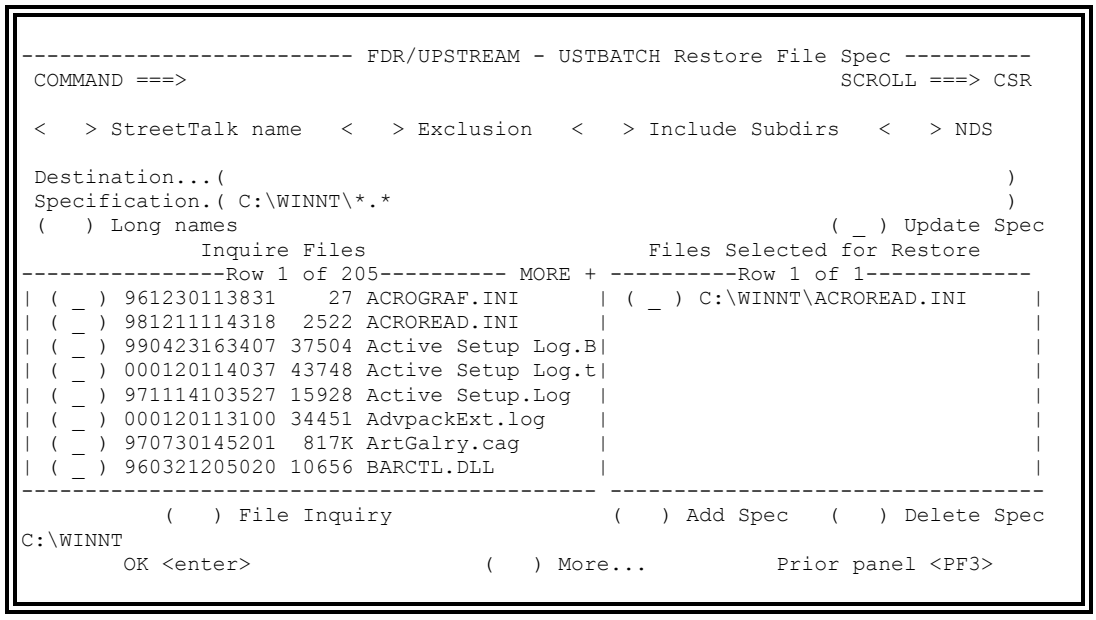


Figure 63 - Restore via ISPF - After Updating the Selection of a Specific File

Once you have updated the file specification, press the ISPF EXIT key (generally the PFK3 key) to return to the previous menu. The press this key again to return to the original USTBATCH main menu.

Step # 7 - Generate the USTBATCH Control Cards

You have now completed the specification of the FDR/UPSTREAM parameters that will be required to perform the requested restore. The next step is to initiate the generation of the OS/390 JCL to be used to invoke the USTBATCH utility program which submits your restore request to the FDR/UPSTREAM MVS Started Task for processing. You do this by specifying **"GEN"** on the "COMMAND" line of the ISPF panel as shown below and pressing the **ENTER** key.

```
------------------------- FDR/UPSTREAM - USTBATCH ----------------------------
COMMAND ===> GEN

     GEN - Generate statements     READ/SAVE/DELETE parameter set

APPLPREF ===> UPSTR     |  QUEUE     ===>         |  MAXRETRY  ===>
USAPPL   ===> UPSTREAM  |  CONV      ===> WAIT    |  TMAXRETRY ===>
TPNAME   ===> UPSTREAM  |  WTOCOMP   ===> YES     |  APPLRETRY ===>
LOGMODE  ===> #INTER    |  RESTART   ===>        (count,minutes)

   TARGNAME    ===>                          or TARGLU   ===>
or DNSname     ===>
or TCP/IP addr ===> 192.168.75.253           TCP/IP port ===> 2972

WSPARM   ===>
USERID   ===>           |  PASSWORD  ===>

ACTION   ===> 2     (specify to display related parameters and press enter)
   1 - Backup               5 - Restart Backup          9 - FDRSOS Backup
   2 - Restore & Inquiry    6 - Restart Restore        10 - FDRSOS Restore
   3 - Run a PC Job         7 - Kill Restart Backup    11 - PC Migration
   4 - File Transfer        8 - Kill Restart Restore   12 - Operator Commands

 Client Login Name ===>
 Client Password   ===>
```

Figure 64 - Restore via ISPF - Generating the USTBATCH Control Cards

Step # 8 - Specifying the JCL for USTBATCH

The panel below allows for the entry of installation specific JCL statements and options that may be required for proper execution the USTBATCH JOB. At a minimum you should alter the JCL to provide:

- A Valid, Installation Specific OS/390 JOBCARD
- A Proper STEPLIB DD Specification for the UPSTREAM/MVS Load Library

Selecting option # 2 on the command line and then pressing the **ENTER** key will allow you to review via the ISPF EDIT command the generated UPSTREAM/MVS USTBATCH JCL and parameters.

```
------------------------- FDR/UPSTREAM - USTBATCH -------------------------
 COMMAND ===> 2

  Please select one of the following options or press the END key to cancel

    1 - Browse the generated JCL stream
    2 - Edit   the generated JCL stream
    3 - Submit the generated JCL stream
    4 - Save   the generated JCL in a data set
    5 - Run    the generated USTBATCH statements in the TSO foreground

 JCL statements:
  ( //jobname  JOB (job acct data),'job id data',NOTIFY=userid            )
  ( //*                                                                   )
  ( //*                                                                   )
  ( //*                                                                   )
  ( //USTBATCH EXEC PGM=USTBATCH                                         )
  ( //STEPLIB  DD   DISP=SHR,DSN=your.upstream.load.library              )
  ( //SYSUDUMP DD   SYSOUT=*                                              )
  ( //USTLOG   DD   SYSOUT=*                                              )
```

Figure 65 - Restore via ISPF - Altering the USTBATCH JCL

Menu Field	Description
COMMAND	Select “2” in order to edit the generated USTBATCH JCL and parameters.
JOB Card Information	This field must specify a valid OS/390 JOB Card in order for the JCL generation to work properly. Please specify all applicable information that is applicable to your installation standards.
STEPLIB DD DSN	This field is the dataset name of the FDR/UPSTREAM MVS LOADLIB. This library must have been previously APF authorized. This DD statement is not required if the LOADLIB has been placed in the OS/390 LINKLST concatenation.

Step # 9 - Edit and Submit the Generated USTBATCH JCL

The following panel shows the generated JCL and USTBATCH control cards. It is suggested that they be reviewed, saved to a member of PDS in case a rerun is necessary, and then subsequently submitted for OS/390 BATCH processing.

```
File  Edit  Confirm  Menu  Utilities  Compilers  Test  Help
------------------------------------------------------------------------------
 EDIT------ USER01.SPFTEMP2.CNTL--------------------------- Columns 00001 00072
 Command ===>                                                  Scroll ===> CSR
 ****** ***************************** Top of Data ******************************
 000001 //jobname  JOB (job acct data),'job id data',NOTIFY=userid
 000002 //*
 000003 //*
 000004 //*
 000005 //USTBATCH EXEC PGM=USTBATCH
 000006 //STEPLIB  DD DISP=SHR,DSN= your.upstream.load.library
 000007 //SYSUDUMP DD SYSOUT=*
 000008 //USTLOG   DD SYSOUT=*
 000009 //*
 000010 //USTPARM  DD *
 000011 APPLPREF=UPSTR
 000012 USAPPL=UPSTREAM
 000013 LOGMODE=#INTER
 000014 *
 000015 TCPTARG=192.168.75.45
 000016 ACTION 0
 000017 BACKUPPROFILE TEST
            . . . . .
            . . . . .
 000064 *
 000065 ENDPARM
/*
//
```

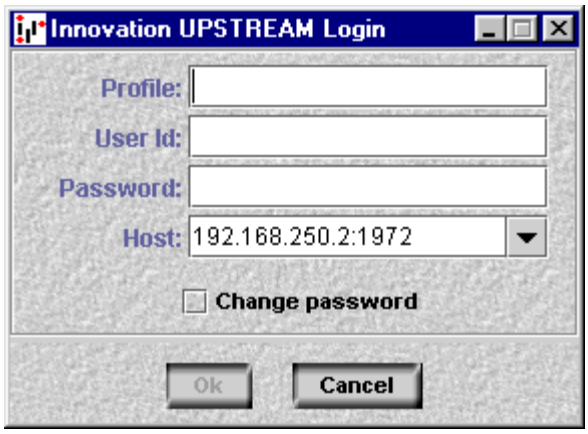
Figure 66 - Restore via ISPF - The Generated USTBATCH JCL

This completes the steps necessary to construct and submit an OS/390 TSO/ISPF initiated restore operation. The executing restore request can be monitored via the UPSTREAM/MVS ISPF STATUS panel (Option #2) or via the UPSTREAM/MVS STATUS operator command.

Restore Initiation Using the UPSTREAM Director

The UPSTREAM Director allows you to perform inquiries and restores from any UPSTREAM system, anywhere in your network. The discussion below describes using the Director on a Windows system.

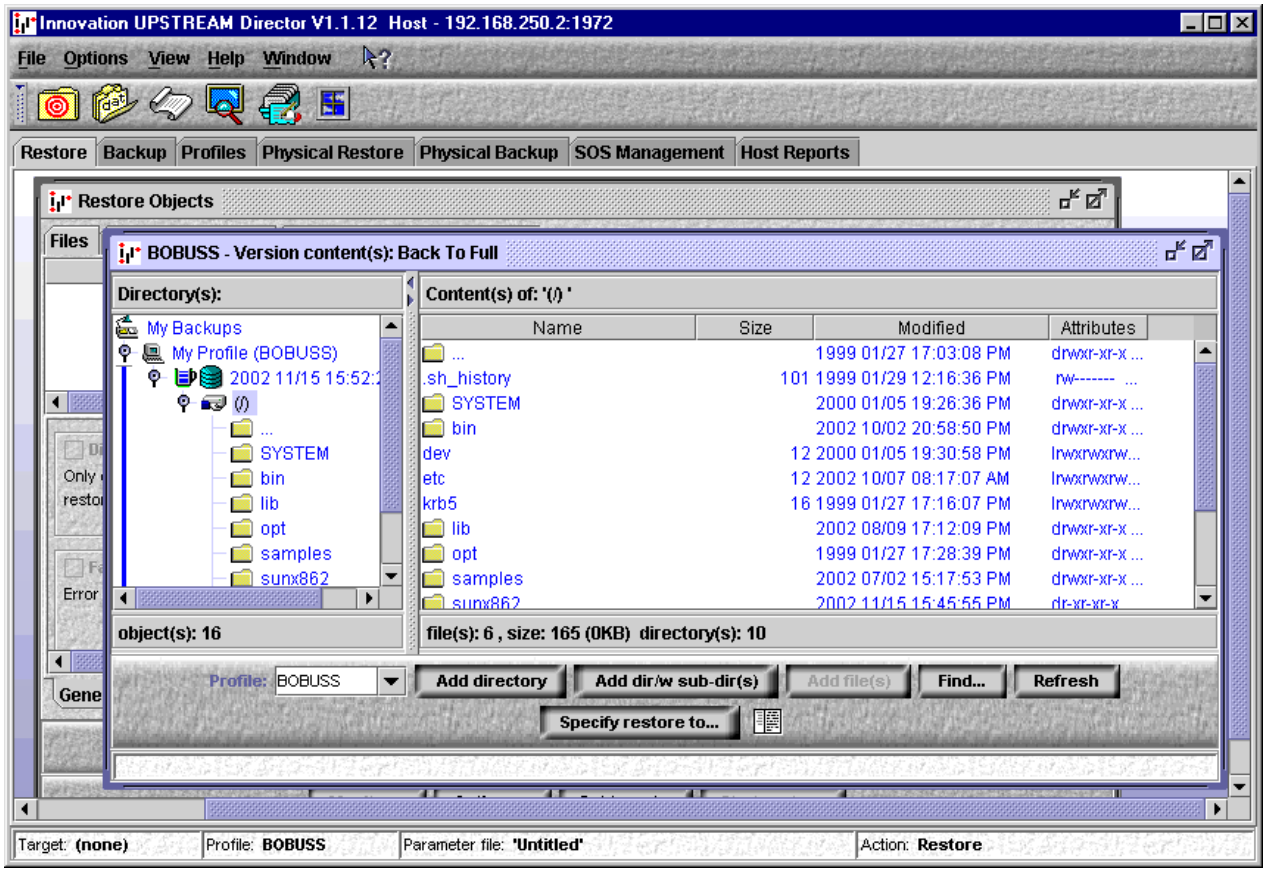
From the Windows Start menu select the FDR_UPSTREAM program group and the UPSTREAM Director item. A login screen will be displayed:



Enter:

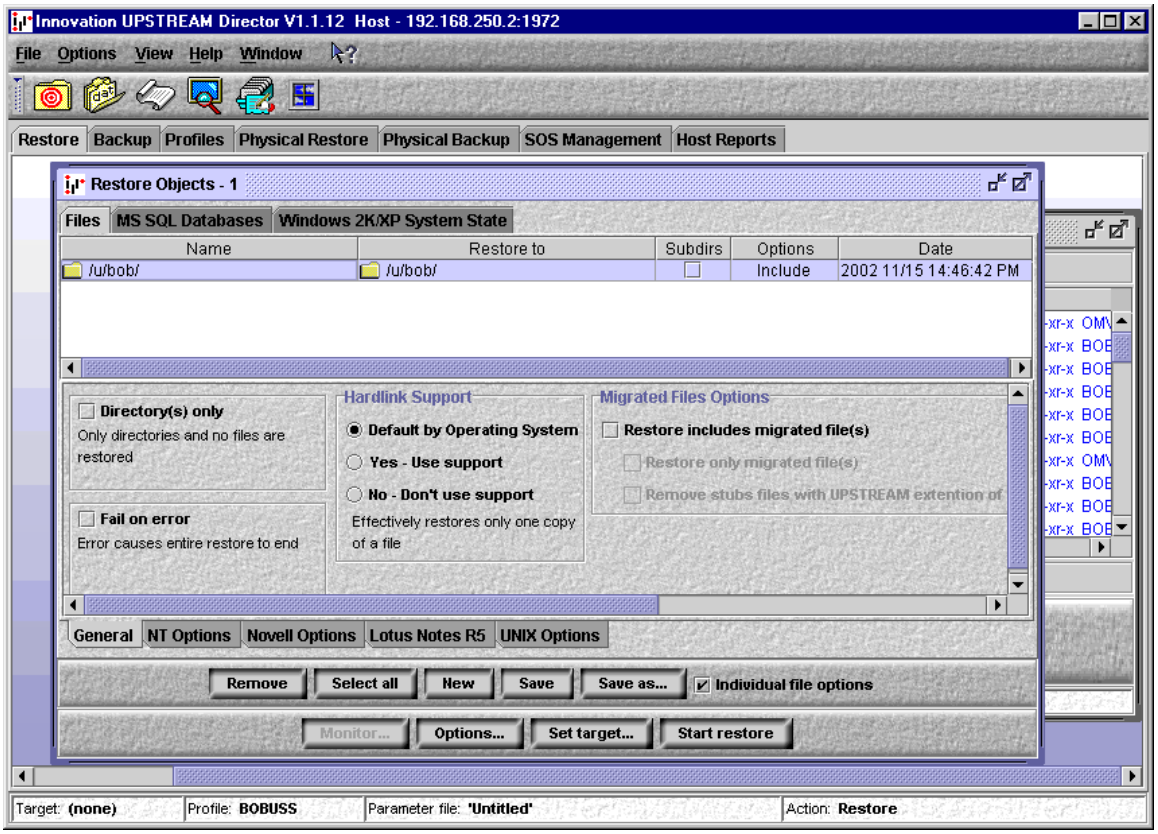
- Profile: A backup profile defined for UPSTREAM use.
- User Id: Your MVS system user name.
- Password: The password associated with your User Id.
- Host: Enter the IP address:Port number of the UPSTREAM/MVS system you wish to communicate with. The default is the value in the UPSTREAM configuration file on this machine, but you can enter any value.

Press the Ok button to continue. The main Director panel will be displayed. Press the Restore tab to perform inquiries and restores.



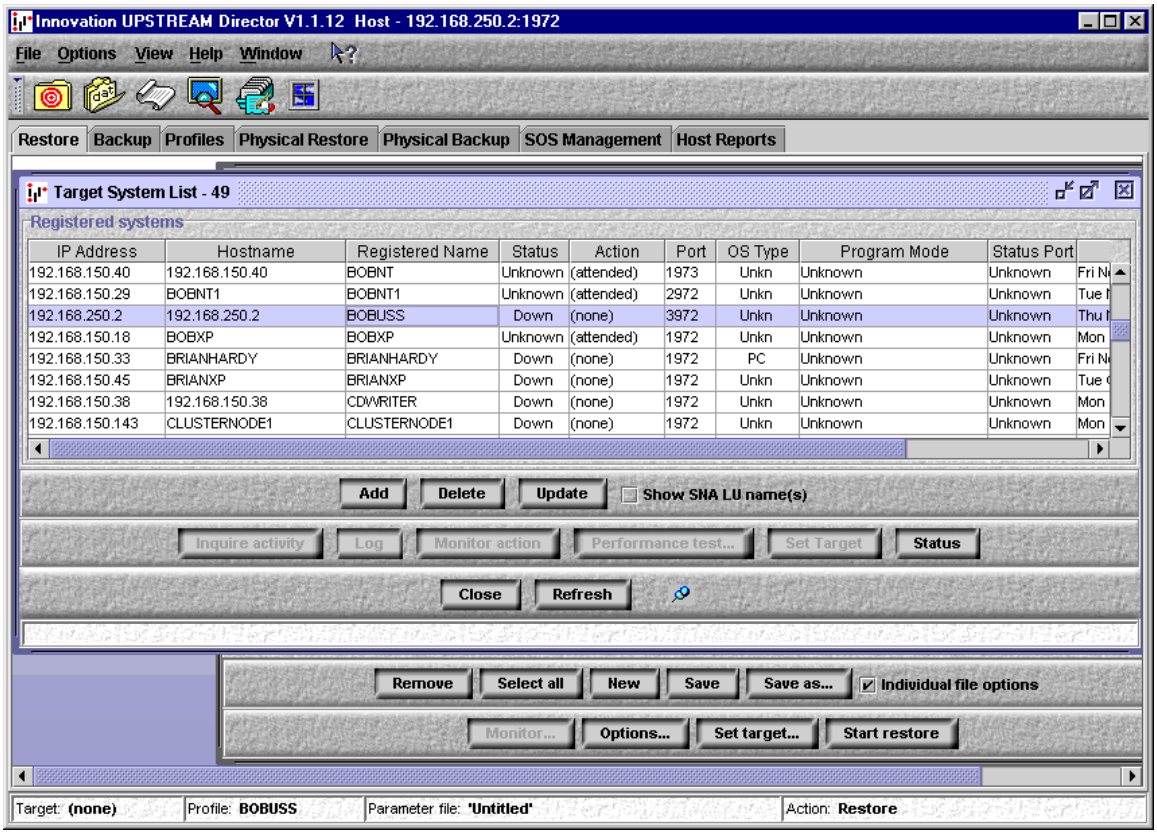
Use the mouse to expand directories. When you find a directory or file you wish to restore, press the Add directory button or use the right mouse button to Add or Add with Subdirectories…

When you have added entries, you can select the Restore Objects window to modify your restore request:



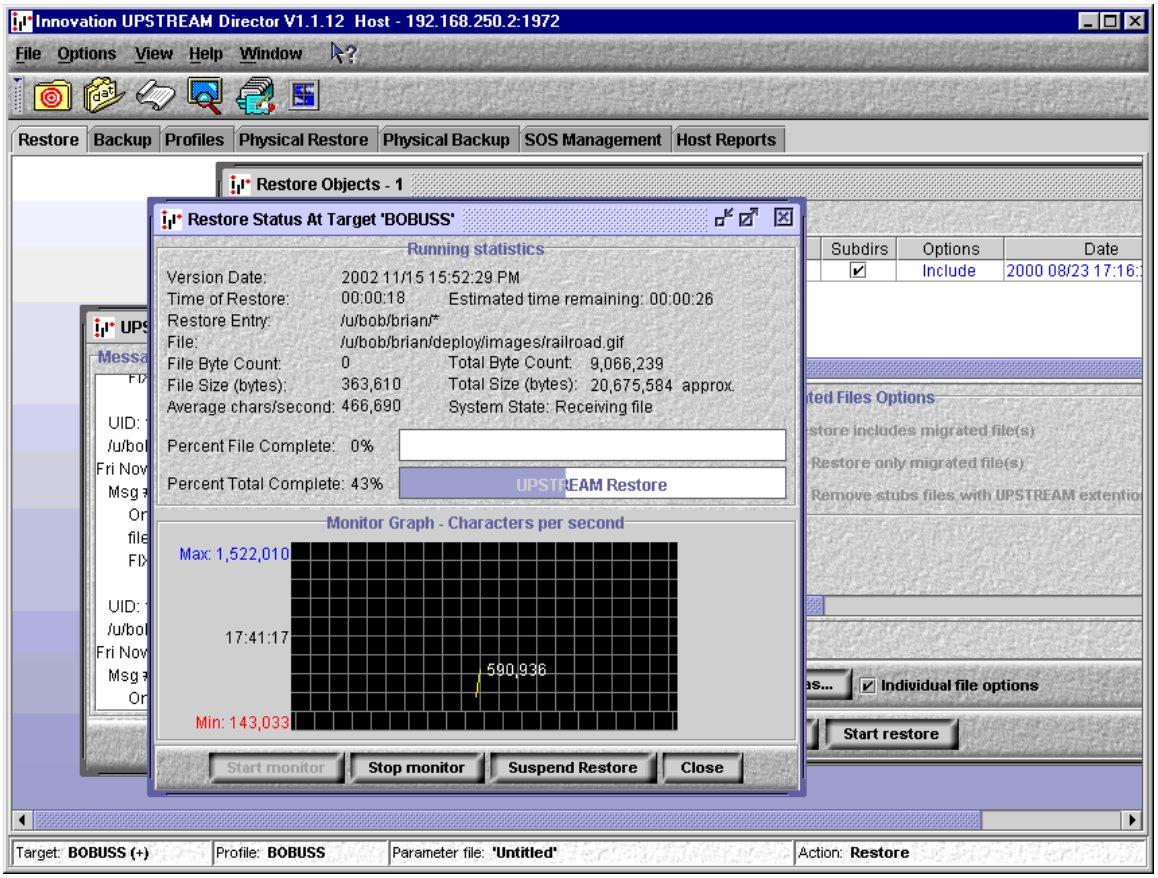
Press the Options button to adjust whole restore specific options. You can modify the entry in the Restore to column to adjust where the files are restored (change their destination); you can check the Subdirs checkbox to include files in the directories below the one specified. When you highlight a row in the list, the parameters in the window below the list will change based on the settings for that entry.

Press the Set Target button to direct the restore to a particular target client USS system:



Highlight the system you wish to restore to. Press the Status button to validate that the system is active and press the Set Target button to target requests to this system.

When you have completed your restore setup, press the Start Restore button. You will be warned that the restore will restore files to their original locations if you did not modify the Restore To field. The progress of the restore will be displayed:


Innovation UPSTREAM Director V1.1.12 Host - 192.168.250.2:1972
File Options View Help Window
Restore Backup Profiles Physical Restore Physical Backup SOS Management Host Reports
Restore Objects - 1
Restore Status At Target 'BOBUSS'
Running statistics
Version Date: 2002 11/15 15:52:29 PM
Time of Restore: 00:00:18 Estimated time remaining: 00:00:26
Restore Entry: /u/bob/brian/*
File: /u/bob/brian/deploy/images/railroad.gif
File Byte Count: 0 Total Byte Count: 9,066,239
File Size (bytes): 363,610 Total Size (bytes): 20,675,584 approx.
Average chars/second: 466,690 System State: Receiving file
Percent File Complete: 0%
Percent Total Complete: 43%
UPSTREAM Restore
Monitor Graph - Characters per second
Max: 1,522,010
17:41:17
590,936
Min: 143,033
Start monitor
Stop monitor
Suspend Restore
Close
Subdirs
Options
Date
Include
2000 08/23 17:16:1
Individual file options
Start restore
Target: BOBUSS (+)
Profile: BOBUSS
Parameter file: 'Untitled'
Action: Restore

6.3 Restore Initiation via JAVA Interface

An alternate method of initiating an UPSTREAM USS restore request, is via the supplied UPSTREAM JAVA workstation interface. This interface is a JAVA application program that is installed on a workstation system (Windows NT/95/98, AIX, HP/UX, etc.). It connects with the UPSTREAM MVS Started Task or the UPSTREAM USS process depending on the function requested.

The following section outlines a UPSTREAM restore request via the JAVA interface on a Microsoft Windows system.

Step # 1 - Start the UPSTREAM Java End User Restore Program

To start the UPSTREAM JAVA End User Restore Interface, select the "**START**" button, then the "**FDR_UPSTREAM**" program group and finally the "**End User Restore**" application item. This will begin execution of the interface.

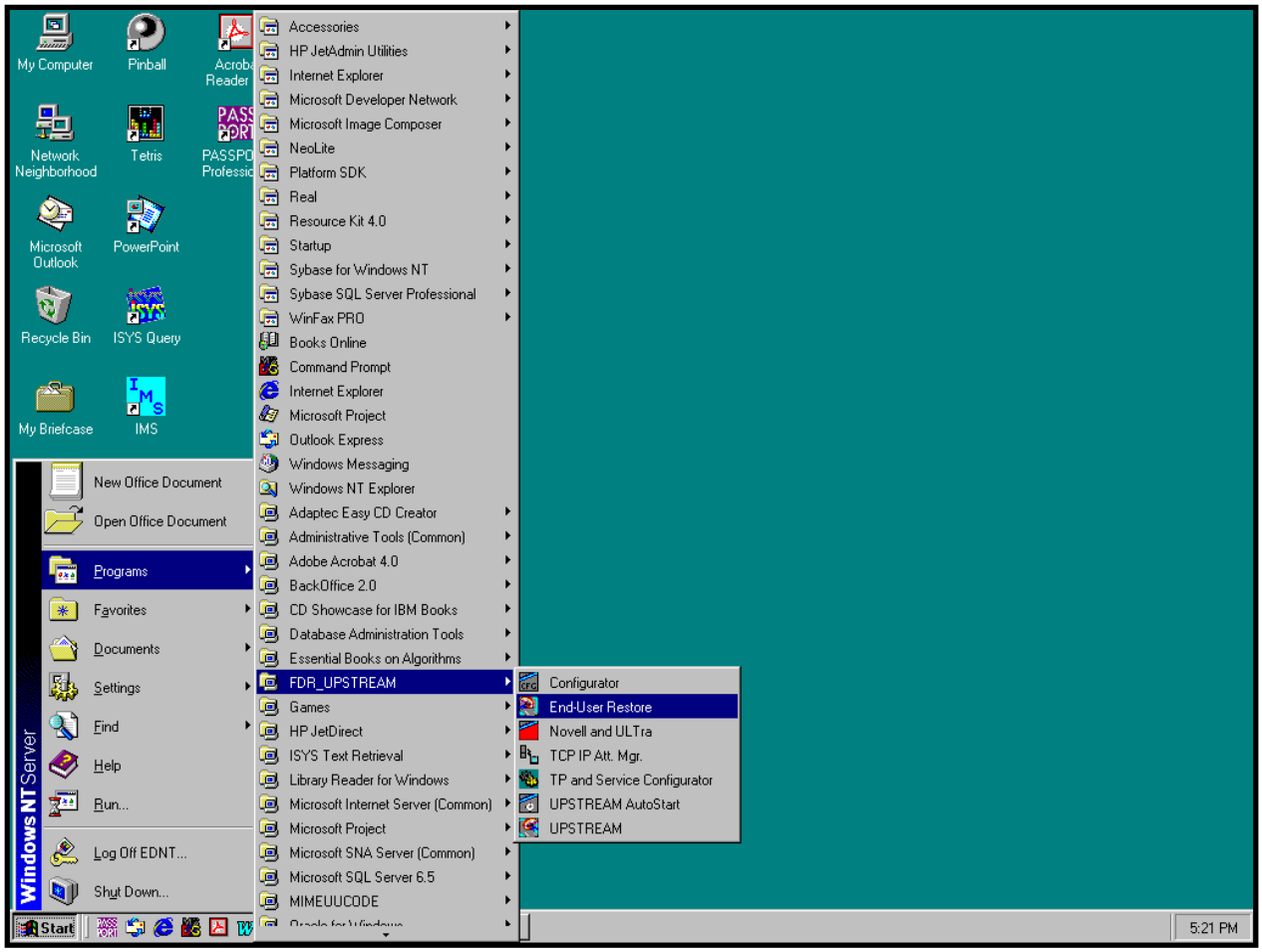


Figure 67 - Restore via JAVA Interface – Windows Start Menu

Step # 2 - Login to the UPSTREAM MVS Started Task

The next menu to appear, see Figure 68 - Restore via JAVA Interface - Login Menu below, will connect the workstation to the UPSTREAM MVS Started Task and optionally validate, via the installed host security system, a User ID and Password. See the UPSTREAM MVS Security section regarding the processing of the different levels of security available via the UPSTREAM MVS Started Task.

Enter a previously created Backup Profile Name in the “Profile:” field. If you do not know the name of your Backup Profile, consult with your UPSTREAM administrator or see page 39 ”Creating a Backup Profile” for information on creating a Backup Profile. Since you are attempting to restore from a previously taken backup, a backup profile most likely will have been already created for you to use.

Optionally, enter a valid OS/390 security system User ID and password in the appropriate menu fields and then click on the “OK” button to proceed.

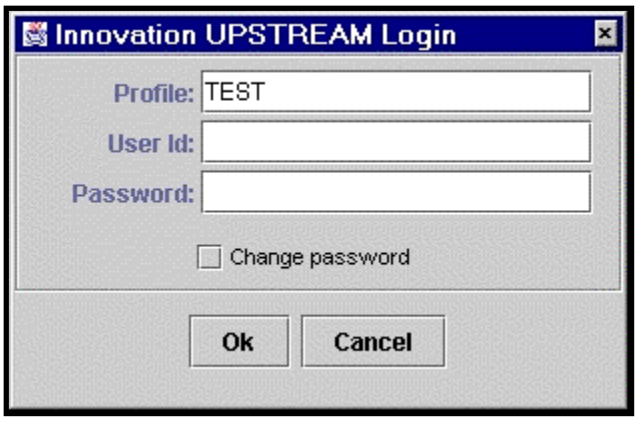


Figure 68 - Restore via JAVA Interface - Login Menu

Step # 3 - Select the Backup(s) to be Used for This Restore Request

The next menu to appear, see

Select the backup you are interested in from this list by double clicking on it. The displayed tree will expand to the next level.

Figure 69 - Restore via JAVA Interface - List of Backups Menu below, will allow you to specify the backups to be used for this restore request. The previously taken backups for the specified Backup Profile are listed in the left hand pane. The backups are listed one per line under the “My Profile(TEST) heading. The icons that prefix each backup are defined as follows:

 First Time FULL Backup

 FULL Merge Backup

 Incremental Backup

 Non-Merge Backup

 Backup Datasets are on DASD

 Backup Datasets are on TAPE

Select the backup you are interested in from this list by double clicking on it. The displayed tree will expand to the next level.

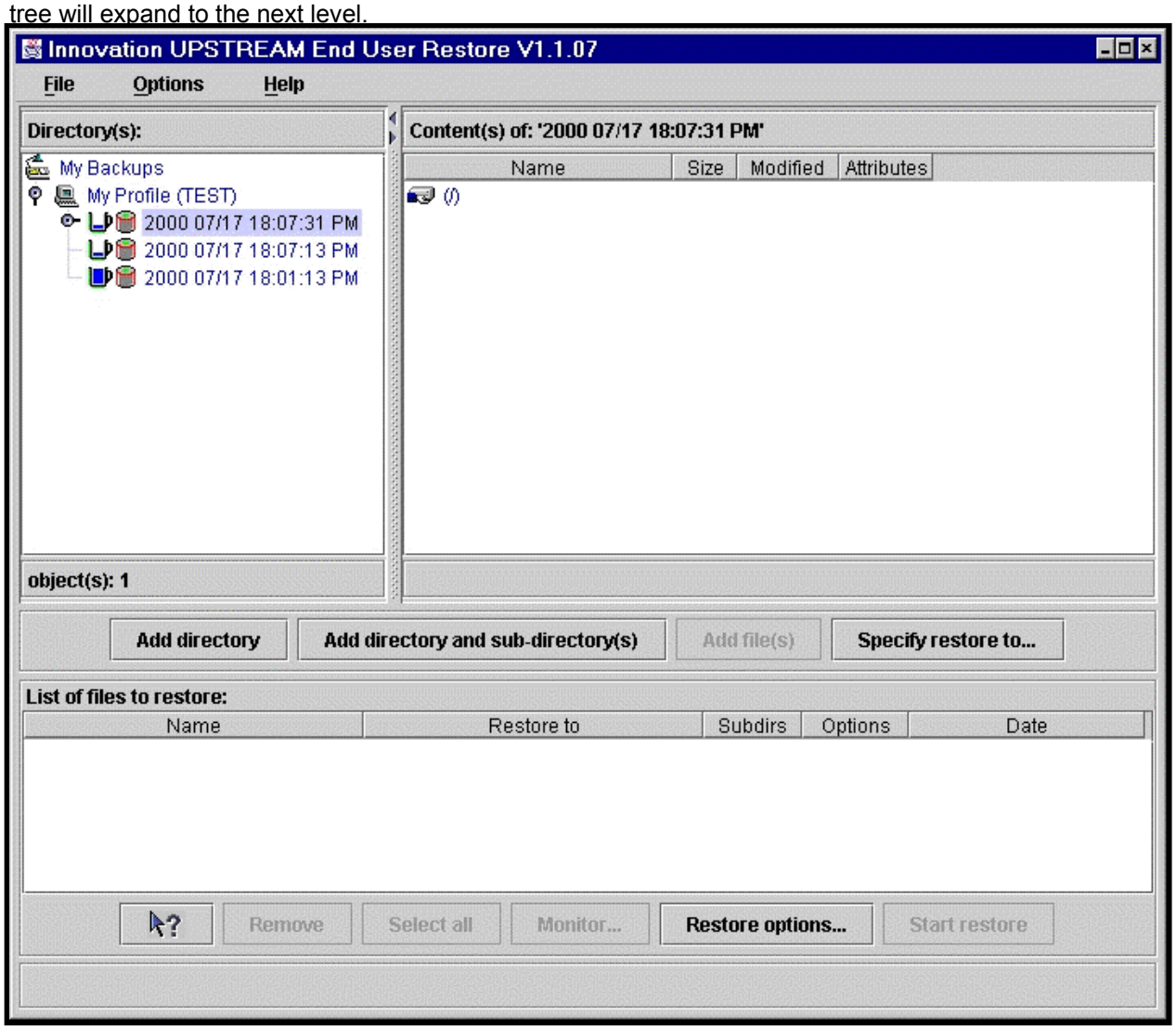


Figure 69 - Restore via JAVA Interface - List of Backups Menu

Step # 4 - Select the File(s) to be Used for This Restore Request

Continue to “drill down” the displayed tree until you can identify the file or files you wish to restore. In our example here we will attempt to restore the file “x.1” located in directory “/u/bob/efg”. Select the file by clicking on it in the right hand pane of the menu. Then press the “Add Files” button to make it appear in the bottom “List of Files to Restore:” pane. Additional help is available via the **HELP** menu dropdown item or by pressing the **F1** key.

After selecting the file, select the “Restore Options” button located on the lower center of the menu.

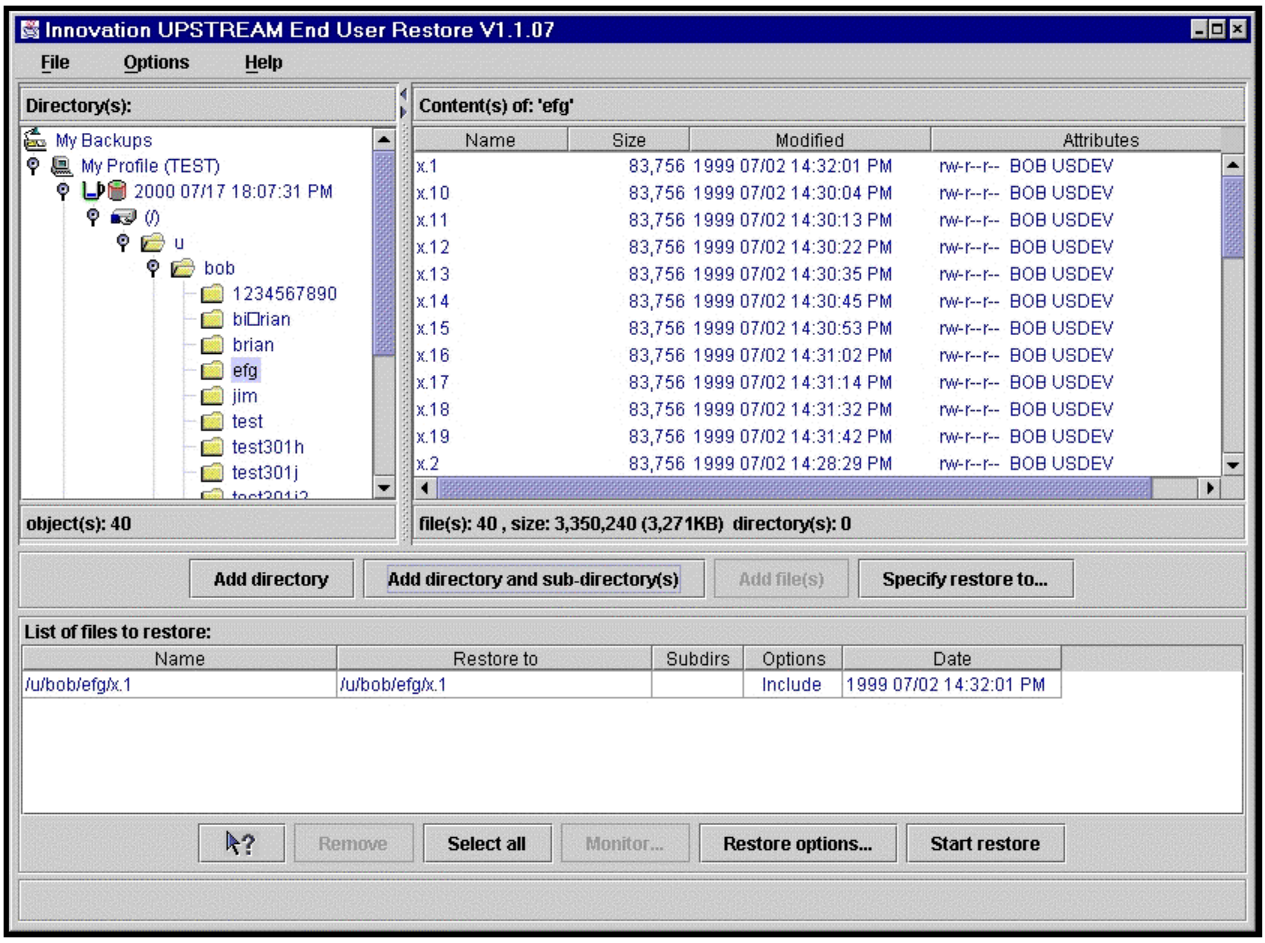


Figure 70 - Restore via JAVA Interface - Initial Menu

Step # 4 - Select the Restore Options

The "**Restore Options**" menu specifies parameters associated with three specific sets of functions:

1) Replacement of files that already exist on

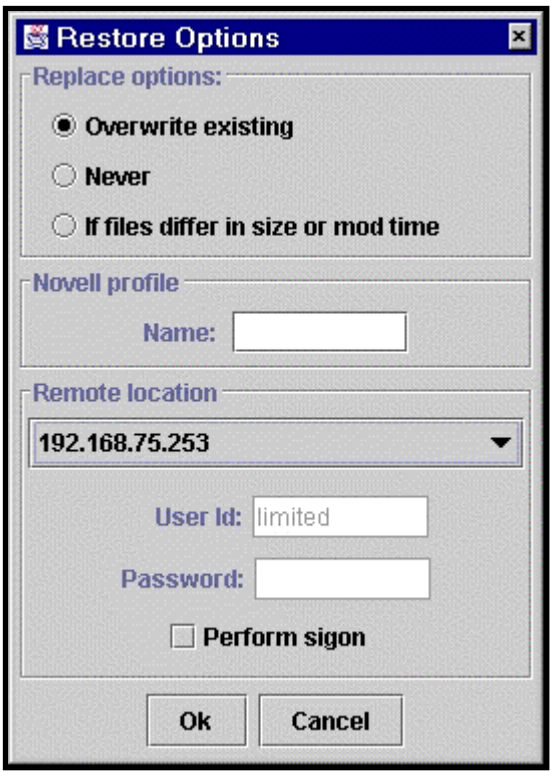


Figure 71 - Restore via JAVA Interface - Specifying Restore Options

Step # 5 - Initiate the Restore Request

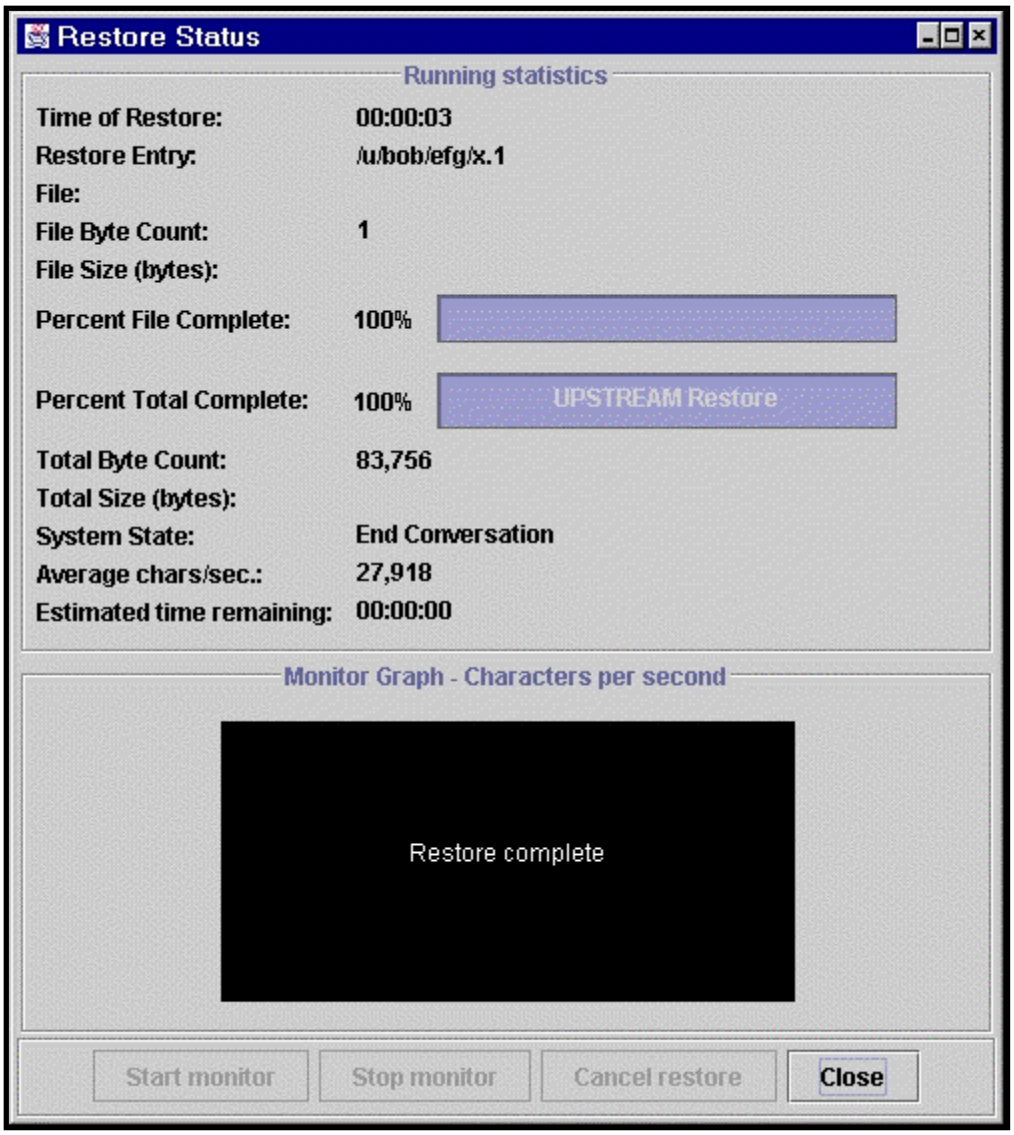


Figure 72 - Restore via JAVA Interface - Restore Status/Completion Menu

7

7 Running a USS User Process

7.1 USS User Process Initiation via MVS BATCH JOB

```
//jobname JOB  (accounting,information),'job id data',
//         NOTIFY=userid
//*
//*  ************************************************************
//*  ***                                                      ***
//*  ***        INITIATE USS PROCESS VIA USTBATCH             ***
//*  ***                                                      ***
//*  ************************************************************
//*
//BACKUP    EXEC PGM=USTBATCH
//STEPLIB   DD   DISP=SHR,DSN=your.upstream.load.library
//SYSUDUMP  DD   SYSOUT=*
//USTLOG    DD   SYSOUT=*
//USTPARM   DD   *
APPLPREF=UPSTR
USAPPL=UPSTREAM
LOGMODE=#INTER
CONV=WAIT
*
TCPTARG=192.168.75.249
TCPPORT=2972
*
ACTION=5                              * RUN A USS USER PROCESS
JOBOPTIONS=3
JOBRETURNCODEMAP=0:0 4:4 ?:8

SPECNUMBER 1
FILES=/u/user01/setupdb
*
ENDPARM
/*
//
```

Figure 73 - USS User Process BATCH Initiation - Sample JCL

Parameter	Value	Type	Description
TCPTARG	see description	USS Process	The IP Address of the LPAR running the USS Process.
TCPPORT	see description	USS Process	The IP Port number associated with the USS Process running at the above specified IP address.
ACTION	**5**	USS Process	5 - Indicates that this is a request to run a USS User Process.
JOBOPTIONS	**3**	USS Process	3 (bitmap) - Indicates: - 1=Start process and do not terminate UPSTREAM - 2 = Wait for process to terminate
JOBRETURNCODEMAP	**0:0 4:4 ?:8**	USS Process	Return code mapping applied at USS User Process completion. For each set of return codes, the left hand number is mapped into the value on the immediate right. "?" indicates all non-specified return codes.
FILES	**/u/user01/ setupdb**	USS Process	Name of the USS User Process to start

Figure 74 - USS User Process Initiation via MVS BATCH JOB

7.2 USS User Process Initiation via ISPF Interface

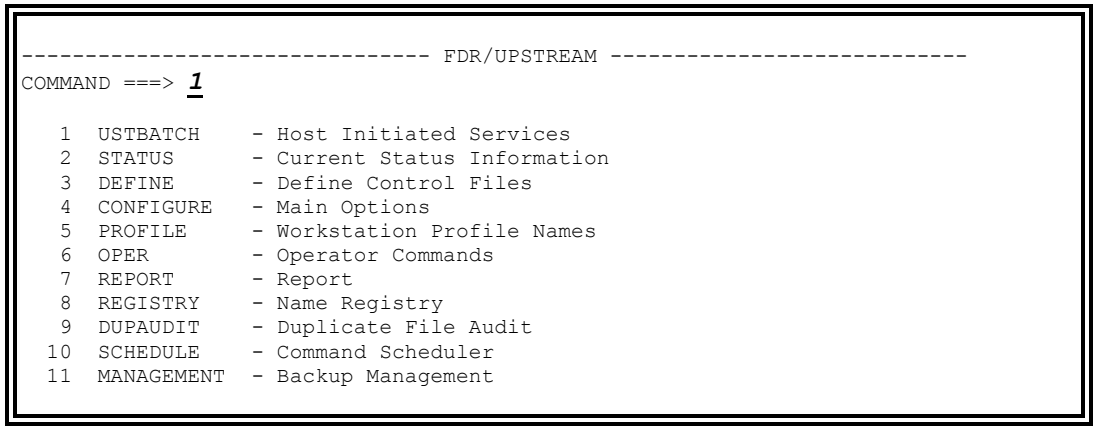


Figure 75 - Initiate USS User Process via ISPF - Selecting the USTBATCH Option

```
------------------------- FDR/UPSTREAM - USTBATCH ----------------------------
COMMAND ===>

     GEN - Generate statements     READ/SAVE/DELETE parameter set

APPLPREF ===> UPSTR      |  QUEUE     ===>          |  MAXRETRY  ===>
USAPPL   ===> UPSTREAM   |  CONV      ===> WAIT     |  TMAXRETRY ===>
TPNAME   ===> UPSTREAM   |  WTOCOMP   ===> YES      |  APPLRETRY ===>
LOGMODE  ===> #INTER     |  RESTART   ===>         (count,minutes)

   TARGNAME    ===>                          or TARGLU   ===>
or DNSname     ===>
or TCP/IP addr ===>  192.168.75.45           TCP/IP port ===> 2972

WSPARM   ===>
USERID   ===>            |  PASSWORD  ===>

ACTION   ===> 3       (specify to display related parameters and press enter)
   1 - Backup               5 - Restart Backup          9 - FDRSOS Backup
   2 - Restore & Inquiry    6 - Restart Restore        10 - FDRSOS Restore
   3 - Run a PC Job         7 - Kill Restart Backup    11 - PC Migration
  4 - File Transfer        8 - Kill Restart Restore   12 - Operator Commands

 Client Login Name ===>
 Client Password   ===>
```

Figure 76 - Initiate USS User Process via ISPF - Specifying the USTBATCH Parameters

```
------------------------- FDR/UPSTREAM - USTBATCH Run a PC Job ---------------
COMMAND ===>

---Optional ULTra Workstation Options-----  --LAN Interface-----
|                                        |  |                   |
| LAN WS Name...(                       )|  | (  ) IPX/SPX      |
|                                        |  | (   ) NetBIOS     |
| LAN WS Pwd....(          )             |  | (   ) TCP/IP      |
|                                        |  |                   |
------------------------------------------  --------------------

Command Line....( /u/user01/setupdb                                        )

Return Code Map ( 0:0 ?:8                                                  )

-------------------------------------------------------------------------------
| (   ) Do not run job, terminate UPSTREAM or ULTra immediately               |
| ( X ) Run job from UPSTREAM or ULTra and:                                   |
|       < X > Wait for job completion                                         |
|       <   > Terminate UPSTREAM or ULTra after job start/completion          |
|-----------------------------------------------------------------------------
                   OK <enter>       Prior panel <PF3>
```

Figure 77 - Initiate USS User Process via ISPF - Specifying the Process and Options

```
------------------------- FDR/UPSTREAM - USTBATCH ----------------------------
COMMAND ===> GEN

     GEN - Generate statements     READ/SAVE/DELETE parameter set

APPLPREF ===> UPSTR      |  QUEUE     ===>          |  MAXRETRY  ===>
USAPPL   ===> UPSTREAM   |  CONV      ===> WAIT     |  TMAXRETRY ===>
TPNAME   ===> UPSTREAM   |  WTOCOMP   ===> YES      |  APPLRETRY ===>
LOGMODE  ===> #INTER     |  RESTART   ===>         (count,minutes)

   TARGNAME    ===>                          or TARGLU   ===>
or DNSname     ===>
or TCP/IP addr ===>  192.168.75.45           TCP/IP port ===> 2972

WSPARM   ===>
USERID   ===>           |  PASSWORD  ===>

ACTION   ===> 3      (specify to display related parameters and press enter)
   1 - Backup               5 - Restart Backup          9 - FDRSOS Backup
   2 - Restore & Inquiry    6 - Restart Restore        10 - FDRSOS Restore
   3 - Run a PC Job         7 - Kill Restart Backup    11 - PC Migration
   4 - File Transfer        8 - Kill Restart Restore   12 - Operator Commands

 Client Login Name ===>
 Client Password   ===>
```

Figure 78 - Initiate USS User Process via ISPF - Generating the USTBATCH Parameters

```
------------------------- FDR/UPSTREAM - USTBATCH -------------------------
 COMMAND ===> 2

  Please select one of the following options or press the END key to cancel

    1 - Browse the generated JCL stream
    2 - Edit   the generated JCL stream
    3 - Submit the generated JCL stream
    4 - Save   the generated JCL in a data set
    5 - Run    the generated USTBATCH statements in the TSO foreground

 JCL statements:
  ( //jobname  JOB (job acct data),'job id data',NOTIFY=userid            )
  ( //*                                                                   )
  ( //*                                                                   )
  ( //*                                                                   )
  ( //USTBATCH EXEC PGM=USTBATCH                                         )
  ( //STEPLIB  DD   DISP=SHR,DSN=your.upstream.load.library              )
  ( //SYSUDUMP DD   SYSOUT=*                                              )
  ( //USTLOG   DD   SYSOUT=*                                              )
```

Figure 79 - Initiate USS User Process via ISPF - Altering the USTBATCH JCL

Menu Field	Description
COMMAND	Select “2” in order to edit the generated USTBATCH JCL and parameters.
JOB Card Information	This field must specify a valid OS/390 JOB Card in order for the JCL generation to work properly. Please specify all applicable information that is applicable to your installation standards.
STEPLIB DD DSN	This field is the dataset name of the FDR/UPSTREAM MVS LOADLIB. This library must have been previously APF authorized. This DD statement is not required if the LOADLIB has been placed in the OS/390 LINKLST concatenation.

```
File  Edit  Confirm  Menu  Utilities  Compilers  Test  Help
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
EDIT------ USER01.SPFTEMP1.CNTL---------------------------- Columns 00001 00072
Command ===>                                                  Scroll ===> CSR
****** ***************************** Top of Data ******************************
000001 //jobname JOB  (accounting,information),'job id data',
000002 //        NOTIFY=userid
000003 //*
000004 //*
000005 //BACKUP    EXEC PGM=USTBATCH
000006 //STEPLIB   DD   DISP=SHR,DSN=your.upstream.load.library
000007 //SYSUDUMP  DD   SYSOUT=*
000008 //USTLOG    DD   SYSOUT=*
000009 //USTPARM   DD   *
000010 APPLPREF=UPSTR
000011 USAPPL=UPSTREAM
000012 LOGMODE=#INTER
000013 CONV=WAIT
000014 *
000015 TCPTARG=192.168.75.249..2972
000016 *
000017 ACTION=5
000017 SPECNUMBER=1
000018 FILES=/u/user01/setupdb
000019 *
000020 ENDPARM
000021 /*
000022 //
```

Figure 80 - Initiate USS User Process via ISPF - Viewing the USTBATCH Parameters

8

8 Performing A Vault

The FDR/UPSTREAM Vaulting facility is used to create additional copies of existing backup datasets that have been previously created via the normal backup process. The following steps need to be performed in order to perform a successful VAULT process.

8.1 VAULT Initiation via MVS BATCH JOB

8.1.1 Step # 1 - Enable Backup Profile(s) for Vaulting

A Backup Profile that is to be the source of a Vaulting operation must be enabled and properly configured. Proper configuration for Vaulting must be performed prior to the time that the backups are taken in order for it to be later selected for Vaulting.

8.1.2 Step # 2 - Define a VAULT Profile

A VAULT Profile is used to define the special dataset that precede and follow secondary copies of FDR/UPSTREAM backup datasets created by the VAULT facility. You need to construct a VAULT Profile for each group of Backup Profiles that you wish processed. A group of Backup Profiles consists of one or more either specified on the initiation of the VAULT command or specifically grouped by the GROUPID option specified on each individual Backup Profile.

The steps necessary to define a VAULT profile is outlined in the section entitled “Creating a VAULT Profile“ beginning on page 47. Create your VAULT Profile and then return here to proceed with the next step of this procedure.

8.1.3 Step # 3 - Define VAULT Dataset GDGs (Optional)

If you specified either TAPEGDG=YES or DASDGDG=YES when you constructed your VAULT Profile, then you must build GDG Base definitions for that VAULT Profile to use. One GDG is required for the Tape Retention Dataset defined by the DASDPREF menu field and one GDG is required for the VAULT Control File Dataset defined by the TAPEPREF menu field. The following sample JCL illustrates how to construct these definitions.

```
//*
//*       DEFINE GDG BASE TO USE WITH FDR/UPSTREAM VAULTING
//*
//DEFINE   EXEC PGM=IDCAMS
//SYSPRINT DD   SYSOUT=*
//SYSIN    DD   *
  DEFINE GDG (NAME(UPSTREAM.TEST.USTVLTAA) LIMIT(20) SCRATCH)
  DEFINE GDG (NAME(UPSTREAM.TEST.USTVLCAA) LIMIT(20) SCRATCH)
/*
//
```

Figure 81 - Defining the VAULT GDG Bases

8.1.4 Step # 4 - Select a Method of Initiation

It is now time to initiate the actual VAULT process. The process can be initiated via many methods since it runs as a subtask of the FDR/UPSTREAM/MVS Started Task. The methods we will outline here are the most commonly used. Using one of these methods or a variant will allow you to easily submit, process and manage the request via your existing OS/390 JOB Management subsystems.

The three methods described in this section are:

- VAULT Initiation via USTBATCH JOB
- VAULT Initiation via the TSO/ISPF Interface
- VAULT Initiation via OS/390 OPERATOR Command

Please select one of these methods and proceed to that heading to continue.

8.2 VAULT Initiation via USTBATCH JOB

Using the sample JCL outlined in Figure 31 - First Time Full Backup Initiation via MVS BATCH JOB below, will allow a simple and quick way of getting started performing FDR/UPSTREAM VAULT operations of your previously taken FDR/UPSTREAM USS backups. The JCL will at a minimum require some customization for your particular site requirements for the JOB card and STEPLIB specifications. You should review the table of parameter descriptions that follow the sample JCL to review the meaning of the actual keywords specified and how they may have been customized at your installation.

The sample JCL provided performs a VAULT operation for only Backup Profile TEST. Please review this specification carefully to determine that this is what you want to do.

When you have completed reviewing the JCL and parameters, submit the JCL and the VAULT operation will begin execution.

```
//jobname  JOB  (accounting,information),'UPSTREAM VAULT',
//        MSGLEVEL=(1,1),CLASS=A,MSGCLASS=X
//*
//*  ********************************************************
//*  ***  VAULT PREVIOUSLY TAKEN FDR/UPSTREAM USS BACKUPS   ***
//*  ***       FOR BACKUP PROFILE TEST                      ***
//*  ********************************************************
//*
//VAULT    EXEC PGM=USTBATCH
//STEPLIB   DD  DISP=SHR,DSN=your.upstream.load.library
//SYSUDUMP  DD  SYSOUT=*
//USTLOG    DD  SYSOUT=*
//USTPARM   DD  *
APPLPREF=UPSTR                      * VTAM APPL Prefix
USAPPL=UPSTREAM                     * Name of UPSTREAM Started TASK VTAM APPL
LOGMODE=#INTER                      * VTAM LOGMODE to use from USTBATCH to STC
CONV=WAIT                           * WAIT for Backup to complete before ending
*
COMMAND=VAULT01,PROFILE=TEST        * VAULT Request
*
ENDPARM                             * End of FDR/UPSTREAM USTBATCH Parameters
/*
//
```

Figure 82 - VAULT Initiation via MVS BATCH JOB

The following table outlines each parameter, its specified value, and what it means in the example VAULT request. All of the parameters used here are more fully documented in the "USTBATCH Parameter Reference" section beginning on page 190.

Parameter	Value	Parameter Type	Description
APPLPREF	**UPSTR**	USTBATCH	VTAM APPL Prefix
USAPPL	**UPSTREAM**	USTBATCH	Name of UPSTREAM Started Task VTAM APPL
LOGMODE	**#INTER**	USTBATCH	VTAM LOGMODE to use from BATCH to STC
CONV	**WAIT**	USTBATCH	WAIT for VAULT request to complete before ending the USTBATCH JOB.
COMMAND	**(See Description)**	USTBATCH	The FDR/UPSTREAM Started Task command to be issued.
ENDPARM	**n/a**	USTBATCH	End of USTBATCH input parameters

Figure 83 - VAULT Initiation via MVS BATCH JOB - USTBATCH Parameters

When you have completed reviewing the JCL and parameters, submit the JCL for OS/390 BATCH processing and the VAULT will begin execution. When the VAULT completes execution the output should be similar to the output illustrated below.

```
UST728  17:38:28 ACB UPSTR001 OPENED TO VTAM

UST729  17:38:29 APPC ALLOCATE TO UPSTREAM SUCCESSFUL
UST734  17:38:29 REQUEST SENT TO ONLINE INITIATOR FOR COMMAND VAULT01,PROFILE=TEST
UST735  17:38:29 REQUEST CONFIRMED BY ONLINE INITIATOR

UST760I 17:38:29 RESTART NOT ENABLED - COUNT=   0 DELAY=  10

------- FDR/UPSTREAM -MVS TASK MESSAGES FOLLOW:
-UST197  17:38:29 COMMAND  REMOTE INITIATION TO COMMAND               FROM UPSTR001
-UST224  17:38:30 USTBATCH        0.013 CPU SECOND(S) USED IN VAULTREQ
-UST248  17:38:30 USTBATCH COMMAND  VAULTREQ   PROCESS DETACHED TASKID=0006
-UST241  17:38:30 USTVAULT USTVAULT NOW ACTIVE
-UST630  17:38:30 USTVLT01 USTVAULT VAULT STARTED VER - V3.2.0
-UST651  17:52:10 USTVLT01 BACKUP IS SELECTED FOR VAULTING PROFILE=TEST
DSN=UPSTREAM.TEST.G0001V00
-UST665  17:52:11 USTVLT01 CONTROL FILE DATA SET NAME IS UPSTREAM.USTVLCAA.G0001V00
-UST663  17:38:31 USTVLT01 VAULTED:      1 VERSION(S)      32,567 FILES       96 DIRS
123,444 DATA RECORDS     1,234,560 KBYTES
-UST173  17:38:31 USTVLT01 VAULT01 COMPLETED SUCCESSFULLY PROFILE=TEST
-UST224  17:38:31 USTVLT01        12.016 CPU SECOND(S) USED IN VAULT
-UST241  17:38:31 USTVLT01 USTVAULT COMPLETED RC=00
-UST248  17:38:31 USTVLT01 USTVAULT VAULT    PROCESS DETACHED TASKID=0006
------- END OF FDR/UPSTREAM -MVS TASK MESSAGES
```

Figure 84 - VAULT Initiation via MVS BATCH JOB - USTBATCH Output

8.3 VAULT Initiation via TSO/ISPF Interface

```
------------------------------- FDR/UPSTREAM ---------------------------
COMMAND ===> 1

   1  USTBATCH    - Host Initiated Services
   2  STATUS      - Current Status Information
   3  DEFINE      - Define Control Files
   4  CONFIGURE   - Main Options
   5  PROFILE     - Workstation Profile Names
   6  OPER        - Operator Commands
   7  REPORT      - Report
   8  REGISTRY    - Name Registry
   9  DUPAUDIT    - Duplicate File Audit
  10  SCHEDULE    - Command Scheduler
  11  MANAGEMENT  - Backup Management
```

Figure 85 - VAULT Initiation via ISPF - Selecting the USTBATCH Option

```
------------------------- FDR/UPSTREAM - USTBATCH ----------------------------
COMMAND ===>

     GEN - Generate statements     READ/SAVE/DELETE parameter set

APPLPREF ===> UPSTR      |  QUEUE     ===>          |  MAXRETRY  ===>
USAPPL   ===> UPSTREAM   |  CONV      ===> WAIT     |  TMAXRETRY ===>
TPNAME   ===> UPSTREAM   |  WTOCOMP   ===> YES      |  APPLRETRY ===>
LOGMODE  ===> #INTER     |  RESTART   ===>         (count,minutes)

   TARGNAME    ===>                          or TARGLU   ===>
or DNSname     ===>
or TCP/IP addr ===>                          TCP/IP port ===>

WSPARM   ===>
USERID   ===>            |  PASSWORD  ===>

ACTION   ===> 12     (specify to display related parameters and press enter)
   1 - Backup               5 - Restart Backup          9 - FDRSOS Backup
   2 - Restore & Inquiry    6 - Restart Restore        10 - FDRSOS Restore
   3 - Run a PC Job         7 - Kill Restart Backup    11 - PC Migration
  4 - File Transfer        8 - Kill Restart Restore   12 - Operator Commands

 Client Login Name ===>
 Client Password   ===>
```

Figure 86 - VAULT Initiation via ISPF - Specifying the USTBATCH Parameters

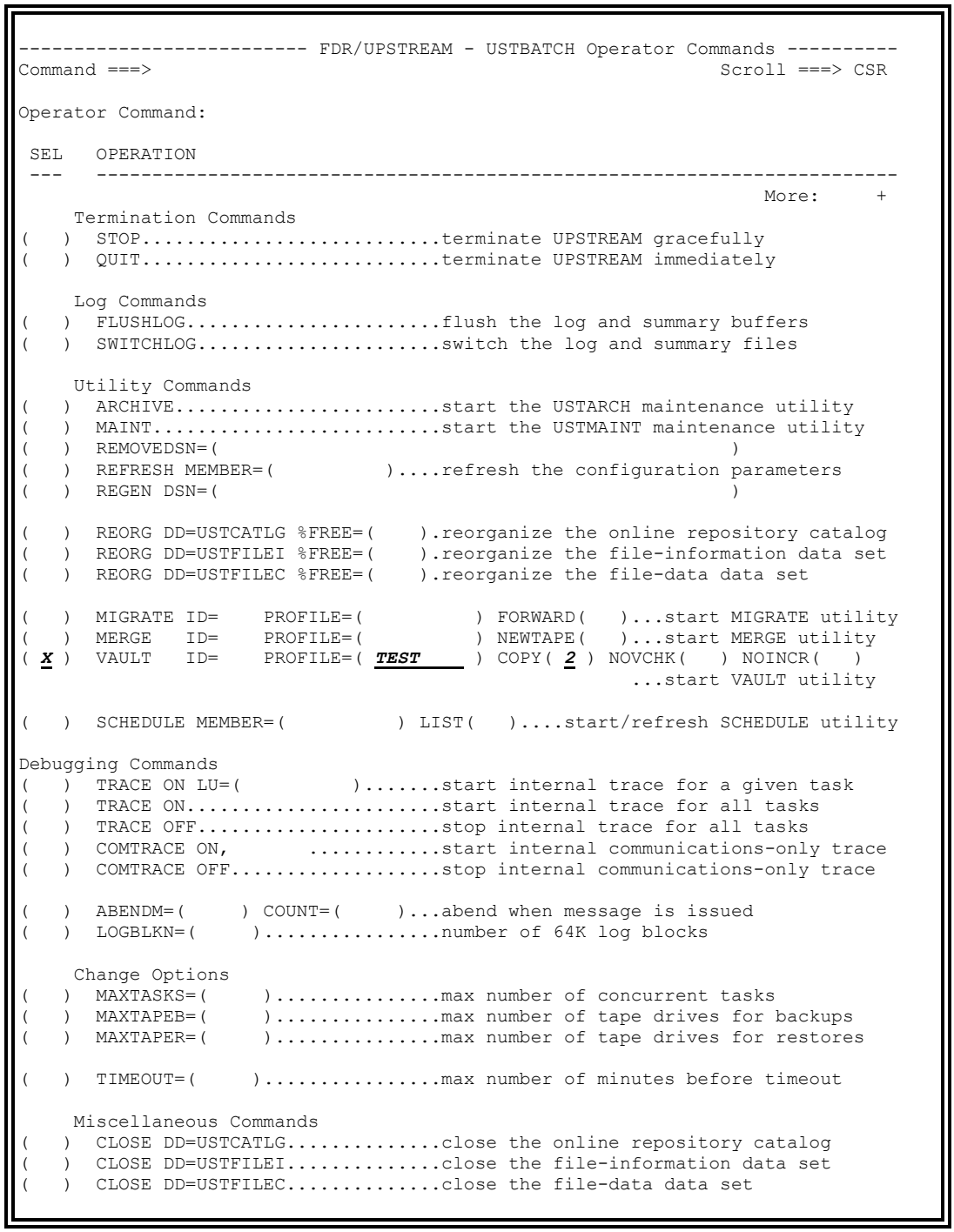


Figure 87 - VAULT Initiation via ISPF - Specifying the Command

Menu Field	Description
PROFILE	Specification of this field indicates that ONLY the specified Backup Profile will be selected for VAULT processing by this VAULT command.
COPY	This field specifies the numeric substitution character that will replace the "?" character specified in the Backup Profile TAPEPREF/DASDPREF field when the VAULT copy of the backup dataset is created on the VAULT Tape Set.

```
------------------------- FDR/UPSTREAM - USTBATCH ----------------------------
COMMAND ===> GEN

     GEN - Generate statements     READ/SAVE/DELETE parameter set

APPLPREF ===> UPSTR      |  QUEUE     ===>          |  MAXRETRY  ===>
USAPPL   ===> UPSTREAM   |  CONV      ===> WAIT     |  TMAXRETRY ===>
TPNAME   ===> UPSTREAM   |  WTOCOMP   ===> YES      |  APPLRETRY ===>
LOGMODE  ===> #INTER     |  RESTART   ===>         (count,minutes)

   TARGNAME    ===>                          or TARGLU   ===>
or DNSname     ===>
or TCP/IP addr ===>                          TCP/IP port ===>

WSPARM   ===>
USERID   ===>            |  PASSWORD  ===>

ACTION   ===> 12    (specify to display related parameters and press enter)
   1 - Backup               5 - Restart Backup          9 - FDRSOS Backup
   2 - Restore & Inquiry    6 - Restart Restore        10 - FDRSOS Restore
   3 - Run a PC Job         7 - Kill Restart Backup    11 - PC Migration
  4 - File Transfer        8 - Kill Restart Restore   12 - Operator Commands

 Client Login Name ===>
 Client Password   ===>
```

Figure 88 - VAULT Initiation via ISPF - Generating the USTBATCH Parameters

```
------------------------- FDR/UPSTREAM - USTBATCH -------------------------
 COMMAND ===> 2

  Please select one of the following options or press the END key to cancel

    1 - Browse the generated JCL stream
    2 - Edit   the generated JCL stream
    3 - Submit the generated JCL stream
    4 - Save   the generated JCL in a data set
    5 - Run    the generated USTBATCH statements in the TSO foreground

 JCL statements:
  ( //jobname  JOB (job acct data),'job id data',NOTIFY=userid            )
  ( //*                                                                   )
  ( //*                                                                   )
  ( //*                                                                   )
  ( //USTBATCH EXEC PGM=USTBATCH                                         )
  ( //STEPLIB  DD   DISP=SHR,DSN=your.upstream.load.library              )
  ( //SYSUDUMP DD   SYSOUT=*                                              )
  ( //USTLOG   DD   SYSOUT=*                                              )
```

Figure 89 - VAULT Initiation via ISPF - Altering the USTBATCH JCL

Menu Field	Description
COMMAND	Select “2” in order to edit the generated USTBATCH JCL and parameters.
JOB Card Information	This field must specify a valid OS/390 JOB Card in order for the JCL generation to work properly. Please specify all applicable information that is applicable to your installation standards.
STEPLIB DD DSN	This field is the dataset name of the FDR/UPSTREAM MVS LOADLIB. This library must have been previously APF authorized. This DD statement is not required if the LOADLIB has been placed in the OS/390 LINKLST concatenation.

```
File  Edit  Confirm  Menu  Utilities  Compilers  Test  Help
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
EDIT------ USER01.SPFTEMP1.CNTL---------------------------- Columns 00001 00072
Command ===>                                                  Scroll ===> CSR
****** ***************************** Top of Data ******************************
000001 //jobname JOB  (accounting,information),'job id data',
000002 //        NOTIFY=userid
000003 //*
000004 //*
000005 //BACKUP    EXEC PGM=USTBATCH
000006 //STEPLIB   DD   DISP=SHR,DSN=your.upstream.load.library
000007 //SYSUDUMP  DD   SYSOUT=*
000008 //USTLOG    DD   SYSOUT=*
000009 //USTPARM   DD   *
000010 APPLPREF=UPSTR
000011 USAPPL=UPSTREAM
000012 LOGMODE=#INTER
000013 CONV=WAIT
000014 *
000018 COMMAND=VAULT01,PROFILE=TEST
000019 *
000020 ENDPARM
000021 /*
000022 //
```

Figure 90 - VAULT Initiation via ISPF - Viewing the USTBATCH Parameters

8.4 VAULT Initiation via MVS Operator Command

9

9 Managing Your Backups

9.1 Available Management Functions

FDR/UPSTREAM USS is designed have all management functions performed from the TSO/ISPF User Interface. The REGEN and REMOVEDSN functions are also available via the FDR/UPSTREAM OS/390 Console Interface facility. The following management functions are available:

- **REGEN**

  This function is used to update backup information in the FDR/UPSTREAM database with information from an UPSTREAM backup or vault file. It can be used when backup information has been lost or is incorrect in the database, or when secondary or vault copy of an FDR/UPSTREAM backup is to be used in place of the primary copy of a backup.

- **REMOVEDSN**

  This command is used if you wish to delete from the FDR/UPSTREAM database, records for a particular backup dataset. If more than one backup is contained within that backup dataset, then all backups are removed. The actual backup dataset is not uncataloged or scratched from the OS/390 system catalog or tape management system.

- **Delete**

  This command is used to perform the following functions on the selected backup:

  - Remove all FDR/UPSTREAM database records (equivalent to the REMOVEDSN function).
  - Uncatalog the backup dataset from the OS/390 catalog.
  - Delete any DASD resources and make available for reuse any tape volumes associated with the backup dataset.

- **Delete No Remove (DNR)**

  This command is used to perform the following functions on the selected backup:

  - Uncatalog the backup dataset from the OS/390 catalog.
  - Delete any DASD resources and make available for reuse any tape volumes associated with the backup dataset.

- Leave all entries in the FDR/UPSTREAM database as is.

- **Browse**

  This diagnostic feature allows you to invoke the TSO/ISPF Browse function on a DASD based FDR/UPSTREAM backup dataset. All normal Browse functions work normally.

9.2 Using the TSO/ISPF Management Interface

As an example, let us run through the removal of an previously taken but now unwanted FDR/UPSTREAM backup. Let's assume that the backup was taken to tape, it was successful, and we wish to utilize the TSO/ISPF management interface.

First we need to enter the TSO/ISPF Management Interface. This is available off the FDR/UPSTREAM Main Menu as option number eleven (11). So on the TSO/ISPF command line enter "11", as illustrated in the figure below, followed by pressing the **ENTER** key.

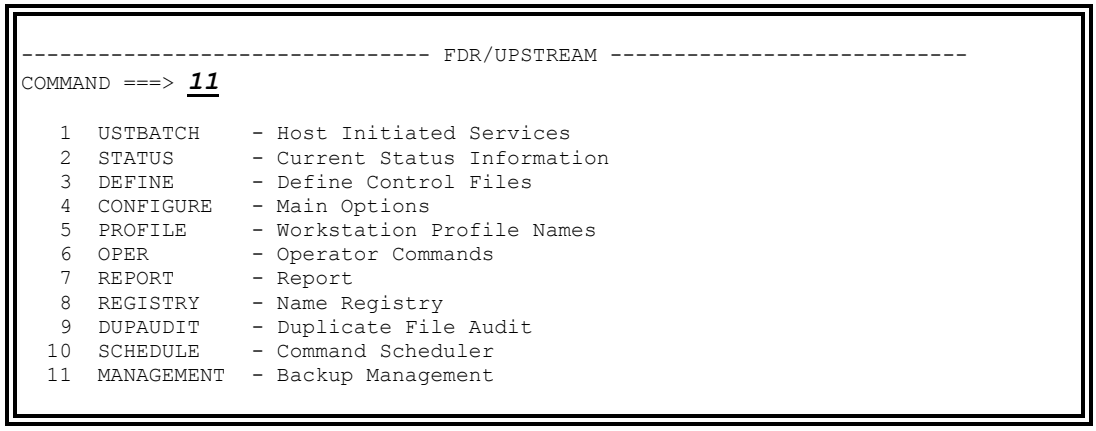


Figure 91 - Backup Management - Main Screen Selection

The next panel that appears asks you to provide certain prerequisite configuration related information about the FDR/UPSTREAM Backup Profiles, previous function type, and databases that you wish to perform management functions against.

The following Fields are required:

Profile Name

One (1) to eight (8) character Backup Profile name you wish to process. An asterisk indicates to process all Backup Profiles in the FDR/UPSTREAM database.

Record Type

This option indicates whether you wish to process previously performed BACKUP or VAULT type of requests with this invocation of the TSO/ISPF Management Interface. You may only process one of these types at a time.

Catalog Dataset Name

This is the fully qualified OS/390 MVS dataset name of the FDR/UPSTREAM CATALOG database component. This file is specified in the FDR/UPSTREAM Started Task JCL as DDname USTCATLG. It is suggested that this dataset name be specified by

enclosing it in quotes to avoid dataset name resolution interference with your TSO/E PROFILE PREFIX setting.

FILEINFO Dataset Name

This is the fully qualified OS/390 MVS dataset name of the FDR/UPSTREAM FILEINFO database component. This file is specified in the FDR/UPSTREAM Started Task JCL as DDname USTFILEI. It is suggested that this dataset name be specified by enclosing it in quotes to avoid dataset name resolution interference with your TSO/E PROFILE PREFIX setting.

The figure below illustrates an example of a fully completed request that will process BACKUP type requests. Press the **ENTER** key in order to proceed to the next panel.

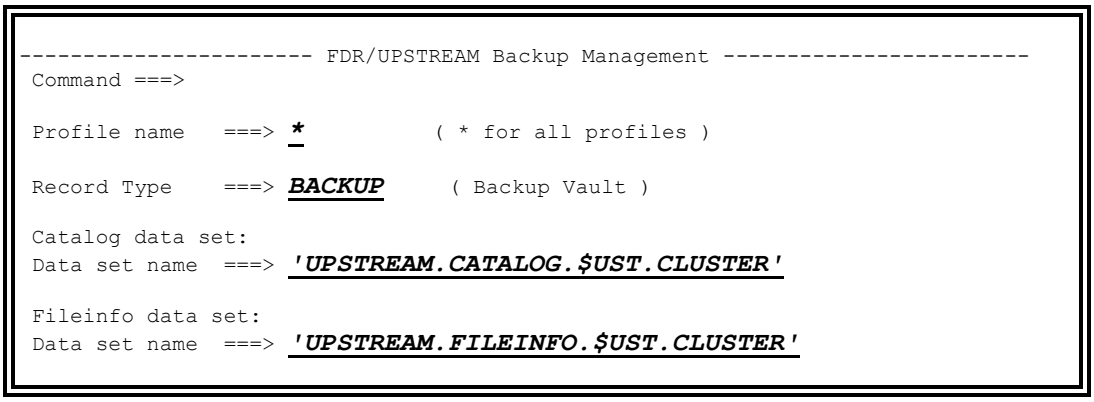


Figure 92 - Backup Management Profile/Type Selection Menu

This panel is the actual management function selection panel. The available commands are outlined on the “Available row commands” line and the applicable abbreviation is entered in the leftmost columns of the line of the backup you wish to process. In the example below, we have selected to DELETE the FDR/UPSTREAM backup created for Backup Profile TEST on 01/05/2000 at 13:02 hours. This action will remove all the database entries from the FDR/UPSTREAM database components for this backup request, delete and uncatalog the backup dataset itself, which will cause the tape management system to later scratch the tapes and make them available for reuse.

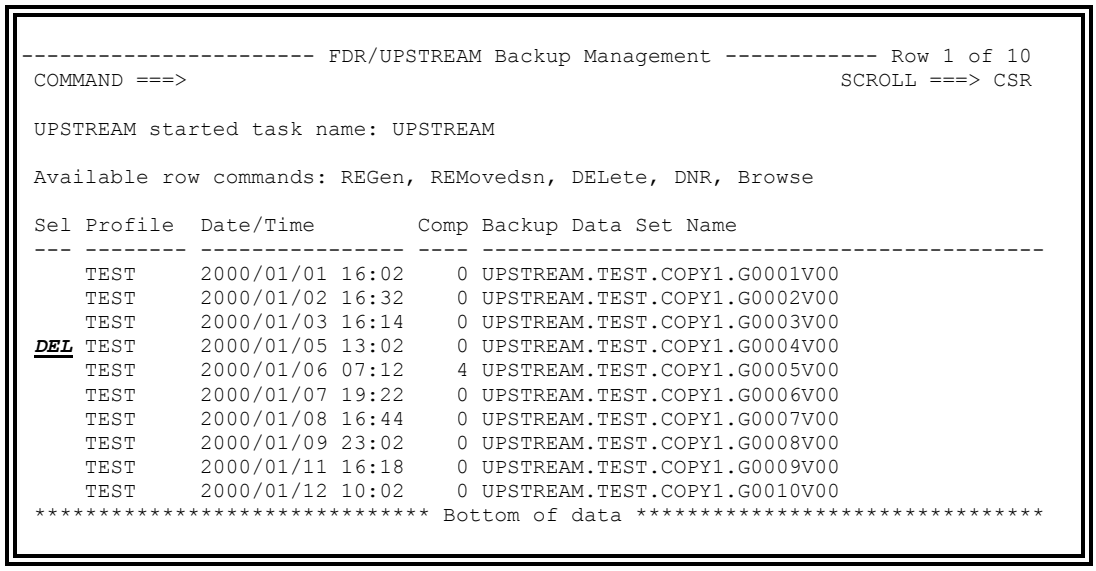


Figure 93 - Backup Management - Selection of Backup to Delete

If the dataset exists on DASD you will receive the following DASD dataset confirmation menu. Press **ENTER** to accept the deletion of the dataset name in question or press the PF3 key to not delete the backup dataset.

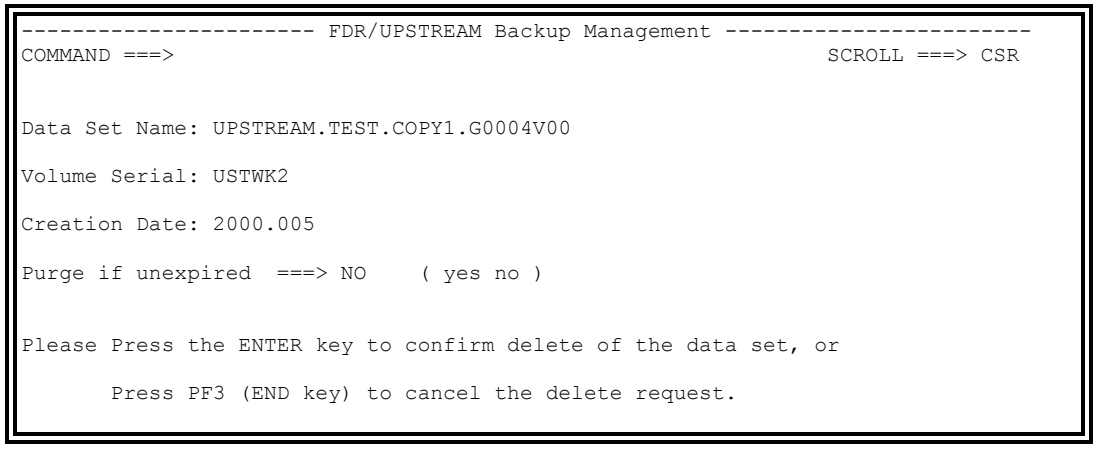


Figure 94 - Backup Management - Confirmation of DELETE Function

The updated panel shown in the figure below will appear at the completion of processing. Note the message that appears at the bottom of the updated panel indicating the action that was submitted to the FDR/UPSTREAM MVS Started Task for processing. You must review the Started Task USTLOG dataset to determine if the function processed correctly.

You may now select another backup for processing or press the PF3 key to return to the prior menu.

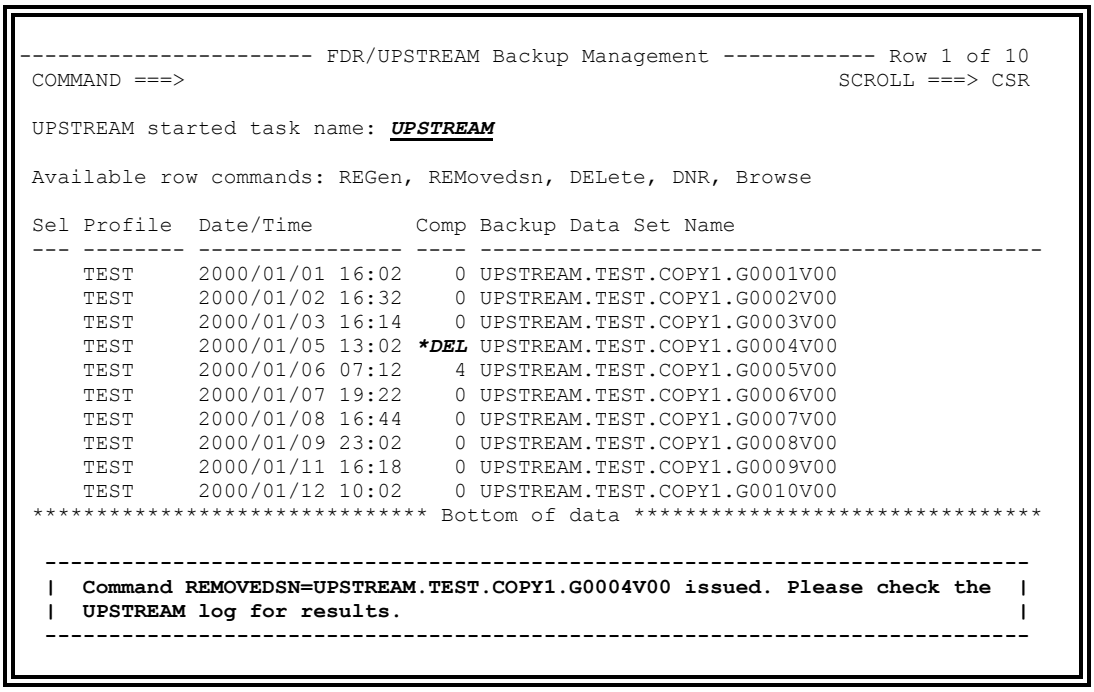
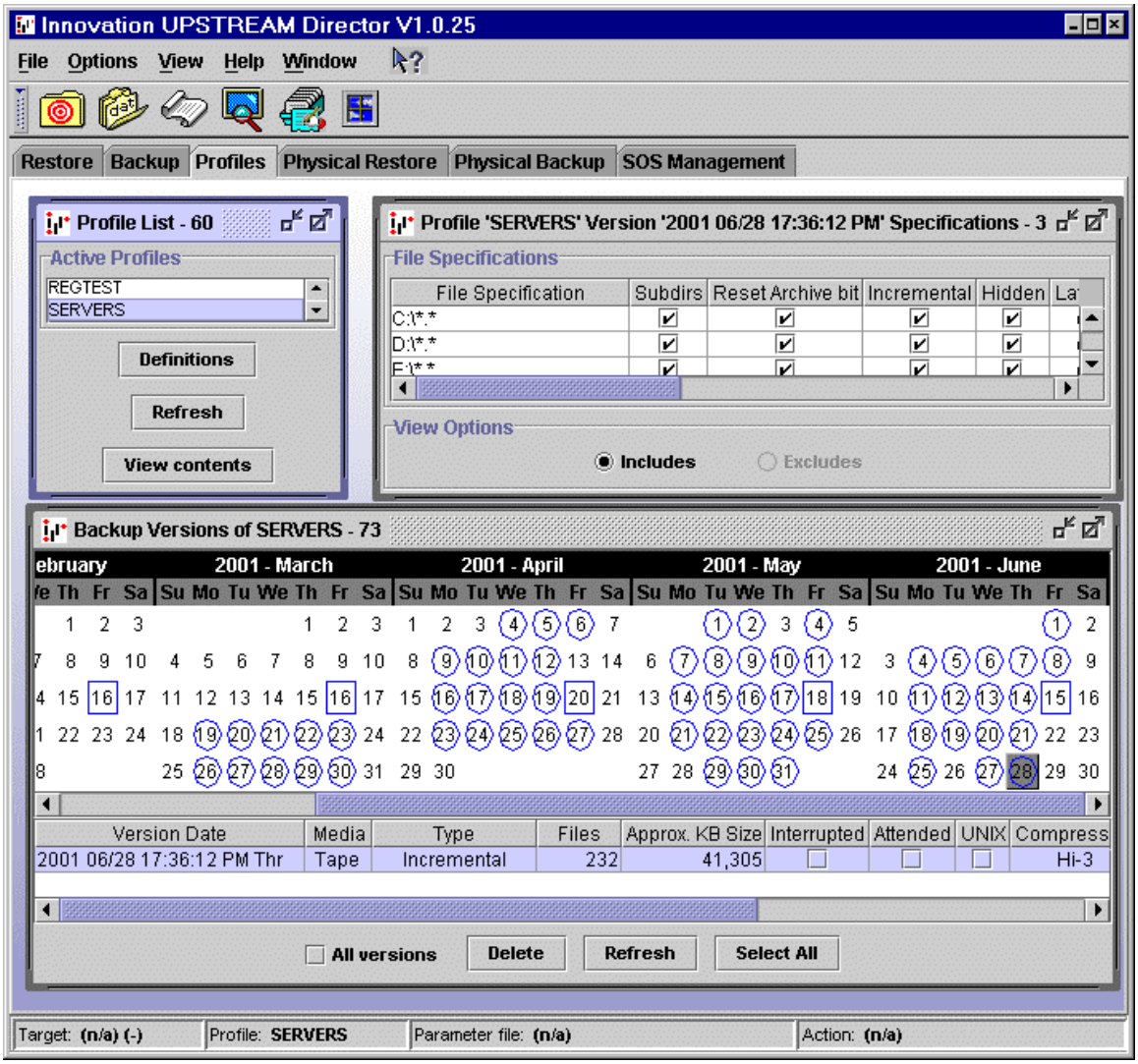


Figure 95 - Backup Management - Completion of DELETE Function

9.3 Backup Management in the UPSTREAM Director

To display and delete specific backups in the UPSTREAM Director, press the Profiles tab:



When you highlight a line in the list box below the calendar the Profile window displays details about the backup. To delete a given backup, highlight the backup in the list and press the Delete button. You can select more than one entry at a time to delete.

10

10 Reporting on System Activity

The UPSTREAM MVS Reporting Subsystem has three major interfaces. They are:

- The USTRPORT MVS Batch Program
- The UPSTREAM MVS ISPF Reporting Interface
- The UPSTREAM Director Reporting Interface

10.1 Using the USTRPORT MVS Batch Program Reporting Interface

FDR/UPSTREAM includes a generalized report program, USTRPORT, which can generate a number of customized reports about FDR/UPSTREAM status and activity, including:

HISTORY - History records are created for every operation performed by UPSTREAM, and are kept in the USTCATLG dataset. This report will detail all activity performed by the FDR/UPSTREAM system.

BACKUP – For each backup that is run, Upstream places control records in the USTCATLG dataset. This report will detail only these backup requests. Performing a backup is discussed in section “Performing A Backup” on page 66.

VAULT - Secondary (VAULT) copies of backups created by the USTVAULT utility program. This report lists these vault requests and associated dataset names. The Vault utility is outlined in section “Performing A Vault” on page 120.

CONFIG – This report lists each defined profile and its associated parameters and settings. Configuring the Upstream system is discussed in the section entitled “Constructing Profiles” on page 36.

CUSTOM - This report allows the user to design the layout of the reports and specify reporting selection criteria.

REGISTRY – This report displays information about the configured usage of the Upstream Registered Names Facility.

DUPLICATE - This report provides information on the usage of the Upstream Duplicate Database and repository. This feature is infrequently used with the Upstream USS system.

10.1.1 USTRPORT JCL Requirements

The following Job Control Statements are required to execute the FDR/UPSTREAM Reporting Utility; you will find some sample USTRPORT jobstreams in the FDR/UPSTREAM ICL (Installation Control Library) in member names starting with "RPT":

EXEC STATEMENT

Must specify the name of the FDR/Upstream report writer program, USTRPORT. The EXEC statement should also specify REGION=0M to make the maximum region available. It may optionally contain a PARM= operand to pass options to the USTRPORT program. Any PARM= data passed to the USTRPORT program is interpreted as control statements input. Multiple commands specified via this method, must be separated by a slash (/) character.

JOBLIB or STEPLIB DD STATEMENT

Specifies the library in which USTRPORT resides (usually the FDR/UPSTREAM program library). This must be an APF authorized library.

SYSPRINT DD STATEMENT

Specifies the primary output message data set. This is a required DD statement and is usually a SYSOUT data set. The LRECL may be specified from a minimum of 133 to a maximum of 241; 133 is the default if not specified. If BLKSIZE is not specified, the system determined blocksize (SDB) will be used on systems that support it, and 64 times the LRECL will be used on other systems.

SYSUDUMP DD STATEMENT

Recommended in all USTRPORT jobs in order to more easily diagnose error conditions which make USTRPORT abend. Usually a SYSOUT data set.

USTCATLG DD STATEMENT

Specifies the FDR/UPSTREAM Catalog data set, for example,

```
//USTCATLG  DD  DSN=UPSTREAM.CATALOG.$UST.CLUSTER,DISP=SHR
```

This DD is required for all report types except RPTYPE=CONFIG.

USTFILEI DD STATEMENT

Specifies the FDR/UPSTREAM File-Information data set, for example,

```
//USTFILEI  DD  DSN=UPSTREAM.FILEINFO.$UST.CLUSTER,DISP=SHR
```

This DD is required only when you are doing RPTYPE=BACKUP, VAULT or CUSTOM (if backup fields are included in the REPORT fields).

USTCONFG DD STATEMENT

Specifies the current FDR/UPSTREAM configuration data set (and member, if a PDS) of the configuration to be reported upon, for example:

```
//USTCONFG  DD  DSN=UPSTREAM.CONFIG.FILE(CONFIG02),DISP=SHR
```

This DD is required only when you are doing RPTYPE=CONFIG. If the configuration data set is a PDS, member name can be omitted if the MEMBER= operand is specified on the PRINT statement.

SYSIN DD STATEMENT

Specifies the control statement data set. Usually a DD * data set or control card PDS member.

10.1.2 USTRPORT Control Statements

The USTRPORT statements are used to specify the format of the REPORT and what data is selected. The control statements are:

TITLE - Specifies a user defined title line.

HEADING - Specifies user-replacement column heading lines.

DEFAULT - Sets processing DEFAULTS.

CANCEL - Cancels preceding specifications, when producing multiple reports in one execution.

SELECT - Specifies selection criteria for the data values to be included in the report.

EXCLUDE - Specifies criteria for excluding certain data values to be excluded from the report.

REPORT - Customizes the report, specifying the fields to be printed

PRINT - Generates the report.

10.1.3 TITLE Statement

The TITLE statement is used to define a user-specified TITLE LINE to be displayed between the INNOVATION header identification and the data header lines, to identify the report. A maximum of one line may be specified. A two line data header will automatically be generated identify the fields being reported (the columns).

Syntax

```
TITLE       LINE='text'

            ,SKIP=n
```

Operands

LINE=

Specifies the text to be printed or displayed. Must be enclosed in quotes. The number of characters specified must not exceed the page width. If the TITLE cannot be contained on one control statement (Column 1 to 71), you can continue the text by specifying a '+' or '-' after the last character on this line. If '+' is specified, USTRPORT will scan for the first non-blank character on the next statement. If '-' is specified USTRPORT will start with column 1 of the next statement. For example:

```
TITLE LINE='BACKUP +
            REPORT'
```

SKIP=

Specifies the number of lines to be left blank between the TITLE LINE and the data heading line. A value of 1 to 3 lines may be specified. Default is that 1 line will be skipped.

10.1.4 HEADING Statement

By default, USTRPORT provides column headings with text which is descriptive of the field(s) in each column (e.g., LUNAME, PROFILE). The HEADING statement allows you to specify replacement text of your choosing. It is your responsibility to line up the heading text with the actual columns generated by USTRPORT.

Syntax

```
HEADING   LINE(1)='first heading line text'
           ,LINE(2)='second heading line text'
           ,LINE(3)='third heading line text'
```

OPERANDS

Keyword	Description
LINE(n)=	Specifies the replacement heading text for heading line n (n=1, 2, or 3). If the heading text cannot be contained in one control statement (columns 1 to 71), it may be continued using the same conventions described for the TITLE statement. Only LINE(1)= is required, the others are optional. A 1, 2, or 3-line heading will be generated depending on the number of lines specified.

10.1.5 DEFAULT Statement

The purpose of the DEFAULT statement is to change USTRPORT's default values for various options used when generating a report. Most of the operands on the DEFAULT statement are also operands of the PRINT statement, and can be specified there. The DEFAULT statement can be used when more than one report (more than one PRINT statement) is to be generated in one USTRPORT run; the DEFAULT statement avoids having to specify options used in more than one report more than once. Only the operands, which are unique to the DEFAULT statement, are described below; others are described under the PRINT command. The alias SET can be used in place of DEFAULT.

Syntax

```
DEFAULT     BYTEFORMAT=BYTE|KILOBYTE|MEGABYTE
SET         ,CLOCK12|CLOCK24
            ,EXNOBKDSN|SLNOBKDSN
            ,EXNOCATLG|SLNOCATLG
            ,FORMAT=NORMAL|VERIFY|DUMP
            ,FULLNAME
            ,LINECNT=nn|58
            ,MAXCC=nnnn
            ,NOCLOCK
            ,NOABEND
            ,PAGEWIDTH=nnnn
            ,PROFSTACK|NOPROFSTACK
```

```
,SELTERR=YES|NO

,SHOWATTR|NOSHOWATTR

,SUMDIR=(YES|NO|ONLY,FULLNAME|SHORTNAME,INCLSUB|EXCLSUB)

,UPPERCASE|LOWERCASE
```

OPERANDS

Keyword	Description
CLOCK12 **CLOCK24**	Specifies how the time-of-day should be printed in a report including BKFILES (information about workstation files included in a backup); the time is the "last update" time recorded for the workstation file. CLOCK12 (the default) displays it in AM/PM format; CLOCK24 displays in 24-hour clock format.
FULLNAME	Specifies that in a report including BKFILES (information about workstation files included in a backup), all file names should be printed with the full path name. The default is that the full path name will be included only with the first file under a given directory; additional files under that directory will have blanks up to the last backslash (\) in the name.
LINECNT= **LC=**	Specifies the maximum number of lines each report page can contain. The number can be any value from 10 to 99, inclusive. The default is each page will contain a maximum of 58 lines.
MAXCC=	Overrides the maximum completion code from all USTRPORT statements that preceded this DEFAULT or SET statement. This will be the completion (return) code returned to MVS at the end of this USTRPORT step unless some following statement causes a higher code. This might be used to set the maximum code to zero (SET MAXCC=0) when you don't care about the successful completion of the preceding operations.
NOABEND	Directs USTRPORT to exit with an error return code instead of a User Abend for the rare unusual conditions that would normally cause a User Abend to be taken.
NOCLOCK **NOCL**	USTRPORT generates the Innovation title line with the time, date, and page number as the first line of every page. This option directs USTRPORT to only get the time and date at the beginning of the report and always repeat that value on each page. Normally without this option, USTRPORT will refresh the time and date at the beginning of each new page.
PAGEWIDTH=	When creating custom reports with the REPORT statement, USTRPORT calculates the width of the report using the length of all requested fields, plus spaces between the fields. An error will occur if the report width exceeds the current page width. PAGEWIDTH= has a minimum of 132 and maximum of the LRECL of SYSPRINT minus 1 (which is also the default).
PROFSTACK **NOPROFSTACK**	When creating custom reports with the REPORT statement, USTRPORT normally builds the report in the same manor that it builds the report for RPTYPE=HISTORY or BACKUP, by printing the profile name and then reporting all records for that profile name indented one space; this is the PROFSTACK option. If FIELD operand on the REPORT statement includes PROFILENAME, this is not done; this is the NOPROFSTACK option. The PROFSTACK and NOPROFSTACK operands can be used to override this default operation. NOPROFSTACK will NOT list the profile name, even though it is not included in the FIELD list. PROFSTACK will list the profile name and indent the following records even though the profile name is printed on each line.
SHOWATTR **NOSHOWATTR**	Specifies whether a report including BKFILES (information about workstation files included in a backup) should include the attribute flags associated with each file. The default is NOSHOWATTR, do not display attributes.
UPPERCASE **LOWERCASE**	UPPERCASE forces all output to be generated in only uppercase characters. LOWERCASE allows USTRPORT to use both upper and lower case characters in reports. The default is LOWERCASE.

10.1.6 SELECT/EXCLUDE STATEMENTS

The SELECT/EXCLUDE statements act as a filter for the data sets to be processed by USTRPORT, comparing the values you specify against the values in the records to be processed. The operands on SELECT/EXCLUDE may be followed by one of a number of comparison

operators. Since one form of those operators involve special characters (such as the not(¬) and less-than(<)), alternate forms of each operator without special characters are provided. The operators are:

= or .EQ.	equal	¬= or .NE.	not equal
< or .LT.	less than	> or .GT.	greater than
<= or .LE.	less than or equal to	>= or .GE	greater than or equal to

Some operands only accept an equal test, some equal and not-equal, and some accept all 6 comparisons, as shown in the operand table above. USTRPORT will test each SELECT/EXCLUDE against the values in each input record. The test implied by each operand will be true if the indicated comparison of the FIELD value and the value you provide is true. For example, COMPCODE.NE.0 selects all records for operations which did not complete successfully.

Some operands allow you to specify multiple values in parenthesis for equal and not-equal (as shown in the table above) or single values without parenthesis. If multiple values are specified, USTRPORT will compare the input record to each of those values. For equal, the test is true if ANY of the comparisons are equal. For not-equal, the test is true if ALL of the comparisons are not-equal. For example, COMPCODE=(0,SUSPEND) will select those entries whose completion code was either zero or whose operation was suspended. Also, a given field name may be specified more than once with several different operators.

Examples:

```
SELECT PROFILE=PROD*,FILES>100,DAYS<5
SELECT OPERNAME=(BACKUP,'BACKUP M'),BYTES>100000,BYTES<500000
```

If there are no SELECT or EXCLUDE statements present then all records relevant to the Report Type, RPTYPE=, will be reported. If only EXCLUDE statements are present, then all records not EXCLUDEd are reported; likewise if only SELECT statements are present, only selected records are reported. If both types are used, EXCLUDE statements should precede SELECT statements to EXCLUDE a subset of the records SELECTed; other than that, the order of the SELECT/EXCLUDE statements is not significant.

Syntax

	Operand	Valid Operators (op)
SELECT|EXCLUDE	**,PROFILE op (profname1,profname2,..)**	**= .EQ. ¬= .NE.**
	,BKFILES op filemask	**= .EQ.**
	,DAYS op nnn	**all**
	,DATE op yy/mm/dd	**all**
	,TIME op hh:mm:ss	**all**
	,CONDCODE op (comp1,comp2,..)	**= .EQ. ¬ .NE.**
	,ELAPSEDTIME op nnnnn	**all**
	,CPUTIME op nnnnn	**all**
	,LUNAME op (luname1,luname2,..)	**= .EQ. ¬= .NE.**
	,USERID op (userid1,userid2,...)	**= .EQ. ¬= .NE.**

```
,OPERNAME op (oper1,oper2,..)          = .EQ. ¬= .NE.

,OPERTYPE op (type1,type2,..)          =  EQ. ¬= .NE.

,BKTYPE op (bktype1,bktype2,...)       =  EQ. ¬= .NE.

,BLOCKS op nnnnnnnn                    all

,FILES op nnnnnnnn                     all

,BYTES op nnnnnnnn                     all

,MERGEFILES op nnnnnnnn                all

,MERGEBYTES op nnnnnnnn                all

,MERGEBLOCKS op nnnnnnnn               all

,MIGRATEFILES op nnnnnnnn              all

,TRACKS op nnnnnnnn                    all

,TAPES op nnnnnnnn                     all
```

Note: when you are using RPTYPE=CONFIG, only the PROFILE= operand will be honored; all others are ignored. The others can be used only with RPTYPE=HISTORY, BACKUP or VAULT.

OPERANDS

PROFILE
PROFI

Specifies one or more workstation profile names. A prefix can be specified by using the * as the last character of the operand. For example to list all of the entries for all workstation profiles that begin with SYS and OPER specify PROFILE=(SYS*,OPER*)

BKFILES

Is only valid with RPTYPE=BACKUP and VAULT. If present, the report will display details of workstation files which were included in each FDR/UPSTREAM backup file reported. The length of the filename printed is limited by the page width currently in effect (see PAGEWIDTH= under the DEFAULT statement); the usual page width can display the first 88 characters of file names (including the complete path name). BKFILES=* will display all workstation files in the backup, or you may specify a prefix to limit the display (the prefix must match on the beginning characters of the complete path name of the file), for example, BKFILES=C:\WINDOWS*

DAYS

Calculates a date "n" days (0 to 999) previous to the current date; that date is compared to the starting date recorded in each history record. For example to select records for the last ten days, specify DAYS.LE.10 or DAYS<=10. To select records over 30 days old specify DAYS>30.

DATE

Specifies date, in the format "yy/mm/dd", which is compared to the starting date recorded in each history record. For backups, this is the date part of the "version-date".

TIME

Specifies a time, in the format "hh:mm:ss", which is compared to the starting time recorded in each history record. For backups, this is the time part of the "version-date".

CONDCODE
COND

Specifies the completion codes status of the operation recorded by the history record. One or more values can be specified. The following are the valid options:

ABEND	The operation received a System or User abend
SUSPEND	The operation was suspended
CANCEL	The operation was cancelled
SYSTEM	The operation received a SYSTEM Abend
USER	The operation received a USER Abend
0 or ZERO	The operation completed successfully
4	The operation completed with warning messages
8	The operation was terminated with error messages
12	The operation was terminated with severe errors
16	The operation was terminated by the operator

ELAPSEDTIME
ELAPS

Specifies the elapsed time, in tenths of minutes, recorded for the operation to complete. For example to select records that took over 2 and 1/2 minutes you would specify ELAPS.GE.25 or ELAPS>=25.

CPUTIME
CPU

Specifies CPU time used, in thousands of a second or milliseconds, to complete this operation. For example to report all of the events that took less than one second of cpu time you would specify CPUTIME.LE.1000 or CPU<=1000.

LUNAME
LU

Specifies one or more Workstation IDs (up to 8 characters) or ID prefixes (followed by an asterisk (*)). For SNA APPC workstations, this is the VTAM LUNAME. For TCP/IP workstations, this is the network address coded as a 8-digit hexadecimal value (each pair of digits corresponds to one of the 4 values in the address, converted to hex).

USERID
US

Specifies one or more userids (up to 8 characters) or userid prefixes (followed by an asterisk (*)). Userids will be recorded in history records if the userid was specified at the workstation. If the SECLVL=0 configuration option was specified for FDR/UPSTREAM-MVS, userids are optional.

OPERNAME
OPNAME

Specifies one or more FDR/UPSTREAM operations. Valid values are:

utility operations - ARCHIVE, DELETE, MAINT, MAINTF, REGEN, REORG
FDR/UPSTREAM termination - SHUTDOWN
workstation operations - BACKUP, 'BACKUP M', RESTORE, RESTARTB, INQUIREV, INQUIREF, 'REMOVE F', 'REMOVE B', 'COMM MVS', 'COMM PC', 'VSAM TST',

'NON I/O', LOGIN
mainframe-initiated operations - HOSTINIT
Values shown with quotes must be entered that way since they contain blanks; other can be entered with or without quotes. More detail on the meaning of these names can be found in Section 10.

OPERTYPE
OPTYPE
Specifies one or more FDR/UPSTREAM operation types. Operation types are used with certain operation names to qualify the type of operation. Valid values are:
for BACKUP - INCR, FULL, MERG, ARCH, KEYD
for RESTORE - TAPE, DASD
for HOSTINIT - MVS, PC

BKTYPE
For backups, indicates the type of backup. Valid values are: KEYD, ARCH, DASD, TAPE, DEFR. KEYD is for Keyed backups, ARCH is for Archive, DASD is for backups done to disk, TAPE is for backups originally done to TAPE, and DEFR is for deferred Merge Type backups that have not yet been completed by the USTMERGE utility.

BLOCKS
BLK
Specifies the number of blocks transmitted to/from the workstation.

BYTES
BYT
Specifies the number of bytes transmitted to/from the workstation.

FILES
FIL
Specifies the number of files transmitted to/from the workstation.

MERGEFILES
MFIL
Specifies the number of files which were merged forward from previous backups during a full merge backup. Not valid for other operations.

MERGEBYTES
MBYT
Specifies the number of bytes which were merged forward from previous backups during a full merge backup. Not valid for other operations.

MERGEBLOCKS
MBLK
Specifies the number of blocks which were merged forward from previous backups during a full merge backup. Not valid for other operations.

MIGRATEFILES
MIGFIL
Specifies the number of migrated files which were merged forward from previous backups during a full merge backup. Not valid for other operations.

TRACKS
TRK

Specifies the number of DASD tracks that were used for a sequential DASD backup. Not valid for other operations.

TAPES
TAP

Specifies the number of tape volumes that were used for a *sequential tape* backup. Not valid for other operations.

10.1.7 REPORT STATEMENT

The REPORT statement is used to customize reports by specifying the fields to be printed, and the order in which to print them; it will be honored if RPTYPE=CUSTOM is specified, or if RPTYPE= is omitted. The report generated by REPORT will use the same input data as RPTYPE=HISTORY or BACKUP. If the fields do not include any fields related to the backup data sets, the report will report on history records only; if backup fields are included, it will report on history and backup data (including backup data that has no matching history records). SELECT/EXCLUDE statements, if present, will filter the data reported.

Syntax

```
REPORT      FIELD=(field1,field2,...)
```

OPERANDS

FIELD=

specifies the names of one or more FIELDs to be printed in the custom report. The available field names are in the following table. The fields will be printed in the order specified. There will be one space between fields, except that you can include field names of SPn (where "n" is 0 to 9) which will cause the specified number of spaces to appear between the preceding and following fields. For example,

```
REPORT FIELD=(VERSION,SP3,BKDSN,BKVOL)
```

will insert 3 spaces between VERSION and BKDSN, but only one space between BKDSN and BKVOL.

FIELD NAME TABLE

This table lists the field names which are available for inclusion in the FIELD operand of the REPORT statement (many of these can also be used on SELECT/EXCLUDE statements). For each field, the table shows:

NAME The field name as used in the FIELD= operand.

DESCRIPTION A brief description

ATTR How the field will be displayed:
CHAR - character
NUM - numeric
HEX - hexadecimal (binary)

LEN The number of print positions it will occupy in the report

Name	Description	Attr	Len
BKDSN	Backup data set name for Backups	CHAR	44

BKDS1	1st half of Split backup data set name	CHAR	27
BKDS2	2nd half of Split backup data set name	CHAR	27
BKSPLDSN	Backup data set name split two lines	CHAR	27
BKTYPE	Backup type: DASD, TAPE, NONE, ARCH, KEYD	CHAR	4
BKVOLS	Three volsers per line of backup DSN	CHAR	21
BLK	Alias for BLOCKS	NUM	8
BLOCKS	Number of Blocks transmitted.	NUM	8
BYT	Alias for BYTES	NUM	8
BYTES	Number of Bytes transmitted	NUM	8
COMPCODE	Alias for CONDCODE.	CHAR	9
COMPRESSTYPE	Compression type used. HI-1/2/3 FAST	CHAR	4
COMPTYPE	Alias for COMPRESSTYPE	CHAR	4
COND	Abbreviation for CONDCODE.	CHAR	9
CONDCODE	Completion code of event	CHAR	9
CPU	Abbreviation for CPUTIME	NUM	8
CPUTIME	CPU time in Seconds used for event	NUM	8
DATE	Date in YY/MM/DD of event	NUM	8
ELAPS	Abbreviation for ELAPSEDTIME	NUM	6
ELAPSEDTIME	Elapsed time for event in minutes.	NUM	6
FIL	Abbreviation for FILES	NUM	8
FILES	Number of FILES transmited.	NUM	8
FLAGS	Alias for HFLAGS	HEX	5
HFLAGS	History Flags HISTSFL1 and HISTSFL2	HEX	5
HISTSFL0	History TYPE flag	HEX	2
HISTSFL1	History Flag 1	HEX	2
HISTSLF2	History Flag 2	HEX	2
LU	Abbreviation for LUNAME	CHAR	8
LUNAME	LUNAME of origination of event	CHAR	8
MBLK	Alias for MERGEBLOCKS	NUM	8
MBYT	Alias for MERGEBYTES	NUM	8
MERGEBLOCKS	Number of BLOCKS merged by event	NUM	8
MERGEBYTES	Number of BYTES merged by event	NUM	8
MERGEFILES	Number of FILES merged by event	NUM	8
MFIL	Alias for MERGEFILES	NUM	8
MIGFIL	Alias for MIGRATEFILES	NUM	8
MIGRATEFILES	Number of Files Migrated	NUM	8
MINS	Alias for ELAPSEDTIME	NUM	6
OPERNAME	Operation NAME of event	CHAR	8
OPERTYPE	Operation TYPE of event	CHAR	4
OPNAME	Alias for OPERNAME	CHAR	8
OPTYPE	Alias for OPERTYPE	CHAR	4
PROFI	Abbreviation for PROFILENAME	CHAR	8
PROFILE	Abbreviation for PROFILENAME	CHAR	8
PROFILENAME	Name of PROFILE used for event	CHAR	8
SFL0	Alias for HISTSFL0	HEX	2
SFL1	Alias for HISTSFL1	HEX	2
SFL2	Alias for HISTSLF2	HEX	2
TAP	Abbreviation for TAPES	NUM	7
TAPES	Number of TAPES used for Backup	NUM	7
TIME	TIME of event	NUM	8
TRACKS	Number of TRACKS used for backup on DASD	NUM	7
TRK	Alias for TRACKS	NUM	7
US	Abbreviation for userid	CHAR	8
USERID	User ID recorded for event	CHAR	8
VERSION	Combination of DATE+TIME	CHAR	17

10.1.8 PRINT Statement

The PRINT statement instructs USTRPORT to generate the report, using the characteristics specified by the preceding control statements (SELECT, EXCLUDE, DEFAULT, TITLE, HEADING, REPORT) that are currently in effect (they remain in effect until canceled by a CANCEL statement or superseded by new TITLE/HEADING statements) A PRINT statement **must** be entered or no report will be generated (all other statements are optional). Multiple PRINT statements may be given to produce various reports in one execution of USTRPORT.

Syntax

```
PRINT   BYTEFORMAT=BYTE|KILOBYTE|MEGABYTE
            ,EXNOBKDSN|SLNOBKDSN
            ,EXNOCATLG|SLNOCATLG
            ,FORMAT=NORMAL|VERIFY|DUMP
            ,LINECNT=nn|58
            ,MEMBER=membername
        ,RPTYPE=HISTORY|BACKUP|VAULT|CONFIG|ARCHIVE|SQBACKUP|CUSTOM
                |REGISTRY|DUPLICATE
            ,SELTERR=YES|NO
        ,SUMDIR=(YES|NO|ONLY,FULLNAME|SHORTNAME,INCLSUB|EXCLSUB)
```

OPERANDS

BYTEFORMAT=

Specifies the format of those print fields which report a number of bytes.
BYTE - values are always reported in bytes; if the value exceeds 8 digits,asterisks will be displayed.
KILOBYTE - values are always reported in kilobytes (bytes/1024); commas will usually be inserted to improve readability but may be omitted if the value exceeds 6 digits.
MEGABYTE - values are always reported in megabytes and tenths (e.g., 120.5).
The default is that byte fields are displayed in bytes, but if the value is too large it will automatically convert the display to kilobytes or megabytes, as required, with a "K" or "M" to the right to indicate the conversion.

EXNOCATLG
SLNOCATLG

For RPTYPE=BACKUP or a custom report which includes field BKDSN, EXNOCATLG specifies that report lines for backup data sets which are no longer cataloged in the MVS catalog will not be generated, while SLNOCATLG indicates that they will be generated (with "not catlg" in the BKVOLS field). The default is EXNOCATLG.

EXNOBKDSN
SLNOBKDSN

For RPTYPE=BACKUP or a custom report which includes field BKDSN or BKVOLS, EXNOBKDSN specifies that report lines for history records whose backup data set is no longer recorded in the FDR/UPSTREAM catalog (probably because they have expired) will not be reported upon, while SLNOBKDSN indicates that they will be reported (with "DSN not available" in the BKDSN field). The default is EXNOBKDSN.

FORMAT=

Specifies formatting options for the records selected.

VERIFY - Indicates that the record selected to be reported is dumped in hexadecimal dump format immediately following the formatted record.

DUMP - Indicates that the record selected to be reported is dumped in hexadecimal dump format only.

NORMAL - Indicates records are formatted as title headings display.

The default is NORMAL

LINECNT=
LC=

Specifies the maximum number of lines each report page can contain. The number can be any value from 10 to 99, inclusive. The default is each page will contain a maximum of 58 lines.

MEMBER=

Used with RPTYPE=CONFIG only, specifies the PDS member name with the configuration data set on which to report. Must be omitted if the configuration data set is a sequential file and can also be omitted if the member name is specified on the USTCONFG DD statement.

RPTYPE=

Specifies the format of the report to be generated, as well as implying the data source for the report. The values for RPTYPE are:

HISTORY - Generates a report from history records stored in the FDR/UPSTREAM Catalog file.

BACKUP - Generates a report from history records, but includes information on backup data set names and volumes in place of other fields in the HISTORY report, and also reports on backups recorded by FDR/UPSTREAM which have no matching history record.

VAULT - Generates a report identical to RPTYPE=BACKUP, but it will only select backup records which are flagged as having a vault (secondary) copy created by USTVAULT, and the backup data sets shown will be the vault (copy 2) backups.

CONFIG - Generates a report listing information from the FDR/UPSTREAM-MVS configuration file. A USTCONFG DD statement pointing to the configuration file or member must be present.

CUSTOM - Generates a customized report using the field names specified by the REPORT statement (which must precede the PRINT statement). It uses the same data as the HISTORY report (if no backup fields are requested) or the BACKUP report (if backup fields are requested), but the report content and layout are specified by REPORT.

REGISTRY - Generates a report listing the current contents of the FDR/UPSTREAM "Registered Name Service" table, a table which relates network addresses to user-assigned workstation names for use with USTBATCH (See Section 8.8).

DUPLICATE - Generates a report listing the duplicate files currently recorded under the special profile USTDUPFL (see Sections 1.4 and 3.8).

The default is HISTORY, except that if a REPORT statement is in effect, the default is CUSTOM.

SELTERR=

Specifies if USTRPORT should end with a condition code if no records were selected for reporting by a PRINT statement. SELTERR=YES indicates that you want to be notified that no records were selected (probably due to an error in your SELECT/EXCLUDE statements). SELTERR=NO causes a zero condition code if the only error was that no records were selected. The default is YES.

SUMDIR=

For RPTYPE=BACKUP or VAULT with BKFILES= specified on the SELECT statement, controls the printing of summaries of the number of files and data bytes in each directory. As shown above, it has 3 sets of parameters. You can specify one from each set, enclosing the values in parenthesis, e.g., SUMDIR=(ONLY,FULLNAME) or you can specify only one parameter without parenthesis, e.g., SUMDIR=INCLSUB.

YES - requests that the summary by directory be printed at the end of the report.

NO - suppresses the summary (all other SUMDIR options are ignored).

ONLY - requests that only the summary be printed, suppressing the detail report.

FULLNAME - prints the full path name for each directory summarized.

SHORTNAME - uses an indenting scheme to show the structure of subdirectories.

INCLSUB - the summary for each directory will include all files in that directory, plus all subdirectories beneath that directory. This also means that the directory at the very top of the summary will summarize all files in all directories listed.

EXCLSUB - the summary for each directory includes only those files that actually exist in that directory, not including those in subdirectories beneath that directory.

The defaults are YES, NOFULLNAME, EXCLSUB.

10.1.9 CANCEL STATEMENT

The CANCEL statement is used to negate the effects of all or some prior statements except DEFAULT. By default, the options specified on all preceding statements (except PRINT) remain in effect until you cancel them (or, in the case of TITLE/HEADING/REPORT, override them); additional SELECT/EXCLUDE statements will be added to those already in effect. CANCEL can be used between PRINT statements to cancel options in effect so that they can be respecified (or the defaults used).

If no operands are specified, CANCEL will cancel the effect of all of the prior commands except DEFAULT.

Syntax

```
CANCEL      EXCLUDE
```

```
,HEADING

,REPORT

,SELECT

,TITLE
```

OPERANDS

Keyword	Description
EXCLUDE	Cancel the current exclusion criteria table as created by preceding EXCLUDE statements .
HEADING	Cancel the current HEADING line(s), reinstating the defaults.
REPORT	Cancel the current REPORT field specifications.
SELECT	Cancel the current selection criteria table as created by preceding SELECT statements.
TITLE	Cancel the current TITLE line(s), reinstating the defaults.

10.1.10 USTRPORT Examples

This section shows several examples of USTRPORT jobstreams, and the reports that they generate.

Recent Activity Report

This report shows all FDR/UPSTREAM activity in the past 7 days.

```
//USTRPORT  EXEC  PGM=USTRPORT,REGION=4M
//STEPLIB    DD   DISP=SHR,DSN=your.upstream.program.library
//SYSPRINT   DD   SYSOUT=*
//SYSUDUMP   DD   SYSOUT=*
//USTCATLG   DD   DISP=SHR,DSN=your.upstream.catalog.file
//SYSIN      DD   *
  TITLE LINE='XYZ CORPORATION - RECENT UPSTREAM ACTIVITY'
  SELECT DAYS<7
  PRINT RPTYPE=HISTORY
```

The report will be similar to:

```
XYZ CORPORATION - RECENT UPSTREAM ACTIVITY
Profile /               CondCode  Elapse    CPU                       Operation    No. of  No. of   Merged  Merged  Migrate Tracks/
 Start Date+Time   Flags Sys User   Mins.  Seconds  Luname   UserId  Name     Type   Files   Bytes    Files   Bytes    Files # Tapes
------------------ ----- --------  ------  -------- -------- -------- -------------  ------ -------  ------- -------  ------- -------
SERVER1
 98/02/06 15:55:23 70 80        0     0.1    0.297 LU3AS018          BACKUP              0       0        0       0        0      2D
 98/02/06 15:57:08 00 00        0     0.1    0.039 LU3AS018          INQUIREV            1       0        0       0        0       0
 98/02/06 15:57:48 70 80        0     0.6    0.635 LU3AS018          BACKUP             23   1,184K       0       0        0     29D
 98/02/06 15:58:34 00 00        0     0.1    0.037 LU3AS018          INQUIREV            1       0        0       0        0       0
 98/02/06 16:02:32 00 00        0     0.1    0.055 LU3AS018          INQUIREF           23       0        0       0        0       0
SERVER2
 98/02/06 09:32:48 70 80        0     0.1    0.287 LU4AS035          BACKUP              2     593        0       0        0      2D
 98/02/06 09:32:54 00 00        0     0.1    0.038 LU4AS035          INQUIREV            1       0        0       0        0       0
```

Heavy Afternoon Activity Report

This report shows all FDR/UPSTREAM backups of more than 5MB which take place in the afternoon, perhaps for the purpose of shifting them to off-hours.

```
//USTRPORT  EXEC  PGM=USTRPORT,REGION=4M
//STEPLIB    DD   DISP=SHR,DSN=your.upstream.program.library
//SYSPRINT   DD   SYSOUT=*
//SYSUDUMP   DD   SYSOUT=*
//USTCATLG   DD   DISP=SHR,DSN=your.upstream.catalog.file
//SYSIN      DD   *
  TITLE LINE='XYZ CORPORATION - HEAVY AFTERNOON BACKUPS'
  SELECT BYTES>5000000,TIME.GE.13:00:00,TIME.LE.17:00:00
  PRINT RPTYPE=HISTORY
```

The report will be similar to:

```
XYZ CORPORATION - HEAVY AFTERNOON BACKUPS
Profile /               CondCode  Elapse     CPU                        Operation    No. of  No. of   Merged  Merged  Migrate Tracks/
 Start Date+Time   Flags Sys User   Mins.  Seconds  Luname   UserId  Name     Type    Files   Bytes    Files   Bytes    Files # Tapes
------------------ ----- --------  ------  ------- -------- -------- ------------  ------ -------  ------- -------  ------- -------
SERVER3
 98/01/02 15:32:07 20 80        0     3.4    1.930 LU4AS030          BACKUP            227   5,133K       0       0        0     75D
SERVER5
 98/01/12 13:25:00 20 00        0     5.7    8.911 LU2AS045          BACKUP            288   9,390K       0       0        0      1T
```

CUSTOMIZED REPORT

This reports on only backups that did not complete normally, and the report is customized with the REPORT statement to only show selected fields.

```
//USTRPORT  EXEC  PGM=USTRPORT,REGION=4M
//STEPLIB    DD   DISP=SHR,DSN=your.upstream.program.library
//SYSPRINT   DD   SYSOUT=*
//SYSUDUMP   DD   SYSOUT=*
//USTCATLG   DD   DISP=SHR,DSN=your.upstream.catalog.file
//SYSIN      DD   *
  TITLE LINE='XYZ CORPORATION - FAILED BACKUPS'
  SELECT CONDCODE.NE.0,OPERNAME=BACKUP
  REPORT FIELD=(DATE,TIME,CONDCODE,PROFILE,
            LUNAME,USERID,BYTES)
  PRINT RPTYPE=CUSTOM
```

The report will be similar to:

```
XYZ CORPORATION - FAILED BACKUPS
  Date     Time   CondCode  Profile   Luname   UserId  # Bytes
-------- -------- --------- -------- -------- -------- --------
98/01/30 15:07:27        4* SERVER1  LU4AS035 PROD01   304,317
98/02/02 12:30:03        8* SERVER1  LU4AS035 PROD01         0
98/02/03 16:45:37  SUSPEND* SERVER1  LU4AS035 PROD01    59,520
98/02/03 17:28:25        4* SERVER1  LU4AS035 PROD01    97,927
```

BACKUP REPORT

This reports on backups for profiles starting with FIN (finance department). It contains most of the information from the RPTYPE=HISTORY report, but it only selects backups and also includes the dsname and volume serials where the corresponding backup currently resides. It will also display information on backups in the FDR/UPSTREAM catalog whose history records no longer exist.

```
//USTRPORT  EXEC  PGM=USTRPORT,REGION=4M
//STEPLIB    DD   DISP=SHR,DSN=your.upstream.program.library
//SYSPRINT   DD   SYSOUT=*
//SYSUDUMP   DD   SYSOUT=*
//USTCATLG   DD   DISP=SHR,DSN=your.upstream.catalog.file
//USTFILEI   DD   DISP=SHR,DSN=your.upstream.file-information.file
```

```
//SYSIN      DD   *
  TITLE LINE='XYZ CORPORATION - FINANCE DEPARTMENT BACKUPS'
  SELECT PROFILE=FIN*
  PRINT RPTYPE=BACKUP
```

The report will be similar to:

```
XYZ CORPORATION - FINANCE DEPARTMENT BACKUPS
Profile name /     CondCode  CPU Secs  LuName  Op Name  # Files  Mrg File MIG File
 Version Date.Time           ElpsMins  UserId  Op Type  # Bytes  Mrg Byts  Tracks   Backup Data Set Name        Backup Volumes
------------------ --------- -------- -------- -------- -------- -------- --------  -------------------------- ------ ------ ------
FINSERV1
 98/01/10.15:58:40        0    17.351 LU3AS030 BACKUP      8705        0        0   FIN.UPSTREAM.FINSERV1.      001103 001104
                           29.2   FT1032   FULL         197M       0        -     G0005V00
 98/01/11.16:10:07        0     0.332 LU3AS030 BACKUP         1        0        0   FIN.UPSTREAM.FINSERV1.      001022
                            0.2   FT1032   INCR           24        0        -     G0008V00
 98/01/12.16:18:15        0     0.335 LU3AS030 BACKUP        20        0        0   FIN.UPSTREAM.FINSERV1.      001022
                            0.2   FT1032   INCR         224K        0        -     G0008V00
 98/01/16.16:22:45        0    12.757 LU3AS030 BACKUP      8707     8612        0   FIN.UPSTREAM.FINSERV1.      001022 001023
                            6.5   FT1032   MERG         199M      196M        -     G0008V00
FINWS001
 98/01/12.09:28:40        0     5.101 LU3AS030 BACKUP       925        0        0   FIN.UPSTREAM.FINWS001.      000925
                           12.2   FT1013   FULL        4510K        0        -     G0001V00
```

BACKUP FILE REPORT

This is the same as the preceding report, except that BKFILES=* is added to the SELECT, which causes details on all workstation file included in each backup to be printed, and the DEFAULT SHOWATTR statement was added to display workstation file attributes.

```
//USTRPORT  EXEC  PGM=USTRPORT,REGION=4M
//STEPLIB    DD   DISP=SHR,DSN=your.upstream.program.library
//SYSPRINT   DD   SYSOUT=*
//SYSUDUMP   DD   SYSOUT=*
//USTCATLG   DD   DISP=SHR,DSN=your.upstream.catalog.file
//USTFILEI   DD   DISP=SHR,DSN=your.upstream.file-information.file
//SYSIN      DD   *
  TITLE LINE='XYZ CORPORATION - FINANCE DEPARTMENT BACKUPS'
  DEFAULT SHOWATTR
  SELECT PROFILE=FIN*,BKFILES=*
  PRINT RPTYPE=BACKUP
```

The report will be similar to:

```
                                  XYZ CORPORATION - FINANCE DEPARTMENT BACKUPS
Profile name /     CondCode  CPU Secs  LuName  Op Name  # Files  Mrg File MIG File
 Version Date.Time           ElpsMins  UserId  Op Type  # Bytes  Mrg Byts  Tracks   Backup Data Set Name        Backup Volumes
------------------ --------- -------- -------- -------- -------- -------- --------  -------------------------- ------ ------ ------
FINSERV1
 98/01/10.15:58:40        0    17.351 LU3AS030 BACKUP      8705        0        0   FIN.UPSTREAM.FINSERV1.      001103 001104
           0  94/06/05 12:02:08pm <Dir> c:\CSERVE
          12  89/10/04 11:26:50am  ---- C:\CSERVE\ADLIB.BAT
     454,059  93/12/13 02:32:36pm  ----          \ALMANAC.HLP
         766  90/09/08 10:26:26pm  ----          \C-SERV.ICO
         108  93/10/14 00:03:44am  ----          \CHKLIST.MS
       2,265  94/06/14 04:23:30pm  ----          \CIS.INI
       2,537  89/12/06 11:57:04am  ----          \COP.FRM
           0  94/06/05 12:02:36pm <Dir> c:\CSERVE\DOWNLOAD
      11,467  94/05/31 06:59:42am  ---- C:\CSERVE\DOWNLOAD\APR94.PCX
      13,024  94/05/31 07:04:28am  ----                   \AUG94.PCX
```

CONFIGURATION REPORT

This reports on the main (global) options in the FDR/UPSTREAM configuration, plus a selected subset of profiles.

```
//USTRPORT  EXEC  PGM=USTRPORT,REGION=4M
//STEPLIB    DD   DISP=SHR,DSN=your.upstream.program.library
//SYSPRINT   DD   SYSOUT=*
//SYSUDUMP   DD   SYSOUT=*
```

```
//USTCONFG   DD   DISP=SHR,DSN=your.upstream.configuration.file
//SYSIN      DD   *
  TITLE LINE='XYZ CORPORATION - FINANCE DEPARTMENT PROFILES'
  SELECT PROFILE=FIN*
  PRINT RPTYPE=CONFIG,MEMBER=CONFIG02
```

The report will be similar to:

```
                                    XYZ CORPORATION - FINANCE DEPARTMENT PROFILES
 Config                                                          Route    TCPIP   TCPIP  Max   Max  Max   MaxTape MaxTape
 Member   Applid  Subsystm Dasdblk Seclvl SortUnit ATB# WTOCOMP Desc Code Stcname  Port# Tasks Rests Hist  Backup  Restore WSCnt
-------- -------- -------- ------- ------ -------- ---- ------- ---- ---- -------- ----- ----- ----- -----  ------- ------- -----
CONFIG02 USTPROD1 UPSTREAM   16384    0   SYSDA      10   Yes   1000 4020 TCPIP     1972   100   100    30      0       0      69

Profile       TAPE GDG Tapepref                            Tunit   Tape Expdt/   Newtape  Storclas             Merge Copy Migr
WSname   Pref DASD GDG Dasdpref                             Dunit   Comp Retpd    DasdBLK  Mgmtclas Keyed Arch. Vault Incr Thrsh
-------- ---- ---- --- ------------------------------------ -------- ---- ------  ---------- -------- ----- ----- ----- ---- -----
FINSERV1  No  Tape No  FIN.FINSERV1.BACKT                   CART      Yes                          5     2  No    No     0
              DASD No  FIN.FINSERV1.BACKD                   TEMPDA                   16384                      No
FINSERV2  No  Tape Yes FIN.FINSERV2.GDGT                    CART      No                           5     5  Yes   No     0
              DASD Yes FIN.FINSERV2.GDGD                    TEMPDA                   16384                      No
```

Using the TSO/ISPF Reporting Interface

As an example, let us run through the reporting oremoval of an previously taken but now unwanted FDR/UPSTREAM backup. Let's assume that the backup was taken to tape, it was successful, and we wish to utilize the TSO/ISPF management interface.

First we need to enter the TSO/ISPF Management Interface. This is available off the FDR/UPSTREAM Main Menu as option number eleven (11). So on the TSO/ISPF command line enter "11", as illustrated in the figure below, followed by pressing the **ENTER** key.

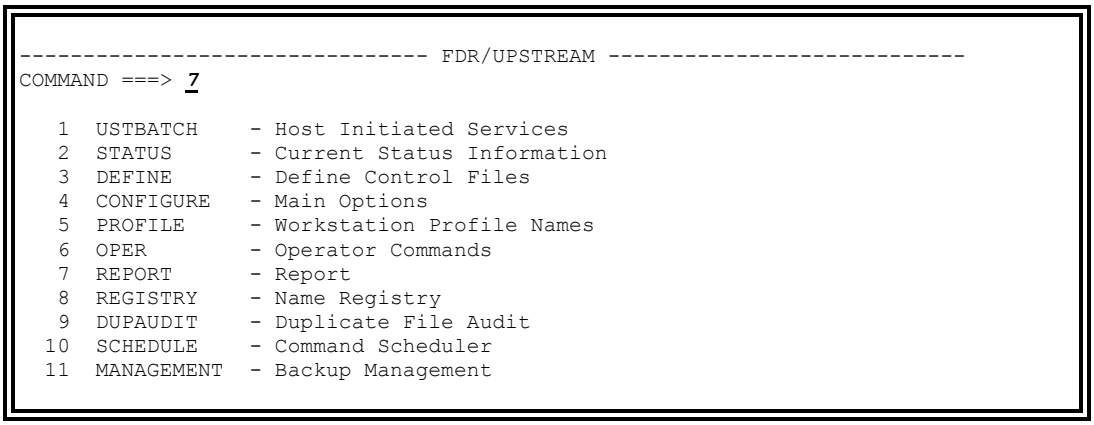


Figure 96 - Reporting - Initial Selection Menu

The next panel that appears asks you to provide certain prerequisite configuration related information about the FDR/UPSTREAM Backup Profiles, previous function type, and databases that you wish to perform management functions against.

The following Fields are required:

Profile Name

One (1) to eight (8) character Backup Profile name you wish to process. An asterisk indicates to process all Backup Profiles in the FDR/UPSTREAM database.

Report Type

This option indicates which type of requests you wish to process with this invocation of the TSO/ISPF Reporting Interface. You may only process one of these types at a time. The valid types are:

HISTORY - History records are created for every operation performed by UPSTREAM, and are kept in the USTCATLG dataset. This report will detail all activity performed by the FDR/UPSTREAM system.

BACKUP – For each backup that is run, Upstream places control records in the USTCATLG dataset. This report will detail only these backup requests. Performing a backup is discussed in section "Performing A Backup" on page 66.

VAULT - Secondary (VAULT) copies of backups created by the USTVAULT utility program. This report lists these vault requests and associated dataset names. The Vault utility is outlined in section "Performing A Vault" on page 120.

CONFIG – This report lists each defined profile and its associated parameters and settings. Configuring the Upstream system is discussed in the section entitled “Constructing Profiles” on page 36.

CUSTOM - This report allows the user to design the layout of the reports and specify reporting selection criteria.

REGISTRY – This report displays information about the configured usage of the Upstream Registered Names Facility.

DUPLICATE - This report provides information on the usage of the Upstream Duplicate Database and repository. This feature is infrequently used with the Upstream USS system.

Catalog Dataset Name

This is the fully qualified OS/390 MVS dataset name of the FDR/UPSTREAM CATALOG database component. This file is specified in the FDR/UPSTREAM Started Task JCL as DDname USTCATLG. It is suggested that this dataset name be specified by enclosing it in single quotes to avoid possible TSO dataset name resolution interference depending on your TSO/E PROFILE PREFIX setting.

FILEINFO Dataset Name

This is the fully qualified OS/390 MVS dataset name of the FDR/UPSTREAM FILEINFO database component. This file is specified in the FDR/UPSTREAM Started Task JCL as DDname USTFILEI. It is suggested that this dataset name be specified by enclosing it in quotes to avoid TSO dataset name resolution interference with your TSO/E PROFILE PREFIX setting.

```
Fileinfo data set:
Data set name  ===> 'USTEST.UPSTREAM.$UST.FILEINFO'

Optional USTRPORT statements:
===>
===>
===>
```

Figure 97 - Reporting - Specifying Reporting Options shown below illustrates an example of a fully completed request that will report on previously performed BACKUP requests. Press the **ENTER** key in order to proceed to the next panel.

```
--------------------------- FDR/UPSTREAM Report -----------------------------
Command ===>                                                Scroll ===> CSR


Profile name   ===> *          ( * for all profiles )

Report Type    ===> BACKUP     (History Backup Vault Config Registry Duplicate)

Backup Date    ===>            ( MM/DD/YYYY - optional )

File name mask ===>                                          (blank=none)

Output Destination:
SYSOUT Class   ===>            ( blank to browse output )
Data Set Name  ===>                                          (optional)

Configuration data set:
Data set name  ===> 'USTEST.UPSTREAM.CONFIG'
Member name    ===> UPSTREAM   (if partitioned)

Catalog data set:
Data set name  ===> 'USTEST.UPSTREAM.$UST.CATALOG'

Fileinfo data set:
Data set name  ===> 'USTEST.UPSTREAM.$UST.FILEINFO'

Optional USTRPORT statements:
===>
===>
===>
```

Figure 97 - Reporting - Specifying Reporting Options

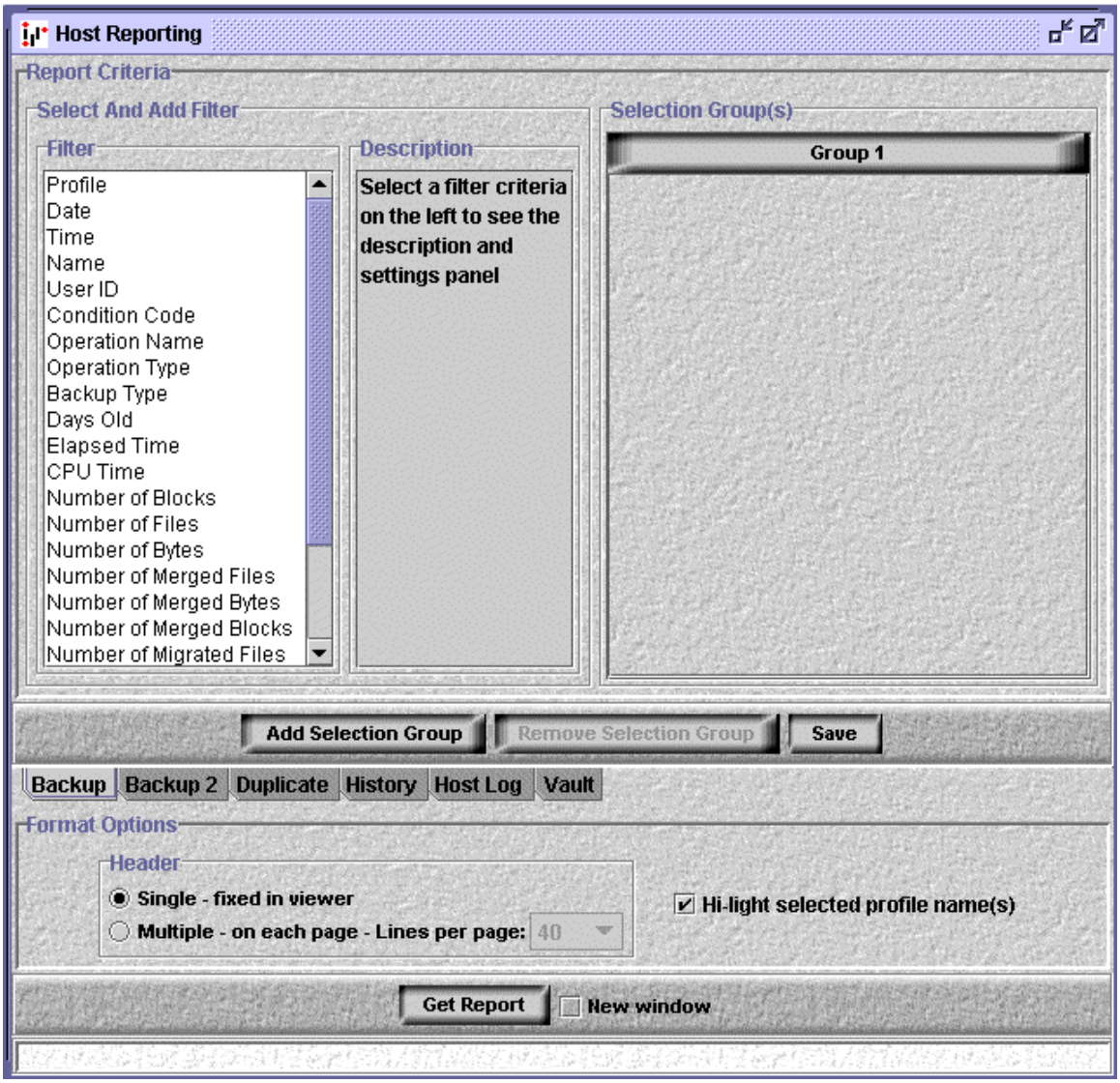
The following panel displays the output of your report request.

```
 Menu  Utilities  Compilers  Help
 ------------------------------------------------------------------------------
 BROWSE    SYS00066.T173329.RA000.EFG.R0134550------- Line 00000000 Col 001 080
 Command ===>                                          Scroll ===> CSR
******************************** Top of Data ********************************
UST300  FDR/UPSTREAM  USTRPORT Version: 3.1.7     -- Innovation Data Processing
Profile name /     CondCode  CPU Secs  LuName  Oper Name # Files  Mrg File MIG F
 Version Date.Time           Elps Min  UserId  Opty Devt # Bytes  Mrg Byte Trks/
------------------ --------- -------- -------- --------- -------- -------- -----
TEST001
 00/03/06.13:02:23        0     0.519 C0A84B2D BACKUP         17        0
                                0.3            FULL DASD   1,447K       0
 00/03/06.13:02:45        0     0.240 C0A84B2D BACKUP          5        0
                                0.2            FULL DASD 120,393        0
 00/03/06.13:03:05        0     1.606 C0A84B2D BACKUP        206        0
                                0.6            FULL DASD   6,852K       0      1
 00/03/06.13:04:12        0     0.395 C0A84B2D BACKUP          4        0
                                0.2            FULL DASD 934,528        0
 00/03/06.13:04:39        0     0.543 C0A84B2D BACKUP         88        0
                                0.3            FULL DASD   1,537K       0
 00/03/06.13:05:26        0     0.301 C0A84B2D BACKUP         12        0
                                0.2            FULL DASD 403,670        0
UST490  Total Entries Selected:     6.   Archive Read:     0.   Seq. Backup Read
```

Figure 98 - Reporting - Viewing Report Request Output

10.2 Using the UPSTREAM Director Reporting Interface

In the UPSTREAM Director, press the Reports tab.



The tabs at the bottom represent the type of report:

- **Backup:** Generates a report of requested backups. This report also is from history records, but includes information on backup data set names and values in place of other fields in the History report. It reports on backups recorded by FDR/UPSTREAM which have no matching history records.
- **Backup2:** Generates a report of storage utilized for sequential backups. Described as the “Sequential Backup” report above.
- **Duplicate:** Reports on the files stored in the duplicate file database.
- **History:** Generates a report from history records stored in the FDR/UPSTREAM MVS Catalog file. This is virtually all activity noted by FDR/UPSTREAM. The report notes (by Backup Profile when known), the date/time of the request, the resulting condition code, elapsed and CPU times, the LU name, the operation and various statistics.

- **Host Log:** FDR/UPSTREAM MVS maintains in memory a large number of its latest log entries (the exact amount is configurable in FDR/UPSTREAM MVS). This report can be very helpful in problem determination. Unlike viewing the running started task log, the log does not have to be flushed to see the latest entries.
- **Vault:** Generates a report identical to the Backup report, but it will only select backup records which are flagged as having a vault (secondary) copy created by USTVAULT, and the backup data sets shown will be the vault (copy 2) backups.

When you select a report type tab, the list of possible filters will change.

When you highlight a filter, the Description frame (to the right of the filter) will change to describe the use of the given filter and a frame will be created beneath the filter list to allow you to enter the filter. Since the format of each filter is different (text for profile, a date for date, etc.), the way that you enter each filter's value will change as well. When you wish to add the filter, press the Add button in the same frame as you enter the filter's value.

For example, if you wished to see all of the failed operations in the last two days:

- Press the **History** tab
- Highlight the filter **Condition Code**
- In the *Condition Code* frame enter the number 0, check the **Exclude** radio button and press the **Add** button.
- In the *Condition Code* frame enter the number 4, check the **Exclude** radio button and press the **Add** button.
- Highlight the filter **Days old**
- In the *Days old* frame, enter the number 2, check the **Less than** radio button and press the **Add** button.
- Press the **Get Report** button.

Selection Groups allow you to use the inclusion operator (OR) between modifiers; modifiers within a selection group are ANDed together, but the modifier immediately preceding the group is ORed with the modifiers in the group. To add a selection group press the *Add Selection Group* button, to remove a group, highlight the group label and press the *Delete Selection Group* button.

For example, if you wished to see all operations with a CPU time of greater than 600seconds (10 minutes) or an elapsed time of greater than 6 hours.

Press the **History** tab

Highlight the filter **CPU time**

In the *CPU time* frame enter the number **600000** (which is 600 seconds * 1000 as it's represented in milliseconds), check the **Greater than** radio button and press the **Add** button.

- Press the Add Selection Group button.
- Highlight the filter Elapsed time
- In the *Elapsed Time* frame, pull down the hours list and select 6, check the Greater than radio button and press the Add button.
- Press the Get Report button.

The *Format Options* frame allow you to adjust how the report is displayed:

In the Header frame you select:

- **Single - fixed in viewer.** The header is displayed at the top of the viewer screen and does not scroll when the report is scrolled - it remains at the top. This is most useful when you are generating a report for display only. This is the default.

- **Multiple - on each page - lines per page.** The header is re-displayed every xx number of lines – and you need to specify the number of lines between headers. This is most useful when generating reports which will be printed.
- **Hi-light selected profile names.** When you check this box, the Director will highlight backup profile names if you used that as a filter. The default is unchecked.
- **New window** If you check this box, each report you generate is displayed in a separate window. If you don't check it, each report is displayed in the single window.

When a Director report is displayed you can press the First button to go to the top of the display, the Last button to go to the bottom or the Save button to display a save dialog which allows you to save the report to a file.

Saved reports are plain ASCII text files with no special formatting.

The UPSTREAM Director can save your report definitions which include the report type, filter settings, and all of the other settings which comprise a report. Press the **Save** button in the Host Reporting window, and you will be asked to enter a New Criteria Name which is merely a short description of the report and optionally a more lengthy description. It then is saved to an internal location within the Director so it's available in later Director sessions.

Load the saved jobs in the Saved Report Criteria window, also in the Host Reports tab.

Reports with a leading asterisk ('*') are pre-canned reports which are shipped with UPSTREAM. Press the Load button to load the highlighted saved report to the main report display (double-click the line will have the same affect. Press the Delete button to delete the saved report and Update Description to change it's descriptive text.

11

11 Maintaining the Upstream MVS Repository

11.1 Overview

This section describes the FDR/UPSTREAM-MVS database (the "repository files"), helps you plan for their usage, and describes the procedures necessary to maintain the database and the files that comprise it.

The FDR/UPSTREAM system uses its database to store the status of completed functions, record the location of every workstation file which was backed up, track secondary copies of backups, identify system users, and to track candidate duplicate workstation files.

The FDR/UPSTREAM-MVS Database consists of three files. These files contain the internal control records that support all FDR/UPSTREAM functions. These are the DDnames by which they are referenced in FDR/UPSTREAM JCL are:

- • USTCATLG – catalog file
- • USTFILEI – fileinfo file
- • USTFILEC – filedata file

Each file's contents, usage, and maintenance requirements, are outlined in this section. The files do contain interrelated entries and control information so it is critical that they be processed as a single entity. They should not be altered individually, in any manner, by external programs without prior consultation with Innovation Technical Support personnel.

11.2 FILE FORMAT

The FDR/UPSTREAM-MVS database files can be in either of two formats:

- • They can be standard VSAM KSDS (keyed) clusters
- • They can be in a special Innovation proprietary format (IAM).

The proprietary format provides VSAM-compatible keyed access, so that most FDR/UPSTREAM-MVS programs are not sensitive to the format of the files. However, that format is designed to avoid the overhead of VSAM, providing high-speed access to the data, using an advanced internal file structure which is far superior to regular VSAM files and requires 30 to 70 percent less DASD space than a similarly defined VSAM file. Proprietary format files can be allocated on any DASD device and appear to the MVS operating system as physical sequential files (DSORG=PS) even though the data is accessed by key. To the MVS catalog, these files appear as non-VSAM type entries.

The proprietary format achieves these economies through the following design features:

- It loads the entire index structure into memory eliminating the need for imbedded indices.

- Index compression techniques scan the entire key
- File internal index components require minimal information to be stored on DASD.
- FREESPACE allocation techniques make much more efficient use of disk space.

Files in either format can be defined with the USTCAMS utility. VSAM files can also be allocated with IDCAMS. These data sets may be SMS-managed. If they are true VSAM KSDS files, you can choose to make them extended format (EF) files which will support hardware compression. However, if you use the proprietary Innovation format, the data class must not specify extended format or compression.

11.3 Database Maintenance

The UPSTREAM database files are generally accessed by a key in order to reduce file access times during record location and insertion operations. Under normal operating circumstances, the vast majority of activity against the database will be for the insertion of FDR/UPSTREAM control records due to backups. Due to the nature of the insertion process on any type of key sequenced file, non-optimal organization of the file is the result. This may affect the future ability to add records, and may impact the performance of the database.

Three utilities are provided to address this problem:

- MAINT - purges obsolete records from the USTCATLG and FILEINFO Repository database files. USTMAINT is by default run automatically every time you start the FDR/UPSTREAM-MVS started task, but it can be run at any time. See section 11.10 - MAINT Processing on page 163 for additional information.
- MAINTF - purges obsolete records from the FILEINFO Repository database file they have been inadvertently left due to system or application ABENDS or other unpredictable events. MAINTF is never run by default but should be run on a semi-regular basis. See section 11.11 - MAINTF Processing on page 163 for additional information.
- REORG - reorganizes one or more of the database files, in order to reclaim space for deleted records and put all inserted records in their proper locations. A re-organization of the database files will be required at periodic intervals, based upon the level of insertion activity and the sizing of the database file in question. USTREORG is run while the FDR/UPSTREAM-MVS started task is still active; however, all other activity must be quiesced. It will create a backup file containing all of the data set records, from which it is reloaded. You can retain that backup (perhaps as a GDG) to guard against database corruption or other problems. You can also reorganize database files with the USTCAMS batch utility but this requires that the FDR/UPSTREAM-MVS Repository Started Task be stopped.

If you save the backup files created by USTREORG or USTCAMS, and you find that you must restore them, perhaps because of database damage, you must restore the backups of all three database files from the same point-in-time. The database files have interrelations, data from one used to access another, so if they are restored from backups taken at different times those relationships may not be valid. Since these files are often reorganized on different schedules, you may want use other products (e.g., FDR) to take backups for recovery purposes.

11.4 Reporting

The records in the Repository database can be displayed via any of the following methods:

- The USTRPORT batch generalized reporting utility. USTRPORT offers a great deal of flexibility in selecting records for display and formatting the report. This is discussed.
- The USTDUPRT batch duplicate file audit utility.
- The USTBKPRT batch backup file report utility.
- The FDR/UPSTREAM-MVS ISPF interface allows interactive execution of the above utilities via option 7 for USTRPORT and option 8 for USTDUPRT.
- FDR/UPSTREAM-Service User Interface or the FDR/UPSTREAM Director allows most of these reports to be generated and displayed on a workstation system.

11.5 The USTCATLG File

The USTCATLG (catalog) file contains the primary control records for the functions of the FDR/UPSTREAM system. It contains these data records:

- For a Workstation Backup: history record, backup control record, file specification record
- For a Workstation Restore: history record
- For a Vault Operation: history record, vault control record

11.5.1 History Records

A catalog history record is created for each FDR/UPSTREAM function when it completes. These records contain information such as function requested, elapsed time, execution time, number of workstation files processed, etc. They allow you to report on FDR/UPSTREAM overall activity, or report on specific workstations or activities.

The setting of the system-wide MAXHIST parameter (See Section 3.4) controls the retention of the History records; it specifies the number of days that the History records should be retained before being purged by USTMAINT. The default setting for the MAXHIST parameter is 30 days, but Innovation suggests that this be altered to be equal to the highest retention of your Full backups so that you have full history reporting for all backups which still exist.

11.5.2 Backup Dataset Records

A catalog record of this type is created for each backup requested. This record contains information such as: name of the backup profile used, type of backup requested, time and date of the backup request, the MVS data set name created to hold the contents of the backup, number of files backed up, etc. The contents of this record are used to access the other record types in the other database files. For example, an inquiry request would get a list of these records to identify all the backups for a particular backup profile. Then a selection of one or more of these records would be made and the contents of some the fields would be used in order to construct a database key to obtain, for example, a list of files backed up for a particular file server.

The retention of these records is controlled by the MVS catalog. All FDR/UPSTREAM backup data sets are cataloged in the appropriate MVS catalog, so the Backup Data set record only contains the data set name. When the backup named in a Backup Data set record is no longer in the MVS catalog, the record and its associated File Specification records are eligible for purge by USTMAINT.

FDR/UPSTREAM MVS will never automatically uncatalog any backup data sets it creates. Instead it assumes that the customer's tape and/or DASD management systems (i.e. CA-1, TLMS, FDR/ABR, HSM, etc.) will uncatalog the data set when they have reached their expiration as specified by the RETPD or EXPDT attributes of the associated workstation profile. If you create the backup as a GDG (Generation Data Group), then the number of backups to be retained is specified when the GDG base is created, and older backups are automatically

uncataloged as new backups are created. Whatever technique is used, the FDR/UPSTREAM administrator must insure that backups are retained for an adequate period.

The FDR/UPSTREAM-MVS administrator or (with proper authorization) a FDR/UPSTREAM user can delete specific backups with the FDR/UPSTREAM-MVS ISPF interface (see Section 6.10) or FDR/UPSTREAM-Workstation.

11.5.3 File Specification Records

A catalog record is created for each file specification specified in a backup request. This record contains the file specification requested in the original backup and some supporting data. For example, if you specified that you wanted to back up the C:*.* and D:*.* drives for a particular file server, this would cause the creation of two File Specification Records within the USTCATLG file. File Specification records are purged when their associated Backup Data set record is purged.

11.5.4 VAULT Copy Records

Two Vault Copy catalog records are created for each VAULT request performed. One record contains the information related to the Vault Retention Data set that is created as the first data set on the Vault tape set. This data set is used to control the retention of the tape set that contains the output of the Vault request. The second Vault Copy Record is for the Vault Control File that is placed as the last data set on the Vault tape set. This file contains all the extracted database control information related to the backups that have been placed on this Vault tape set.

These records are purged by rules similar to the rules for Backup Data set records, described above.

When the first data set on the vault tape is no longer cataloged, it is eligible for purge by USTMAINT.

11.5.5 Registered Name Records

A catalog record is created for each workstation that signs on with auto-registration enabled or is manually defined via the ISPF interface. A Registered Name record is utilized in order to establish an alias for a remote workstation and conceal its network address (SNA LUNAME, IP address, etc.) from the connection process. This allows the use of IP DHCP protocols or dynamic SNA LU naming when interfacing between the FDR/UPSTREAM workstation and the host software. This record also contains information regarding the installed version of the particular FDR/UPSTREAM workstation when it last connected. This information can be used by the automatic software distribution feature of FDR/UPSTREAM to update the version of the FDR/UPSTREAM software on the workstation.

If a Registered Name Record was not accessed within the last 90-days, it is eligible for deletion, The records can be optionally manually deleted via the FDR/UPSTREAM-MVS ISPF interface (See Section 6.7).

11.6 CATALOG File Sizing

The approximate sizing for the USTCATLG file is fairly straightforward and can be expressed as follows:

$$N * (H + B + F + 2V) + R = T$$

where:

H = # of history records / backup (always one)

B = # of backups records / backup (always one)

F = # of File Specification Records / Backup (variable)

V = # of Vault Requests (two records per vault request)

R = # of defined registered names

N = # of retained backups (Full, Incremental, and Non-Merge)

T = Total # of records to allocate (average record size 150 bytes)

The easiest method for performing this calculation is to use the FDR/UPSTREAM MVS ISPF "DEFINE" panel (Section 2.5) which will calculate the size of the file from input you provide and generate all the necessary MVS JCL to define the file.

The USTCATLG file will change on a regular basis as each request made to the FDR/UPSTREAM system is completed. The file should be adequately allocated to allow for uninterrupted service for at least one week's time. It should be regularly reorganized with USTREORG. The USTCATLG file is generally less than 5 cylinders in size, even in the largest shops, so weekly or even daily reorganization causes few complications.

11.7 The USTFILEI File

The USTFILEI (FILEINFO) file contains the control records created by the backup and the automatic duplicate file processing functions of the FDR/UPSTREAM system. It contains two types of records:

- • File Information Records
- • Automatic Duplicate File Candidate Records

11.7.1 File Information Records

A File Information Record is created for each workstation file backed up by the FDR/UPSTREAM system. These records contain information such as file name, byte count, backup date and time, location of the backup, etc. They are used when constructing a list of files to be restored. You can also report on the files which have been backed up.

Since most workstations or file servers contain a very large number of files that you will wish to backup and track, these records comprise the most important capacity planning issue when setting up and maintaining the FDR/UPSTREAM-MVS system.

File Information records will be purged by USTMAINT when their associated Backup Data set record is purged from the USTCATLG file as earlier described.

11.7.2 Automatic Duplicate File Candidate Records

A FDR/UPSTREAM Automatic Duplicate File Candidate Record is created for each file that meets the selection criteria as it is backed up when the DUPLICATE=AUTO option is enabled (see Sections 3.4 and 1.4). They are used to identify files which are identical on multiple workstations, so they need to be backed up only once. These records contain information such as file name, size, date and time last modified, etc.

The retention of the Duplicate File Candidate Records is controlled by the parameter MAXDUPL (see Section 3.4), which defaults to 30 days. Once a file has been identified as a candidate for duplicate file processing, it will remain a viable candidate for only the period specified in MAXDUPL, if it is never selected for duplicate processing. Then it will be eligible for purge. If the file is processed a second time during this period, then it is considered a selected duplicate file and the record will remain until the file is purged via the UPSTREAM Workstation Duplicate File Management function.

11.8 FILEINFO File Sizing

The approximate sizing for this file is fairly straightforward and can be expressed as follows:

$$N * (F + C) = T$$

where:

F = Average # of files backed up (very variable per server)

N = # of retained backups (Full, Incremental, and Non-Merge)

C = # of first observed candidate duplicate files (very variable per server)

T = Total # of records to allocate (average record size 150 bytes)

If the DUPLICATE=AUTO option is not enabled, then the “C” portion of the above calculation can be ignored. The enabling this function is not suggested unless you have reviewed the Duplicate File section of this manual and have determined that the significant resources required are worth the benefits that this option provides. DUPLICATE=AUTO is not the default setting.

The easiest method for performing this calculation is to use the FDR/UPSTREAM MVS ISPF “DEFINE” panel (Section 2.5) which will calculate the size of the file from input you provide and generate all the necessary MVS JCL to define the file.

The USTFILEI file will change as each backup is completed. The file should be adequately allocated to allow for uninterrupted service for at least one week’s time.

The USTFILEI file is generally quite large in size, routinely exceeding 500 cylinders in size. Due to the size of this file, the large amount of activity the file receives, and the need to interrupt the FDR/UPSTREAM-MVS system processing during it’s reorganization, a weekly schedule for reorganization is suggested.

11.9 Database File Interrelationships

The USTFILEI file contains indirect references to the USTFILEC database file and is also the target of keyed access requests based on data from the USTCATLG file. The version date, profile name, and several other fields contained in the USTCATLG file are used in the construction of the access keys used to access records in this and the USTFILEC database files. The USTFILEI file contains references to entries in the USTFILEC file pertaining to the occurrence and usage counts associated with the Duplicate File Management features of the product.

As previously stated, any alteration or restore of a single UPSTREAM database file without similar activities to the other files will result in a corrupted and possibly unusable database.

11.10 MAINT Processing

The MAINT function processes the USTCATLG Repository Database file looking for backups that have been previously taken and then determining if the backup datasets that they are on are still cataloged in the MVS catalog. If the datasets are still cataloged, it does no processing for this backup. If the backup datasets are no longer cataloged, it purges all control records, with the exception of history records, from the Repository Database for the backup in question.

This function is by default executed automatically whenever the UPSTREAM MVS Reposttory started task is started. It should also be run at least once a week to remove unnecessary control records from the database. The space utilized by the deleted control records is not reclaimed for use by the system until a REORG function has been performed on the appropiate databse component.

To execute the MAINT function via OS/390 operator command, enter on the following:

F UPSTREAM,MAINT

The following JCL will allow for the execution of the MAINT function via an OS/390 batch JOB.

```
//jobname JOB  (accounting,information),'job id data',
//        NOTIFY=userid
//*
//*
//BACKUP    EXEC PGM=USTBATCH
//STEPLIB   DD   DISP=SHR,DSN=your.upstream.load.library
//SYSUDUMP  DD   SYSOUT=*
//USTLOG    DD   SYSOUT=*
//USTPARM   DD   *
APPLPREF=UPSTR
USAPPL=UPSTREAM
LOGMODE=#INTER
CONV=WAIT
*
COMMAND=MAINT
*
ENDPARM
/*
//
```

Figure 99 - MAINT Initiation via USTBATCH Interface

11.11 MAINTF Processing

The MAINTF utility function is used to delete orphan records from the USTFILEI Repository database file. When an FDR/UPSTREAM backup is in progress, its USTFILEI entries are added as each file is backed up. The actual USTCATLG entries are not added until the backup completes. If the FDR/UPSTREAM system ABENDs or the MVS system is re-IPL'ed while a backup is in progress, the USTCATLG entries for the in-progress backups will not be written. The related USTFILEI entries however will still be in the USTFILEI file and inaccessible. The MAINTF utility function was created to correct this situation.

To execute the MAINTF function via OS/390 operator command, enter on the following:

F UPSTREAM,MAINTF

The following JCL will allow for the execution of the MAINTF function via an OS/390 batch JOB.

```
//jobname JOB  (accounting,information),'job id data',
//        NOTIFY=userid
//*
//*
//BACKUP    EXEC PGM=USTBATCH
//STEPLIB   DD   DISP=SHR,DSN= your.upstream.load.library
//SYSUDUMP  DD   SYSOUT=*
//USTLOG    DD   SYSOUT=*
//USTPARM   DD   *
APPLPREF=UPSTR
USAPPL=UPSTREAM
LOGMODE=#INTER
CONV=WAIT
*
COMMAND=MAINTF
*
ENDPARM
/*
//
```

Figure 100 - MAINTF Initiation via USTBATCH Interface

Weekly execution of this utility function is generally recommended.

11.12 The FILEDATA (USTFILEC) File

The FILEDATA (Repository file DDNAME USTFILEC) file contains the data records created by the Duplicate File Processing functions of the FDR/UPSTREAM system. It is also the storage medium for the “ARCHIVE” and “KEYED” backup functions from previous releases of the UPSTREAM system. The “ARCHIVE” and “KEYED” features are no longer supported for direct usage and will not be discussed here.

The FILEINFO database file contains only one type of control record, the Duplicate File Data Record. These records contain the actual backup data selected and transmitted by the UPSTREAM workstation component. They are initially placed within this database file, either through manual or automatic processing, to allow UPSTREAM to avoid their retransmission upon subsequent discovery during the backup of different systems. These records are, optionally, later copied from this database file to the backup tape in lieu of their transmission from the UPSTREAM workstation during backup processing.

The Duplicate File Data Records can only be removed manually; there is no method for automatic elimination of duplicate file data. The UPSTREAM Service Duplicate Management Function Menu is the only interface method currently supplied to perform this manual removal. This interface allows for inquiry about stored duplicate files and removal of unwanted duplicate files.

11.13 FILEDATA File Sizing

The sizing issues for the FILEDATA file are straightforward or quite unpredictable depending on whether you chose the “manual” or “automatic” method, respectively, of propagating this database file.

When sizing for the “manual” method, you can use the size of the workstation files or directories that you will be placing into the USTFILEC file (plus approximately 5% for overhead functions) as a basis for the calculations.

When sizing for the “automatic” method however, the number and size of the duplicated files selected for processing on the systems being backed up can be quite unpredictable. The only

predictive method available is the Duplicate File Audit Report (USTDUPRT). This report is capable of looking at previously performed backups and identifying files on those backups that are candidate duplicates. The output of this report will supply you with a starting point for estimating the allocation size for this file.

The USTFILEC file is generally quite large in size when duplicate file processing has been enabled, and will routinely exceed several hundred cylinders in size. Due to the access pattern for this file, a regular schedule for reorganization is not usually necessary. However, if a large number of deletions are performed, the file should be reorganized to recapture “dead space” within the file.

If duplicate file processing is not being performed at this site, this file does not need to be reorganized at all.

12

12 Lotus Notes© Support

FDR/UPSTREAM supports Notes R5 and R6 databases using the Lotus Notes backup API. This means that UPSTREAM can perform on-line full backups of databases (even if in use) as well as incremental backups by backing up Notes transaction logs - essential if you are using transaction logging (which Lotus highly recommends). UPSTREAM can also perform incremental backups of databases where Notes indication of change or a DBIID change is detected and the database is backed up to assure recovery from transaction logs.

12.1 Transaction Logging

Notes R5 introduces the concept of transaction logs. Notes uses them for 3 purposes:

- To avoid the use of the Fixup task. Transaction logs allow internal database recovery much quicker on system failure.
- Improves performance as database updates are deferred.
- Allows incremental backups, as you just backup the transaction logs.

Because of the way that transaction logging works, the Lotus Notes Backup API requires that Notes databases be processed quite differently than your normal file backups both for fulls and incrementals.

NOTE: All the *.nsf, *.ntf, and *.box databases files and the *.lfh and *.txn transaction log files in the Domino data directory and its subdirectories should be excluded from your normal backups and processed using the UPSTREAM Notes R5 backup agent.

The UPSTREAM Notes R5 backup agent uses the Notes backup API. Through its use, full backups are able to access all databases, even if in use and are guaranteed to have all transactions committed.

The Notes backup API requires that you perform your backups locally on the Domino server.

Incremental backups consist of backups of the transaction logs as well as any databases which are new or have been changed so that transaction logs can not be applied. There are only one set of transaction logs for a given Domino server; all databases use the single set of logs. Notes actually creates transaction logs in multiple 64MB files. Thus the smallest incremental is 64MB. A transaction log can not be archived until it has been filled and Notes has switched to a new transaction log. FDR/UPSTREAM performs both incrementals of ar-chived transaction logs and transaction logs still in use.

To guarantee full recovery, UPSTREAM will automatically backup with all transaction log backups:

- Any transaction logs which require archiving.
- The active transaction logs.
- The active notes.ini file.
- Any id files (cert.id, server.id, etc.) stored in the notes data directory.

12.2 Installation Steps

The following are the steps to using the Notes R5 database agent:

- Exclude the Notes databases and transaction logs from your normal production backups (see above).
- Verify that you have a large amount of free disk space in your UPSTREAM Work Path, equal to the largest Notes database.
- Run the Domino Administrator and set up archive transaction logging (below).
- Verify that your environment variables are correct.

There are a number of environment variables which must be set to use UPSTREAM Notes R5 support. These environment variables must be in the actual environment; they can not be in the UPSTREAM environment file.

For USS users we recommend that you add these variables to the **usx** script if you are starting UPSTREAM from a batch job or /etc/init.options file (with the -e switch) if you are running UPSTREAM from /etc/rc.

The environment variables are:

- **LOTUS**. Used by the Notes API, it must point to the Domino main directory. For most users this /usr/lpp/lotus.
- **LIBPATH**. Used by the system dynamic linker, it is used to find the Notes API shared libraries (in particular libnotes.so). It must point to the Domino executable directory. For most users the directory is: /usr/lpp/lotus/notes/latest/os390.
- **NOTES_DATA_DIRECTORY**. Used by the Notes API, it must point to the Domino data files (*.nsf, *.ntf and *.box); the directory you start the Domino server in. For example, if you installed Domino in the /notes directory, you would specify /notes/notesdata.
- **Notes_ExecDirectory**. Specify the same path as you used for LIBPATH.
- **PATH**. This is the standard environment variable for finding executables. You'll need to add all the paths specified above.

  For UNIX, Lotus also recommends adding your Domino resource directory. A resource file is a file provided by Domino that contains error messages and other strings used by Domino and C API programs at run time. Many C API programs require the resource file strings.res. All resource files are part of Domino and reside in the resource directory, **res**, which is in the Domino executable directory. Different resource directories may be provided to support different languages. The default resource directory is res/C in the Domino executable directory. For most users this is /usr/lpp/lotus/notes/latest/res/C.

For example, your usx script might look like the following:

```
LOTUS=/usr/lpp/lotus
export LOTUS
LIBPATH=$LIBPATH:.:/usr/lpp/lotus/notes/latest/os390
export LIBPATH
NOTES_DATA_DIRECTORY=/notesdata
export NOTES_DATA_DIRECTORY
Notes_ExecDirectory=/usr/lpp/lotus/notes/latest/os390
export Notes_ExecDirectory
PATH=.:$PATH:$LOTUS:$NOTES_DATA_DIRECTORY:$Notes_ExecDirectory:/usr/lpp/lotus/notes/latest/res/C
export PATH
cd/usr/lpp/fdrupstream
```

uscmd

- Setup UPSTREAM parameter files (if USS initiating) or MVS jobs (if MVS initiating) using the correct file specs and plug in parameters (see below).

12.3 Domino Administrator Setup

The Lotus Domino Administrator program allows you to define and modify transaction logging parameters. In the Configuration tab, highlight the server document and select the Transactional Logging sub-tab. We recommend the following options:

- Transactional logging: It must be set to "**Enabled**".
- Log path: We recommend that you use the default of **"logdir"**.
- Use all available space on log device: We recommend that you set this option to **"No".** Setting it to **"Yes"** may lead to system instability.
- Maximum log space: There is a bug in Notes where the minimum transaction log size is actually 192MB; specifying a smaller value will result in 192MB being used (see Lotus TechNote #173422). Setting this to a larger value is recommended so long as you leave some free space on the disk.
- Logging style: Specify **"Archived"** to allow database recovery.

The database instance ID (DBIID) allows association between databases and transactions in the transaction logs. When Notes assigns a new DBIID to a database, it can no longer recover transactions from its transaction logs. It does this in the following circumstances:

- You enable transaction logging for the first time.
- You run the Compact server task with any options.
- You run the Fixup task on corrupt databases.
- You change the log path or maximum log size after initial setup and use.
- You move a Domino Release 5 database from one logged server to another logged server or from an unlogged server to a logged server.
- You restore a database

We strongly recommend that you perform a full backup after any of these conditions occur. Thus after saving the parameters above, you should plan on a full backup.

However, if it is impractical to perform full backups after these conditions, we recommend that you specify the plugin parameter DBCHANGEDCHECK=I, so that UPSTREAM will preserve the DBIID for all databases and detect DBIID changes. If a DBIID changes on an incremental backup, UPSTREAM will perform a full backup of that database.

12.4 UPSTREAM PlugIns

A PlugIn is a shared library which is loaded into UPSTREAM when needed and extends UPSTREAM's capabilities without the use of an external program. A single backup can include files which may or may not use PlugIns and PlugIn types can be mixed. There are only two new parameters when using an UPSTREAM PlugIn:

- **PLUGIN** which specifies the name of the PlugIn file (without the directory but with the extension)

- **PLUGINPARAMETERS** which is a single string which may consist of any number of parameters to be used by the PlugIn.

If you are host initiating a you must specify, in the repeating section of the PC parameters (those that begin with SPECNUMBER) the following parameters. Note that if you are running UPSTREAM/MVS v3.1.1 or earlier you must set VERIFY=NO to allow unknown PC parameters to be accepted.

```
PLUGIN notesr5
PLUGINPARAMETERS <parameters>
```

The valid settings for the **PLUGINPARAMETERS** control card are:

Title	Setting	Description
DBCHANGEDCHECK	**Y** **N** **I**	N: UPSTREAM will use the modification date to determine if a database is new. Y: UPSTREAM will not use the modification date to determine if a database is new; it will use the Notes API facilities. (Default) I: A DBIID file is created for all databases when they are backed up. If the Notes API facilities do not say the database is new, UPSTREAM will also check the DBIID against the prior one stored.
LOGBACKUPPROFILE	**Backup Profile**	If you are using multiple backup profiles for your Notes backups, specify the backup profile of the backups used for transaction logs, if it is different. The default (not specified) assumes that this profile is your transaction log profile.
LOGFILES	**Y** **N** **O**	Log files are included in the backup or restore. Log files are not included in the backup or restore. (Default) The file specification is ignored and ONLY log files are included in this backup.
RECOVERYTIME (Restore only)	**YYYYMM DDHHMM SS**	All committed transactions completed prior to the date and time specified are applied to the list of databases

You can specify a full-merge for full backups, but all the files will be transmitted as there is no inherent way to determine if a database has been changed (even by modification date or archive bit) as there may be transactions which are pending.

Restart is not supported for full or incremental Notes R5 backups.

Thus, for full-backups we'd recommend the following JCL (assuming that the Domino data directory is /notesdata):

```
ACTION 1
BACKUPPROFILE <profile>
STORAGETYPE 3 * TAPE
MERGE 1 * FULL MERGE
LOGNONFATAL Y
*
SPECNUMBER 1
FILES /notesdata/*.ntf
PLUGIN notesr5
PLUGINPARAMETERS LOGFILES=Y
*
SPECNUMBER 2
FILES /notesdata/*.nsf
PLUGIN notesr5
PLUGINPARAMETERS LOGFILES=Y
*
SPECNUMBER 3
FILES /notesdata/*.box
PLUGIN notesr5
PLUGINPARAMETERS LOGFILES=Y
```

For incremental backups, we recommend the you use the same parameters, except replace the MERGE parameter with:

MERGE 2

12.5 Incremental Detection of New Databases

When you set the PLUGINPARAMETERS value DBCHANGEDCHECK Y, UPSTREAM will call Notes to determine if a given database is new and requires a full backup - it is more reliable than the archive bit or modification date.

This option is particularly useful for incrementals so that new databases are fully backed up and databases which do not need it are not. To best use it with incrementals, use the LOGFILES=Y option instead of LOGFILES=O and specify the databases you wish to include (with wildcards) in the same manner as you do for the full.

If a database is new it may report UPSTREAM error #10143 and Notes error #5114 and the database will be fully backed up. It is not terribly useful for full merge backups as UPSTREAM will still use the last modification date to indicate if the file has changed, will most likely consider this to be a mismatched file and back it up fully.

You only need to set the PLUGINPARAMETERS value DBCHANGEDCHECK I if the DBIID may change between full backups. This option causes UPSTREAM to open the database during the directory build operation which may decrease overall performance, though it does guarantee that all databases will be recoverable from log files.

When you set this option, UPSTREAM will create a 16 byte file to hold the DBIID, in the same directory as the database, with the same name as the database with the added extension .DBIID. These files are updated whenever the database is backed up with this option. Thus we recommend if you are going to use this option for your incrementals, that you use it for your fulls as well to update this file.

12.6 Restores

If you restore a database from a full backup it is guaranteed to be complete, as of the date/time of the backup. To restore one or more databases from a full, merely specify them in the same way to request any other restore, with the addition (for each file spec) of the PLUGIN value of notesr5. PLUGINPARAMETERS are only used in restores if you are applying log files or wish to restore to a particular date and time.

You will need to be sure that Domino and Notes do not have these databases open. After closing a database which was open via Domino, you may have to wait a few minutes for Domino to actually close it. You can specify a new destination if you wish.

To restore databases as of the latest incremental, you must specify PLUGINPARAMETERS LOGFILES=Y. The database can not be renamed (specify no Destination) as the Notes API does not support renamed databases.

The PLUGINPARAMETERS value RECOVERYTIME allows the specification of a date and time such that all committed transactions completed prior to that time are applied to all databases restored. Do this if you do not wish a database recovered with the most recent transactions.

The option is only available for restores when your PLUGINPARAMETERS value includes LOGFILES=Y. You'll need to add to PLUGINPARAMETERS a date in YYYYMMDDHHMMSS form. For example, if you wished to roll forward to 2PM on June 23, 2000, specify 20000623140000. If you were host initiating the PLUGINPARAMETERS line would look like:

PLUGINPARAMETERS LOGFILES=Y RECOVERYTIME=20000623140000

There are two steps that UPSTREAM performs in log file restores. First it restores the database(s). Then it calls Notes, providing it with the names of the databases and asks it to apply the logs. If the transaction logs are not currently on disk, it will ask UPSTREAM to perform the restore(s). When it completes, the databases should be properly recovered.

If a database has problems (for example, the DBIID has changed), Notes will stop the recovery without completing it. Thus we recommend breaking down your log file restores into multiple restore requests so that the failure in one will not require you to repeat the process multiple times.

12.7 Transaction Log Backups

When you request transaction log backups, the following additional files are automatically included so that a transaction log backup is suitable for disaster recovery. You use UPSTREAM as described in the *Disaster Recovery* section below to recover these files as needed. Note that all of these files must be renamed on recovery.

- The active transaction log. It is saved on the host using the file name **/notesr5activelog:<file name>** when <file name> is the file name of the file.
- The active notes.ini file. It is saved on the host using the file name **/notesr5ini:notes.ini**. There can be problems finding the notes.ini file programmatically; we have included the new environment variable **USNOTESINI** which can point to the notes.ini file. By default UPSTREAM will use the file name specified in this environment variable first, then the location defined in the Directory value in the Notes environment and then the directory above it.
- Any id files (cert.id, server.id, etc.) stored in the notes data directory, using the file name prefix **/notesr5id:**

12.8 Multiple Backups

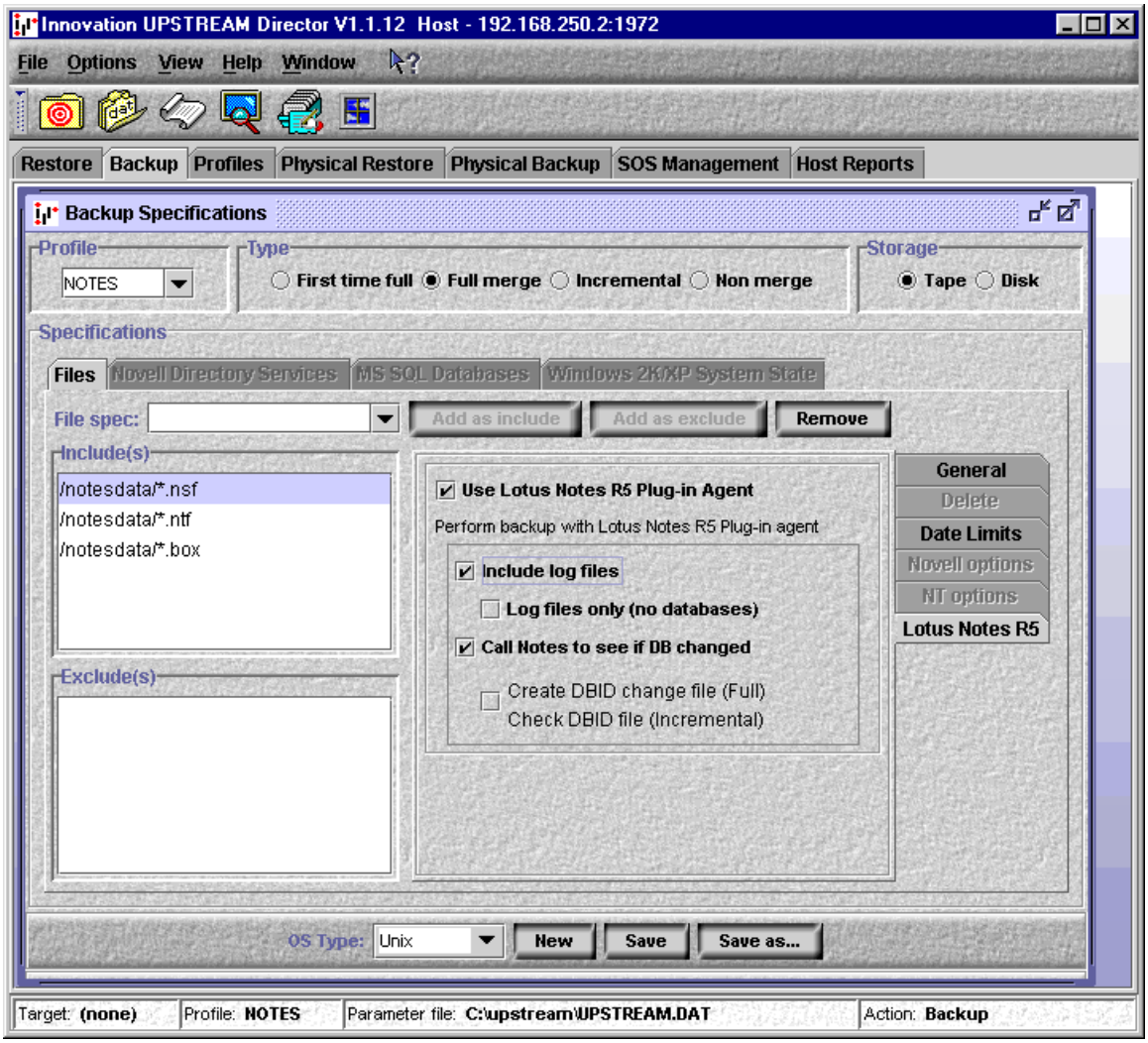
The NotesR5 agent supports multiple simultaneous backups. To do this you must:

- Logically separate the backups. You must create multiple, non-overlapping, UPSTREAM backups requests to separate backup profiles. If your data is stored in separate directories, this can be quite simple (one backup of the Notes data directory in the /notesdata directory; another backup of the Notes data directory /notesdata/mail). Otherwise separate them by extension (*.nsf in one backup, *.ntf in another, *.box in yet another for example).
- Specify the log files in only one of these backups.

If you are performing a restore in which you wish to apply transaction logs there is no problem if the database is being restored from the backup profile used to store transaction logs. However, if you used a different backup profile for the transaction logs, you must specify the new PLUGINPARAMETERS value, **LOGBACKUPPROFILE** with the backup profile used for the transaction logs. Then if a transaction log is needed, it will be recovered correctly.

Notes and the UPSTREAM Director

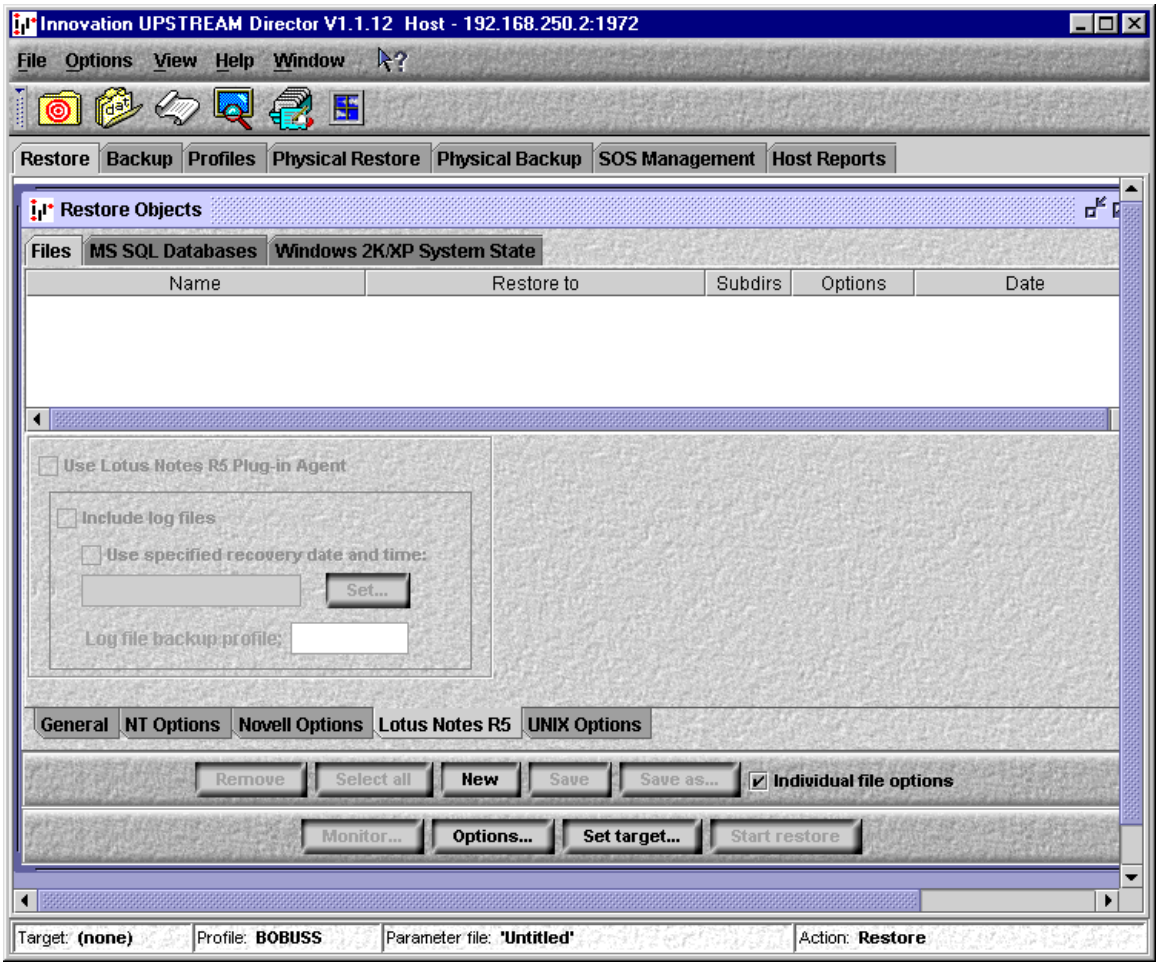
The UPSTREAM Director can be used to specify a Notes backup (though most users automate it with MVS scheduling systems). The Director is most helpful in Notes restores as it allows inquiries, Notes awareness and restore monitoring.



When you highlight a file spec, you can modify the values in the properties tabs to the right of the specs. In the General tab, you can specify values like Subdirectories, Include NFS mounts, etc. In the Lotus Notes R5 tab, you can specify:

- Use Lotus Notes R5 Plug-in Agent: Checkbox must be checked to indicate that you wish to use the Notes R5 plugin. This is equivalent to specifying PLUGIN notesr5 from JCL or UPSTREAM parameter files.
- Include log files. Check this box to have log files included with your backups. This is recommended. Checking this box by itself specifies the PLUGINPARAMETERS value LOGFILES Y. If you check this box, you can check the indented box: Log files only (no databases). You may wish to select this option if you wish to perform a backup with no databases at all. Checking this box specifies the PLUGINPARAMETERS value LOGFILES O.
- Call Notes to see if DB changed. This is recommended for all backups. Checking this box by itself specifies the PLUGINPARAMETERS value DBCHANGEDCHECK Y. If you check this box you can check the indented box: Create DBIID change file (Full), Check DBIID file (Incremental). Check this box for exhaustive DBIID change check during file incrementals. Checking this box specifies the PLUGINPARAMETERS value RECOVERYTIME to the specified date and time.

For Director restores, you select Notes databases to restore in the regular way from the directory tree with the mouse. After you have selected the files, in the Restore Objects window you can select Notes specific restore parameters:



- Use Lotus Notes R5 Plug-in Agent: Checkbox must be checked to indicate that you wish to use the Notes R5 plugin. This is equivalent to specifying PLUGIN notesr5 from JCL or UPSTREAM parameter files.
- Include log files: Check this checkbox to have log files applied to the databases after the original full database is restored. Checking this checkbox specifies the PLUGINPARAMETERS value LOGFILES Y.

  If you check this checkbox you can check the indented checkbox: Use specified recovery date and time. If you check this checkbox you must press the Set… button to display the Director Calendar control to specify the specific date and time the database is to be recovered to. Databases can be recovered to dates between the full backup and when the last set of log files were backed up. Checking this checkbox adds the PLUGINPARAMETERS value RECOVERYTIME.
- Log file backup profile: If you used a separate backup profile to backup log files, specify that backup profile in this field. Entering this field adds the PLUGINPARAMETERS value LOGBACKUPPROFILE.

12.9 Disaster Recovery

In the event of the catastrophic loss of the active logger files, it will be possible to recover database backups to the last committed transaction in the archived transaction logs if the administrator has taken care to preserve the following, prior to any data loss:

- A set of recoverable database backup files.
- Performed UPSTREAM transaction log backups (with the v3.1.2b or later NotesR5 PlugIn). When you perform transaction log backups, the notes.ini file and the active transaction log is included along with any transaction logs which required archiving. With the components listed above available, the disaster recovery procedures consist of the following. Note that you must be precise and the order is very important. Call tech support if you experience difficulty or have questions.

For UNIX, the steps below should be performed as the notes user. If you can't be the notes user, you should manually change the owner and group of all notes created files after each step to be the notes owner and group.

1. Restore the Domino server - Depending on the extent of the data loss it may be necessary, and advisable, to install a new Domino server. Be sure that the new installation is configured in the same manner as the damaged one (i.e. same directory structure/location and logdir path).

2. Restore the notes.ini file that was preserved prior to the data loss. DO NOT LAUNCH THE NEW SERVER.

   UPSTREAM backs up the notes.ini file whenever a log file backup is performed, using the file name /notesr5ini:notes.ini.

   To restore the notes.ini file, select this file in UPSTREAM using either the ISPF panels on the host or the Director on a workstation. You must specify a Destination. For example you would specify a destination of /notesdata/notes.ini.

3. Prepare the data directory - Using UPSTREAM, restore database backup files of all required databases into the data directory (including the name and address book, unless a regular up-to-date copy is available from another server). Make sure that LOGFILES is not enabled.

4. Prepare the log directory - Make sure that the "logdir", as it is defined in the notes.ini file, exists and that no old files are present therein. If a transactional log control file (nlogctrl.lfh) or transaction logs (*.TXN) remain from a previous installation they must be removed for the disaster recovery procedure to complete successfully.

5. Restore the latest transaction log. UPSTREAM backs up the latest transaction log whenever a log file backup is performed, using the file name c:\notesr5activelog:<name> for PC operating systems and /notesr5activelog:<name> for UNIX operating sys-tems. The <name> is the actual file name of the transaction log, for example: S0000011.TXN. There may be several stored; select the most recent one. Select this file in UPSTREAM using either the ISPF panels on the host or List and Restore on the workstation. You must specify a Destination. For example on most PC systems, you would specify a destination of c:\lotus\domino\data\logdir\

6. Manually edit notes.ini (using Notepad, vi, etc.). Set or add the parameter TRANSLOG_Recreate_Logctrl=1 in the notes.ini file.

7. Perform Media Recovery - Using UPSTREAM, restore all database backup files that you desire to have rolled up to the latest state from the archived log, specifying the LOGFILES=Y, PLUGINPARAMETERS value. When the first database is restored, the log control file will be rebuilt and the notes.ini setting for TRANSLOG_Recreate_Logctrl will be set to 0 automatically.

8. Restore the id files. All existing id files which were stored in the notes data directory are backed up with the file name prefix c:\notesr5id: for PC systems and /notesr5id: for UNIX

systems. You will need to fully qualify the destination file name for each file, specifying the notes data directory and the original file name.

9. Launch the Domino server - With the disaster recovery complete, it is now safe to start the Domino server and execute server tasks and functions.

10. Perform a new backup. With the successful completion of the disaster recovery process and launching of the new Domino server, new database backup files should be created and secured to avoid any future loss of data.

If you are recreating the server from scratch, you can shorten the procedure somewhat:

1. Reinstall Domino. Install it into the same directories as you had it originally.

2. Using UPSTREAM restore the following non-database files:

   - notes.ini to the original location (usually c:\lotus\domino\notes.ini for PC systems and the /notesdata directory on UNIX systems) from c:\notesr5ini:notes.ini
   - The active transaction log. For example, on a PC system, if UPSTREAM shows the transaction log file as c:\notesr5activelog:S0000011.TXN, and you have Notes installed in the default directory, you would specify a destination of c:\lotus\domino\data\logdir\S0000011.TXN. Make sure that the log directory is empty or doesn't exist before you begin the restore.
   - The id files. For example, on a PC system, if UPSTREAM shows files c:\notesr5id:cert.id and c:\notesr5id:server.id, and you have Notes installed in the default directory, you would specify destinations of c:\lotus\domino\data\cert.id and c:\lotus\domino\data\server.id respectively.

3. When the restores have completed, manually edit notes.ini (using Notepad, vi, etc.). Set or add the parameter TRANSLOG_Recreate_Logctrl=1 in the notes.ini file.

4. Perform Media Recovery - Using UPSTREAM, restore all database backup files that you desire to have rolled up to the latest state from the archived log, specifying the LOGFILES=Y, PLUGINPARAMETERS value. When the first database is restored, the log control file will be rebuilt and the notes.ini setting for TRANSLOG_Recreate_Logctrl will be set to 0 automatically.

5. Launch the Domino server - With the disaster recovery complete, it is now safe to start the Domino server and execute server tasks and functions.

6. Perform a new backup. With the successful completion of the disaster recovery process and launching of the new Domino server, new database backup files should be created and secured to avoid any future loss of data.

12.10 Errata

The following come from experiences with Notes:

- Do NOT backup all files in the Domino data directory using the UPSTREAM Notes R5 PlugIn as it may result in UPSTREAM crashing (in a Notes API call). You should only backup the Notes database files (*.nsf, *.ntf, and *.box).
- Any failure in UPSTREAM during a Notes backup or restore may hang UPSTREAM or Notes when they attempt to come up later. You must either reboot the machine, or stop all the Notes/Domino processes and manually kill all other Notes processes especially nlogasio.
- Lotus has recently changed their documentation for transaction log backups. It is now permissible to back up transaction logs in process and they have documented disaster recovery procedures for these transaction logs. Thus, the FLUSHLOG PlugIn parameter, supported in earlier releases of the UPSTREAM Notes agent is no longer required and has been removed from the dialogs.

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13 Tuning For Performance

The following changes have been tested and will tend to reduce the impact of UNIX Systems Services overhead CPU consumption for the FDR/UPSTREAM for USS process:

- Do not use the 127.0.0.1 local address to indicate the destination address of the USS process. The use of this special, reserved address does not function efficiently with USS applications. Specify the exact, fully qualified local IP address for the TCPTARG parameter or use the FDR/UPSTREAM Registered Name Facility. You will also want to avoid the specification of a VIPA address for similar reasons.
- Turn off ALL UPSTREAM compression (don't use HIGH (any level) or FAST). Make sure that tape drive hardware compression is enabled (IDRC=YES in the backup profile).
- The following options should be set on the TCPCONFIG control statement in your TCP/IP PROFILE dataset. This dataset is defined in your OS/390 TCP/IP Started Task on the DD card named “PROFILE”. Adding these parameters will increase the throughput of USS backups and restores.

  TCPSENDBFRSIZE 32K (32,768)

  TCPRCVBUFRSIZE 32K (32,768)

  TCPMAXRCVBUFRSIZE 512K (524,288) (OS/390 Release 2.6 + higher ONLY)

- Define the UPSTREAM RACF userid to be UID(0) in the OMVS segment of its RACF PROFILE in order to reduce RACF calls. A RACF userid with this OMVS attribute is an implied USS “superuser” and this causes a reduction in the USS operating system services CPU overhead for processing the file opens and closes that FDR/UPSTREAM for USS performs.
- Increase the DEFAULT values supplied for the FDR/UPSTREAM for USS process CPU consumption limits via one of the following methods:
  - Permanently change the USS systemwide default via the MAXCPUTIME parameter in member BPXPRMxx of SYS1.PARMLIB. This will increase this limit for all USS processes, not just for FDR/UPSTREAM.
  - Temporarily reset the USS systemwide default using the following MVS Console Commands. This will increase this limit for all USS processes, not just for FDR/UPSTREAM. This setting will only last until the next system IPL.

    View the current settings:

    ```
    D OMVS,O
    ```

    Change the current settings:

    ```
    SETOMVS MAXCPUTIME=99999
    ```

- Permanently set the process CPU consumption limit for a single RACF user in the users OMVS RACF segment. This can be done via the following TSO commands:

  View the current settings:

  LISTUSER userid OMVS NORACF

  Set New Limits:

  ALTUSER userid OMVS(CPUTIMEMAX(99999))

  NOTE: The RACF OMVS segment CPUTIMEMAX option is only available on OS/390 version 2.8 and higher systems.

- Enable the RACF SAF Fastpath Support via the special RACF Resource class “BPX.SAFFASTPATH”. This facility will eliminate the RACF Auditing of successful file accesses within all USS processes. This feature is described in IBM manual SC28-1890 : USS Planning Guide.
- Enable the mapping of USS UIDs to RACF Userids and USS GIDs to RACF Groupids. This will significantly reduce the path length for RACF access control processing to files stored within the USS file system . This is feature is described in IBM Manual SC28-1913 : OS/390 Security Server : System Programmers Guide.
- Enable VLF caching of IRRGMAP and IRRUMAP classes. These are the VLF classes associated with UID (IRRUMAP) and GID (IRRGMAP). This feature works in conjunction with the mapping of USS UIDs/GIDs to equivalent RACF entities described above. This is described in IBM Manual SC28-1913 : OS/390 Security Server : System Programmers Guide.

14

14 FDR/UPSTREAM MVS Parameter Reference

This chapter documents, in a tabular reference type format, all system parameters of the FDR/UPSTREAM MVS product.

14.1 USTCONFG Systemwide Options Parameter Reference

USTCONFG Systemwide Options			
Menu Field	**Range**	**Default**	**Description**
APPLID	1 - 8 characters	none	Specifies the name of the VTAM application ID to be used by the FDR/UPSTREAM MVS Started Task. This is the name on the first APPL statement in the USTAPPL member of VTAMLST or the ACBNAME= value on that APPL statement (if specified). This application name is normally set to UPSTREAM. **This operand is required.**
DASDBLK	1024 through 32760	10752	Specifies the default allocation blocksize that FDR/UPSTREAM will use when allocating a sequential disk backup. It is not used as the actual blocksize of the backup data set so you generally do not need to change the default value. This value can be overridden on any individual profiles by the DASDBLK operand.
DESC	bit map	1000	Specifies, in hex, the descriptor codes to be used for WTOs issued by the FDR/UPSTREAM Started Task. The bits in the 4-digit hex string represent, left to right, the descriptor codes 1 to 16. Descriptor codes are described in the IBM manual “Routing and Descriptor Codes”. The default is 1000 (code 4 “system status”).
DUPLICATE	AUTO or NOAUTO	NOAUTO	Controls the automatic recognition of duplicate files during MERGE BACKUPs. DUPLICATE=AUTO instructs the FDR/UPSTREAM MVS Started Task to monitor backups from various workstations looking for files which appear to be duplicates of one another. Those duplicates may not need to be transmitted from other workstations.
DUPDAYS	0 - 365 days	30	is meaningful only if DUPLICATE=AUTO is also enabled. It specifies the minimum days that must have elapsed since the last use of a USS file (days since the "update date" associated with the file) before it will be considered for automatic duplicate processing. DUPDAYS=0 indicates no minimum number of days.
DUPSIZE	0 - 4095 bytes	1024 bytes	is meaningful only if DUPLICATE=AUTO is also enabled. It specifies the minimum size in bytes that a USS file must have before it will be considered for automatic duplicate processing. DUPSIZE=0 indicates no minimum.
MAXDUPL	0 - 255 days	30 days	is meaningful only if DUPLICATE=AUTO is also enabled. Whenever a USS file that matches the DUPDAYS= and DUPSIZE= criteria is backed up, if it has not already been identified as a duplicate file, a special record is recorded in the FDR/UPSTREAM database indicating that it is a potential duplicate file. If a matching file is not transmitted from any other system

USTCONFG Systemwide Options			
Menu Field	**Range**	**Default**	**Description**
			within the number of days specified by MAXDUPL=, the special record will be deleted. If a matching file is backed up from a second remote system, it will be identified as a duplicate and a copy of the file is written to the database for use in future backups; however, if the same file is not backed up from a third system within MAXDUPL days since the second backup, the duplicate file and all its records will be erased from the on-line repository. If it is backed up from a third system within MAXDUPL days, it will then be retained for duplicate processing until manually deleted.
MAXHIST	0 - 365 days	30	Specifies the number of days that the FDR/UPSTREAM MVS Started Task will retain history records in the catalog database. One history record will be created for each function (backup, restore, inquiry, etc.) that FDR/UPSTREAM is requested to perform. These history records can be reported on by USTRPORT, the FDR/UPSTREAM report program. Records older than the number of days specified will be purged when USTMAINT, the maintenance/cleanup program, is run. If MAXHIST=0, history records will not be created.
MAXTAPEBACKUP	0 - 255	0	Specifies the maximum number of tape drives (0 to 255) that the FDR/UPSTREAM MVS Started Task will allocate to be in use for backups at any one time. This includes the output tapes required for the online utilities. If this limit is exceeded, any new backup tasks requiring tape drives will wait until the number of backup tapes in use declines. If MAXTAPEBACKUP=0, no tape limit is enforced. A full MERGE BACKUP may require 2 tape drives (the second to read previous backups), but this cannot be determined until the backup is already in progress. If the MAXTAPEBACKUP limit has not been reached, the second drive will be acquired and will count against the limit. But if the limit has already been reached, the second drive will be acquired anyway, and **will not count** against the limit; as long as this MERGE BACKUP retains that second drive, the MAXTAPEBACKUP limit may be exceeded.
MAXTAPERESTORE	0 - 255	0	Specifies the maximum number of tape drives that the FDR/UPSTREAM MVS Started Task will allocate for use for restores at any one time. If this limit is exceeded, any new restore tasks requiring tape drives will wait until the number of restore tapes in use declines. If MAXTAPERESTORE=0, no tape limit is enforced.
MAXTASKS	1 - 255	100	Specifies the maximum number of subtasks that the FDR/UPSTREAM MVS Started Task will permit to be active at any one time. This includes all backups, restores, inquiries, etc. If this limit is exceeded, UPSTREAM will reject any new requests for conversations until the number of tasks declines.
RACFUPD	BACKUP or RESTORE		If SECLVL=2 or 3 and a userid has been granted UPDATE or READ access to a workstation profile name, this specifies what operation the user is authorized to perform: **RACFUPD=BACKUP** allows users with UPDATE authority to do backups or restores, while users with only READ access can do only restores. **RACFUPD=RESTORE** (the default) allows users with UPDATE authority to do backups or restores, while users with only READ access can do only backups. Note that if SECLVL=3 is in effect, a userid which matches a profile name is automatically granted UPDATE authority.
ROUTCDE			Specifies, in hex, the routing codes to be used for

USTCONFG Systemwide Options			
Menu Field	**Range**	**Default**	**Description**
			WTOs issued by the on-line UPSTREAM task. The routing codes allow you to control which consoles will receive the UPSTREAM console messages. The bits in the 4-digit hex string represent, left to right, the routing codes 1 to 16. Routing codes are described in the IBM manual “Routing and Descriptor Codes”. The default is 4020 (code 2 “operator information” and code 11 “Programmer Information”).
SECLVL	0, 1, 2, or 3	1	**0** – specifies that FDR/UPSTREAM is to do no security checking on the USERID and PASSWORD entered by the end user at the workstation. Specify this if you have no security system or prefer not to enforce userid security for UPSTREAM usage. **1** – specifies that FDR/UPSTREAM is to issue a security call to verify the USERID and PASSWORD entered by the end user at the workstation. No further security checking will be done. **2** – specifies that in addition to verifying the USERID and PASSWORD (as in SECLVL=1), FDR/UPSTREAM will issue additional security calls to verify that the userid is permitted to access the workstation profile name entered by the end user, and to verify that the userid is permitted to request restores from tape. **3** -- same as SECLVL=2, except that if the profile name and userid specified at the workstation are the same, the user is automatically considered to be authorized to that profile name.
SORTUNIT		SYSDA	Specifies an OS/390 unit name (anything valid in the UNIT= operand in JCL) which will be used to allocate temporary sort work files when external sorts are required; FDR/UPSTREAM does internal sorts whenever possible.
SUBSYS	1 - 8 characters	UPSTREAM	Specifies the security subsystem and control point name that will be used on security system calls if SECLVL=1, 2 or 3 was specified.
TCPNAME	1 - 8 character name	none	Identifies the OS/390 TCP/IP system with which FDR/UPSTREAM-MVS will communicate. The setting of this value is dependent on the OS/390 TCP/IP stack in use. For IBM TCP/IP, the value is the name of the TCP/IP Started Task. Refer to the FDR/UPSTREAM MVS manual for additional information on this parameter.
TCPPORT	1 - 65535	1972	Specifies the TCP/IP port number which FDR/UPSTREAM-MVS will use as a “well-known” port number to listen for USS process connections.
WTOCOMP			Specifies that FDR/UPSTREAM-MVS will issue WTOs to the system console for all messages relating to backups starting and completing, in addition to writing them to the FDR/UPSTREAM Started Task log dataset (USTLOG). The operand is optional; if omitted, these messages are written only to USTLOG. This feature may be useful for installations with mainframe automation and tracking facilities which monitor console messages.

14.2 USTCONFG Profile Options Parameter Reference

USTCONFG Profile Options			
Menu Field	**Range**	**Default**	**Description**
COPYINCR	YES or NO	NO	For profiles that specify the MERGE option (MERGE BACKUPS), COPYINCR specifies that when doing a FULL MERGE backup, any incremental backups that are stored in separate locations will be copied to the full backup dataset. Incremental backups that are already on the same tape as the full backup will not be copied, but incrementals that are on different tapes or on DASD will be copied. Once the incrementals are successfully copied, they will be scratched (if on DASD) and uncataloged, and the FDR/UPSTREAM records of their location will be updated to point to the new full backup dataset. This is particularly useful if incrementals were done to disk but the full backup is done to tape; the disk incrementals will be moved to the tape and the disk datasets deleted. COPYINCR is ignored for profiles that have MERGE=DEFER set (DEFERRED MERGE BACKUPs). NOCOPYINCR can be used on a MODIFY/COPY statement to turn off the option in an existing profile.
DASD	YES or NO	NO	Specifies that this profile will be permitted to perform backups directly to MVS sequential disk (BSAM) datasets. When enabled for a given profile, the DASDPREF= and DUNIT= or VOL= or STORCLAS= options must also be enabled. On a DEFINE, by default, DASD is not enabled.
DASDBLK	1024 through 32760	10762	Applies only to profiles where DASD (sequential disk) backups are enabled, and specifies the blocksize to be used when allocating those backups; it is no longer used as the actual blocksize of the backup data set so you generally do not need override the default (except: in the special profile USTVAULT, it is used as the blocksize of the backup control file). Values from 1024 to 32760 are accepted; specify a value that would result in good track utilization on the DASD device type you use. The parameter is optional; on a DEFINE it has a default of the value of DASDBLK= specified on the MAIN statement in this configuration (10752 is the default if not on the MAIN statement; this provides good track utilization on both 3380 and 3390 disks). **Note:** When creating DASD backups, FDR/UPSTREAM allocates the backup file in blocks; the total data bytes to be backed up is divided by DASDBLK=, and the resulting number of blocks of that size are requested (plus a few percent for safety). However, when opening the file a blocksize of 32760 is used; you will see this in the DSCB of the backup data sets. You may be concerned that FDR/UPSTREAM is not using the disk tracks efficiently; this is not true. Since the record format is variable (VB), FDR/UPSTREAM will write on each track one block that is close to 32760 in size, and a second block that use the remaining capacity of that track, resulting in extremely efficient utilization.
DASDGDG	YES or NO	NO	Applies to profiles where DASD backups are enabled, and specifies that any backup datasets are to be allocated as new generations of a GDG. DASDGDG is recommended since GDG processing will automatically delete old generations. GDG bases must be predefined in the appropriate system catalog before they can be used by FDR/UPSTREAM-MVS. Be sure you define sufficient generations in the GDG base to retain all required backups.
DASDMAXSIZE	0 - 999999	0	Specifies a maximum size for sequential DASD

USTCONFG Profile Options			
Menu Field	**Range**	**Default**	**Description**
			backups, in kilobytes (units of 1024 bytes). For incremental MERGE backups to DASD, if the estimated size of the backup exceeds this value, the backup will be redirected to sequential tape instead. Full MERGE backups will never be redirected to tape. If specified, the profile must be enabled for sequential tape backups as well as sequential DASD backups. However, the DASDPREF value will be used to name the backup, not the TAPEPREF value. Specifying 0 indicates to not redirect DASD backups to tape).
DASDPREF	(See Description)	NONE	Is required for profiles where DASD backups are enabled, and specifies the 1 to 35 character dataset name prefix that will be used to dynamically allocate the disk dataset for the backup. The prefix may include periods (“.”) to separate index levels and must meet MVS dataset naming standards (no more than 8 characters in an index level and the first character of an index must be a alpha/national character). If you do not include the DASDGDG option in this profile, FDR/UPSTREAM will allocate the backup file as a non-GDG. The length of the value of DASDPREF= must not exceed 19 characters, and FDR/UPSTREAM will add 3 additional index levels at the end of the name to create a unique dataset name containing: profile name, the date as “Dyymmdd”, and the time as “Thhmmss”. Since FDR/UPSTREAM adds the profile name to the prefix, the same prefix may be specified in multiple profiles. If the DASDGDG=YES option is specified for this profile, the backup dataset will be allocated as new generations of a GDG; DASDPREF must specify the GDG base name, and may be up to 35 characters long. The GDG name used in each profile should be unique; Innovation suggests that it include the profile name. The GDG base must be predefined in the appropriate MVS catalog along with the number of generations to keep; the DELETE option should be specified when defining the GDG base so that old generations are scratched from disk. If the DASDGDG option is used in a profile with WSPREF= or WSNAME=GLOBAL, and the LAST index level of DASDPREF= matches the profile prefix name (or GLOBAL), then FDR/UPSTREAM will substitute the actual profile name used by the workstation. For example, if the profile has WSPREF=ABC, DASDGDG, DASDPREF=BACKUP.ABC but the workstation uses profile name ABC123, the actual GDG name will be BACKUP.ABC123. This allows unique dataset names to be generated based on the actual profile name. The GDG bases for these modified names must be predefined, and the total length of the name with a maximum 8 character profile name cannot exceed 35 characters. If the last index does not match, the unmodified GDG name will be used for all actual profile names (in this case, GDG is not recommended). DASDPREF may optionally contain a single exclamation character (!) anywhere in the name. If present, it will be replaced at the time the backup is created with: **F** Full MERGE backup, first-time Full MERGE backup, or Full MERGE **I** Incremental MERGE backup **N** non-MERGE backup of any kind or Simple Migration **E** MIGRATION End Set This is especially useful when DASDGDG is used with

USTCONFG Profile Options			
Menu Field	**Range**	**Default**	**Description**
			MERGE backups; you can setup one GDG with the `F` character to specify the number of full backups to be kept, and a second with the `I` character for the number of incremental backups to be retained. You must define GDG bases with each of the possible characters substituted. If the exclamation is used, you **must** also specify NEWTAPE=FULL. Note that FDR/UPSTREAM expects the ! character to be X'5A'; some international keyboards may generate a different hex code for !, in which case you must identify the key that generates X'5A'. DASDPREF= may also contain a single question mark character (?) anywhere in the name except as the first character of an index level. If present, that character will be replaced with a "1" when the backup is created. If the profile is enabled for vaulting (VAULT), the profile **must** contain the ? character; when USTVAULT is run to create a secondary vault copy, that copy will have another copy number (from 2 to 9) in that location. If DASDGDG is specified, you must define the GDG base with the "1" substituted, and additional GDG bases with whatever copy numbers you intend to use for VAULT'ing with in this profile.
DREPTD			Applies only to profiles where DASD backups are enabled, and specifies the retention period in days of the backup dataset. This parameter is identical to the JCL parameter RETPD. FDR/UPSTREAM does not explicitly enforce these dates, but your DASD management system may. During USTMAINT processing, if FDR/UPSTREAM-MVS recognizes that the backup dataset has been uncataloged from the MVS catalog, it will remove all references to this backup from the database.
DUNIT	valid MVS unit name	none	Applies only to profiles where DASD (sequential disk) backups are enabled and specifies a MVS disk unit name (any value that will allocate a disk device when specified in a UNIT= parameter in JCL). This unit name will be used when dynamically allocating the backup dataset. The DASD volumes mounted on the devices included in that unit name must include one or more volumes with a mount attribute of STORAGE; if necessary, FDR/UPSTREAM will allocate the backup dataset on as many as 5 volumes (if that many STORAGE volumes are available). Either DUNIT=, VOL= or STORCLAS= is required when the DASD option is enabled. DUNIT= and VOL= cannot both be specified on the same profile.
DUPLICATE	COPY or NOCOPY DELETE or NODELETE	COPY DELETE	When MERGE BACKUPs are done and duplicate file support is invoked (See Sections 1.4 and 3.8), this controls whether the duplicate files will be copied into the backup file (DUPLICATE=COPY) or a pointer to the keyed backup in the "file-data" cluster is inserted into the backup file (DUPLICATE=NOCOPY). COPY is the default. A special format of DUPLICATE= is used only in the special USTDUPFL profile. DUPLICATE=NODELETE will prevent inadvertent deletion of the keyed backups of the duplicate files. DUPLICATE=DELETE (the default) permits deletion of the duplicate backups.
EXPDT	Julian format date (YYDDD)	0	Applies only to profiles where TAPE backups are enabled, and specifies the Julian format expiration date of the backup dataset. The meanings are identical to the JCL parameters EXPDT. EXPDT only accepts a 2-digit year number. Year values less than 70 are assumed to be in the 21st century (20xx). This parameter is mutually exclusive with RETPD. FDR/UPSTREAM does not explicitly enforce these dates, but your DASD management system may.

USTCONFG Profile Options			
Menu Field	**Range**	**Default**	**Description**
			During USTMAINT processing, if FDR/UPSTREAM-MVS recognizes that the backup dataset has been uncataloged from the MVS catalog, it will remove all references to this backup from the database.
GROUPID	2 alphameric characters	none	is used to group profiles for processing by the online utility programs USTMIGRT, USTMERGE and USTVAULT (See Section 7 for details on these online utilities). For example, when the operator enters a console command such as: **F UPSTREAM,MIGRT01 or MERGE01 or VAULT01** the utility will only select profiles which specify GROUPID=01 (plus any profiles which specify NOGROUPID). See Section 5.7 for details on the console commands for invoking these utilities. The use of GROUPID=xx is recommended since it automates the selection of backup profiles for utility processing instead of depending on the operator to specify profile names.
IDRC	YES or NO	YES	Applies only to 3480/3490 cartridge drives and causes FDR/UPSTREAM to specify the TRTCH=COMP parameter when dynamically allocating the tape backup to request hardware (IDRC) compaction of the tape dataset. IDRC compaction may be used even if compaction is your system default
MERGE	YES, NO or DEFER	YES	**MERGE=YES** specifies that this profile is enabled for MERGE BACKUP processing. The profile must also be enabled for DASD (sequential disk) or TAPE (sequential tape) backups. **MERGE=NO** indicates that this profile can NOT be used for MERGE processing. **MERGE=DEFER** enables the profile for MERGE BACKUPs, but in addition requests that those backups be performed with "deferred merge" processing option.
MGMTCLASS	1 - 8 characters	none	applies only to profiles where DASD (sequential disk) backups are enabled if your MVS system has SMS (System Managed Storage) enabled. It specifies a 1-8 character management class name that will be passed to SMS during the dynamic allocation of the backup dataset; it will be used by SMS if the dataset becomes SMS-managed (see STORCLAS=). Consult your storage administrator or MVS system programmer for valid management class names. Note that SMS may override or ignore your management class name, and may assign a management class even if you do not specify one in the profile. NOMGMTCLAS can be used on a MODIFY/COPY statement to turn off the option in an existing profile. NOMGMTCLAS is the default on a DEFINE.
MIGTHRESH	0 - 99	0	specifies a threshold for disk-to-tape migration. When the USTMIGRT utility is run (See Section 5.7), it will look for sequential disk backups recorded under each profile name. If the number of such backups equals or exceeds the MIGTHRESH=nn value, USTMIGRT will migrate the least recent backups to tape until the remaining number is nn-1. Specifying 0 disables migration for this profile.
NEWTAPEF	YES or NO	YES	Specifies if a new MVS dataset should be created on a new tape volume when processing FIRST TIME FULL or FULL MERGE backups. This option only applies to backups to sequential tape.
NEWTAPEI	YES or NO	NO	Specifies if a new MVS dataset should be created on a new tape volume when processing INCREMENTAL MERGE type backups. This option only applies to backups to sequential tape.
PCMIGRATE	YES or	NO	YES - This profile can be used only for the migration of files from the USS file system; it cannot be used for

USTCONFG Profile Options			
Menu Field	**Range**	**Default**	**Description**
	NO		normal backups. NO - This profile can be used for normal FDR/UPSTREAM operations. Note that file migration referred to by this parameter is distinct from the backup dataset migration processing performed by the USTMIGRT utility.
PREFIX	YES or NO	NO	This option indicates that this Profile is a prefix type profile. When enabled, the parameters specified for this profile will be used when the exact profile name specified in an FDR/UPSTREAM operation does not exist in the configuration but yet matches all characters specified for this Profile's name. For example, if there is a profile with WSNAME=TECHWS01 and another with WSPREF=TECH, the first will be used if the workstation enters TECHWS01, but the second will be used if TECHWS02 is entered. This feature is useful if a large number of profiles will have similar prefix naming and can utilize similar Profile attributes.
PROFILE	1 - 8 national characters	none	Specifies the workstation profile name to be defined. It may be 1-8 characters, and it must start with an alphabetic or national character (the remainder may be any alphanumeric or national characters). Every workstation which will communicate with FDR/UPSTREAM should be assigned a unique profile name; all backups and restores in FDR/UPSTREAM are keyed to this profile name. Under some circumstances, a workstation may be assigned more than one profile name; for example, on a server, separate profiles might be used for different disks or sets of directories. For MERGE BACKUPS, a given profile should be used with a consistent list of "file sets", i.e., the list of files backed up under that profile should not change (except that new file sets can be added). The configuration should include the special profile name **WSNAME=GLOBA**L. The GLOBAL profile specifies options to be used for any workstation profile name entered by a workstation which is NOT defined in the configuration. This allows end users to use any profile name (except where limited by security as defined in Section 4) even if it is not in the configuration. If the GLOBAL profile is not defined, then only profiles defined in the configuration can be used. A brand-new configuration which does not include a DEFINE for GLOBAL will have a GLOBAL profile automatically defined, but it will be disabled for all types of backups. Use of GLOBAL can reduce the amount of configuration maintenance required. The DEFINE for GLOBAL, if present, must follow the MAIN statement (if present) and must precede any other statements. The configuration may contain a number of special "reserved" profiles with names **USTCATLG, USTFILEI, USTFILEC, USTARCH, USTMIGxx,** **USTMERxx** and **USTVLTxx.** They are used for the on-line execution of FDR/UPSTREAM utilities. **USTDUPFL** is another reserved profile name used for a special backup of files which may be duplicated on various workstations. **DUMMYxxx** profiles are used for testing and simulation. You may **not** create a profile whose name begins with **USTVL**C.
RETPD	0 - 9999 days	0	Applies only to profiles where TAPE backups are enabled, and specifies the retention period in days of the backup dataset. This parameter is identical to the JCL parameter RETPD. FDR/UPSTREAM does not explicitly enforce these dates, but your TAPE management system may. During USTMAINT processing, if FDR/UPSTREAM-MVS recognizes that the backup dataset has been

USTCONFG Profile Options			
Menu Field	**Range**	**Default**	**Description**
			uncataloged from the MVS catalog, it will remove all references to this backup from the database.
STORCLASS	1 - 8 characters	none	STORCLAS applies only to profiles where DASD backups are enabled if your MVS system has SMS (System Managed Storage) enabled. It specifies a valid storage class name that will be passed to SMS during the dynamic allocation of the backup dataset and requests that the dataset be SMS-managed. Note that SMS may override or ignore your storage class name, and may assign a storage class even if you do not specify one in the profile. **Note: if your ACS routines assign an appropriate SMS data class, the FDR/UPSTREAM backup may be allocated as an Extended Format (EF) data set which may be striped or compressed by MVS. Although FDR/UPSTREAM supports EF data sets, restores may perform poorly so they are not recommended.**
TAPE	YES or NO	NO	Specifies that this profile will be permitted to perform backups directly to MVS sequential tape (BSAM) datasets. When enabled for a given profile, the TAPEPREF and the TUNIT or TAPESTORCLAS options must also be enabled.
TAPEGDG	YES or NO	NO	Applies to profiles where TAPE backups are enabled, and specifies that any backup datasets are to be allocated as new generations of a GDG. TAPEGDG is recommended since GDG processing will automatically delete old generations. GDG bases must be predefined in the appropriate system catalog before they can be used by FDR/UPSTREAM-MVS. Be sure you define sufficient generations in the GDG base to retain all required backups.
TAPEPREF	1 - 44 characters	none	Specifies the prefix of the dataset name to be used for sequential tape backups if the TAPE option is enabled. See the DASDPREF= description for details of the dataset name that will be created by UPSTREAM for these backups. See Section 3.8 for details on the data set name usage by the “reserved” profiles: USTCATLG, USTFILEI, USTFILEC, USTARCH, USTMIGRT, and USTVLTxx.
TSTOR	1 - 8 characters	none	Applies only to profiles where TAPE backups are enabled and your system has SMS enabled for tape processing. TSTOR specifies a SMS storage class name which will allocate an appropriate SMS-managed scratch tape for tape backups. This storage class will be used when dynamically allocating the backup dataset. TUNIT= or TSTOR is required when the TAPE option is enabled.
TUNIT	valid MVS unit name	none	Applies only to profiles where TAPE backups are enabled and specifies a MVS tape unit name. This unit name will be used when dynamically allocating the backup dataset.
UNITCNT	1 or 2	1	Applies only to profiles where TAPE backups are enabled and specifies how many tape drives will be allocated when doing tape backups under this profile. Two tape drives may be requested to avoid the delays that occur while rewinding the tape and mounting a new output volume as each tape volume is filled.
VAULT	YES or NO	NO	Specifies if this profile is enabled for the vaulting facility. If this option is enabled, special dataset naming requirements take effect. See the TAPEPREF and DASDPREF fields for additional information.
VOL	1 - 6 character volume serial name	none	Applies only to profiles where DASD backups are enabled and specifies a MVS disk volume serial where the backup data set will be allocated. The DUNIT, VOL and STORCLAS parameters are mutually exclusive. If

USTCONFG Profile Options			
Menu Field	**Range**	**Default**	**Description**
			VOL is specified, a unit name of SYSALLDA will be used for all dynamic allocations to the volume.

14.3 USTBATCH Parameter Reference

USTBATCH Parameter	Range	Default	Description
APPLPREF	1-5 characters	**UPSTR**	Specifies the five character prefix USTBATCH will use to build it's own VTAM APPLID value; it will append a character-numeric value beginning at “001” to the specified APPLPREF value and use the resulting name to attempt to open a VTAM ACB with this name as the APPLID, incrementing the number until it finds a free VTAM application ID.
APPLRETRY			This parameter is used if USTBATCH cannot find a free VTAM application ID (see APPLPREF= above). It will wait 5 seconds and try again, repeating this until an application ID is found free or the APPLRETRY limit is reached. The default is 240 which will cause USTBATCH to retry every 5 seconds for about 20 minutes.
COMMAND		**none**	specifies an FDR/UPSTREAM-MVS console command. Do not include the "F UPSTREAM," preceding the command a you would from a console.
CONV	**“NONE”, “KEEP”, or “WAIT”**	**“NONE”**	**CONV=** controls how USTBATCH manages its VTAM APPC conversation with the FDR/UPSTREAM-MVS main online task, and also that of the SNA or TCP/IP connection to the target workstations. USTBATCH always establishes a APPC connection to the main task for each requested operation in its input stream and transmits the request (target workstation and related parameters). The main task then initiates a APPC or TCP/IP conversation with the workstation and forwards the request. CONV= controls what happens next. **CONV=NONE** - causes the workstation to disconnect as soon as the request has been accepted by the FDR/UPSTREAM Started Task. The Started Task informs USTBATCH that the request was accepted or not, and USTBATCH itself disconnects and goes on to process its next request or terminate. The workstation will reconnect to FDR/UPSTREAM-MVS to perform the requested function, but USTBATCH cannot tell if the request was successful, only that it was accepted by the workstation. **CONV=KEEP** causes FDR/UPSTREAM-MVS to use the same conversation with the workstation for processing the request as was used to send the request to the workstation. In other words, FDR/UPSTREAM-MVS connects to the workstation, sends the request, and keeps that connection to process the request. USTBATCH will be notified as soon as the workstation begins processing the request at which point it will disconnect and process its next request. Certain parameter errors (such as invalid file specs) which prevent the request from ever being processed will be logged by the main task and by USTBATCH) with CONV=KEEP but will be recorded only at the workstation with CONV=NONE. **CONV=WAIT** includes the effect of CONV=KEEP, but in addition USTBATCH will itself remain connected to the FDR/UPSTREAM-MVS main task until the workstation completes the requested operation. At the completion of the operation, USTBATCH will log the final return code and FDR/UPSTREAM-MVS messages associated with the workstation operation, so that the success or failure of the operation can be determined from the USTBATCH log. If WTOCOMP is also specified, the return code will be logged on the system console as well as in the USTBATCH log. CONV=WAIT causes USTBATCH to maintain 2

USTBATCH Parameter	Range	Default	Description
			internal queues of requests. All the requests in the USTBATCH input will be parsed and added to a "wait" queue, ready for initiation. USTBATCH will attempt to initiate concurrent requests to multiple workstations, keeping as many workstations busy as possible. Once a request has been successfully initiated, it is transferred to an "active" queue to await notification of its completion. CONV=WAIT also enables USTBATCH to accept console commands which can be used to display USTBATCH status and modify its operation. If CONV=KEEP or WAIT is specified, you should be wary of also specifying QUEUE; if the workstation operation cannot be immediately started and must be queued, USTBATCH will wait until the request can finally be processed.
DNSNAME	**n/a**	**n/a**	Identifies the target workstation using a Domain Name Server (DNS). It specifies the DNS name of the target workstation (up to 63 characters). If used, the USTBATCH JCL must contain a SYSTCPD DD statement pointing to a valid TCPDATA file or member.
ENDPARM	**n/a**	**n/a**	This optional keyword indicates the end of all USTBATCH keywords for this execution of USTBATCH. Any parameters specified after the ENDPARM keyword receive and error message and are ignored.
LOGMODE	1-8 characters	**#INTER**	Specifies the VTAM logon mode entry name which will be used by the FDR/UPSTREAM-MVS on-line task to establish a session to all VTAM APPC target workstations (TARGLU= or TARGNAME= when the connection is SNA) requested by this USTBATCH execution. It will also be used by the workstation when it establishes its session back to FDR/UPSTREAM-MVS to perform the requested function. It is not used for TCP/IP targets (TCPTARG= or TARGNAME= when the connection is TCP/ IP). Unlike the other "single-use" parameters, LOGMODE= may actually appear more than once. If it is placed in the beginning of the USTBATCH input, with the other "single-use" parameters, it will be used for all sessions established by USTBATCH (unless overridden later in the input). LOGMODE= may also appear after a TARGLU= or TARGNAME= parameter; if so, it's value will be used for that session and all sessions that follow it unless overridden by another LOGMODE=. Luckily, the default of #INTER is usually correct for all sessions, so LOGMODE= will usually not have to be specified at all.
MAXRETRY	0 - 255	0	Specifies the maximum number of retry attempts the FDR/UPSTREAM-MVS on-line initiator will attempt prior to returning an “LU NOT AVAILABLE” indication to the USTBATCH utility. If the value is non-zero and the initial attempt to initiate a conversation with the workstation is unsuccessful, USTBATCH will retry the conversation to the workstation every ten (10) minutes decrementing the retry count until it reaches zero. At that time, an “LU NOT AVAILABLE” indication will be sent to the USTBATCH utility task. The default is 0 (zero).
QUEUE	**Specified or Not Specified**	**Not Specified**	Specification of this parameter instructs the target workstation to queue the request if possible in the event it is unable to process it immediately. If not specified, requests will not be queued. QUEUE should be used with caution if CONV=KEEP or WAIT is also specified (see note under CONV=).

USTBATCH Parameter	Range	Default	Description
RESTART			This parameter controls automatic restart of restores and restartable backups if a communication failure occurs and CONV=WAIT was also specified. It has 2 parameters, e.g., RESTART=3,2 (without parenthesis). The first is the number of times to attempt restart of an interrupted operation and it defaults to 0 so automatic restart is disabled by default. The second parameter is the number of minutes to wait between restart attempts and defaults to 10. When a communication error occurs and a wait to restart is begun, a message is issued to the MVS operator in case manual intervention is required to restore communications.
TARGNAMEE			Specifies the FDR/UPSTREAM name of the target workstation (up to 16 characters including blanks and special characters). It allows you to identify the target workstation using a name which is independent of its current network address and connection type. TARGNAME= can be used only if the workstation is running a version of FDR/UPSTREAM which supports the FDR/UPSTREAM "Registered Name Service.
TCPPORT	**1-65535**	**1972**	specifies the TCP/IP port for which the FDR/UPSTREAM USS Process is configured to listen for host requests This is usually set to 2972. TCPPORT= can be specified after the TCPTARG= or DNSNAME= statements.
TCPTARG			Specifies the network address and port number of the target workstation, for those connected via TCP/IP. The network address (the IP address to which the workstation responds) is specified in “dotted decimal” form (4 decimal numbers separated by periods). The port number (the TCP/IP port on which the workstation is configured to listen for host requests, part of the FDR/UPSTREAM configuration on the workstation, usually 1972) is appended to the address as 2 more periods (or a comma) and the decimal port. For example: **TCPTARG=130.50.75.5..1972** or **TCPTARG=130.50.75.5,1972**
TIMEOUT			If CONV=WAIT was specified, this specifies the number of minutes (1 to 1440) to wait for the request to complete. If it does not complete within the time limit, the request is terminated. Note that if you are issuing multiple concurrent requests from one USTBATCH, it cannot do timeout processing for more than 15 requests.
TMAXRETRY	9999	0	Number of attempts by USTBATCH to connect to the FDR/UPSTREAM-MVS Started Task when informed that the Started Task is already at its maximum permitted task limit (MAXTASKS setting). USTBATCH will retry the operation every 10 minutes until the TMAXRETRY limit is reached or the request is accepted.
USAPPL	1-8 characters	UPSTREAM	specifies the VTAM APPLID of the FDR/UPSTREAM-MVS Started Task. USTBATCH uses this value to allocate an LU 6.2 conversation to the Started Task to request an operation. This value must match the value specified for APPLID parameter specified in the FDR/UPSTREAM systemwide configuration options.

USTBATCH Parameter	Range	Default	Description
VERIFY	YES or NO	YES	**YES** - specifies that the names of workstation parameters present in the USTBATCH input will be verified to detect incorrect spellings. The syntax or values of those parameters are **not** verified. **NO -** requests that workstation parameter names are not verified.
WSPARM	Valid USS filename	none	Specifies the full path name for an optional, pre-defined FDR/UPSTREAM parameter file located within the USS file system. The file name is passed to the FDR/UPSTREAM USS process to be used to obtain additional parameters that will be used to specify this operation.
WTOCOMP	**Specified or Not Specified**	**Not Specified**	When specified in concert with CONV=WAIT, WTOCOMP causes USTBATCH to issue a UST747 message on the OS/390 system console indicating the success or failure of each function request and a return code. This may be used for visual confirmation by the operator or for use with console automation products.

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15 FDR/UPSTREAM USS Parameter Reference

This chapter documents, in a tabular reference type format, all system parameters of the FDR/UPSTREAM USS product.

15.1 USS Process Configuration Parameter Reference

Parameter	Range	Default	Description
INPORT	1-65535	2972	The TCP/IP port used to allow other computers to request functions of this copy of FDR/UPSTREAM
STATUSPORT	1-65535	2033	Initial TCP/IP Port number of a range of 3 ports used to listen for inbound status type requests. These ports are used for tracing and the Java facilities.
TARGETNAME	1-16 characters	none	The Target Name by which this copy of FDR/UPSTREAM will be known.
TARGETNAMEINTERVAL	0 - x	0	Interval in seconds at which to report the TARGETNAME of this copy of FDR/UPSTREAM to the host system. 0 means to only transmit the name on UPSTREAM program entry.
TCPADDRESS	n/a	none	IP Address of the MVS host system to communicate with.
TCPINADAPTER	n/a	Blank (all)	Allows you to specify the local IP adapter address which will accept remote requests. The default (blank) accepts requests on all adapters.
TCPOUTADAPTER	n/a	Blank	Allows you to specify the local IP adapter address which will be used for outbound TCP/IP requests. The default (blank) uses the default system adapter.
TCPRECVBUFFER	1-4 billion	32768	Total per-socket buffer space reserved for receives. An important performance tuning parameter.
TCPSENDBUFFER	1-4 billion	32768	Total per-socket buffer space reserved for sends. An important performance tuning parameter.
USETARGETNAME	YES / NO	NO	Indicates whether or not to utilize the Target Name Facility.
WORKPATH	valid UNIX pathname		Path information for use in locating FDR/UPSTREAM required files.

15.2 USS Process Keyword Parameter Reference

Update to include repeating/non-repeating indicator on parameter names

USS Process Parameter	Range	Default	Description
ACTION	1-19	1	The function to be performed: 0 = Restore / USS receive file transfer 1 = Backup / USS send file transfer 2 = As of...Restore 3 = Wait for remote initiate 4 = Restart only 5 = Run a job 6 = Kill last restartable backup 7 = Run host report 8 = Restart restores only 9 = Kill restartable restore 10 = Submit a host job 11 = Migration 12 = Inquire Versions 13 = Performance test 14 = Reserved 15 = Reserved 16 = Delete backup 17 = Register target name 18 = Inquire files 19 = UPSTREAM/SOS local backup disk report
BACKUPPROFILE	1-8 characters	none	The Backup Profile name to be used when requesting the specified function.
BLANKTRUNC (File Transfer only)	Y / N	Y	(Only used if LINEBLOCK=Y) Y = Trailing blanks at the end of each record are removed. N = Trailing blanks are retained.
CALCDASDSIZE	Y / N	N	N = If you are performing a sequential disk backup the amount of space allocate on MVS for the backup depends on the amount of file data found. Y = If you are performing a sequential disk backup the amount of space allocated on MVS depends on the amount of file and non-file data found.
COMPRESSLEVEL **(Backups only)**	0 - 4	1	Specifies the compression level for data transmitted from USS 0 = No compression 1 = Fast compression 2 = High compression 1 3 = High compression 2 4 = High compression 3
DASDOVERRIDE **(Backups only)**	0-9999	100 %	Allows you to override the amount of space (bytes) requested on a sequential disk backup. Must be specified in 1 of 4 forms: +<number>: Add the given number of bytes to the total calculated. -<number>: Subtract the given number of bytes from the total calculated. <number>%: Use the given percentage to calculate the total. <number>: Use the given number to override any calculated value.

USS Process Parameter	Range	Default	Description
DATELIMIT **(Backups only)**	N or 0, Y or 1, 2	N	Allows inclusion or migration of files based on modification date. If you enable this parameter you must also specify a LATESTDATE. 0 (or N): This feature is disabled. 1 (or Y): Files after the LATESTDATE (and LATESTTIME for UNIX) are included/migrated. 2: Files before the LATESTDATE and LATESTTIME are included/migrated.
DAYSOLD **(Backups only)**	0 - 365	180	The number of days (less 1) that a file has not been accessed before inclusion in the backup or migration.
DESTINATION **(Restores only)**	Valid USS filename or pathname	none	This parameter allows you to specify that files be restored to a different file or path name from which they were originally backed up. The wildcard specifications must match the wildcard specifications in the FILES parameter. You can specify up to 128 characters.
DIRDELETE **(Backups only)**	Y or N	Y	Y = If automatically deleting files, remove directories which ad all the files deleted. N = Leave the directories which were just emptied.
DIRSONLY **(Restores only)**	Y or N	N	Whether ONLY directories and no files should be restored: Y = Restore only directories (no files) N = Restore files and directories.
DUPDAYS **(Backups only)**	1-999	30	If duplicate checking is enabled, specifies the number of days since the file was modified before it can be considered eligible for duplicate handling.
DUPLICATE **(Backups only)**			Whether you wish to use duplicate file checking. N = No special duplicate file handling. Y = UPSTREAM on the Client will send up placeholder records for all files meeting DUPDAYS specification.
EXCLUDELISTNAME	Valid USS Filename	none	A specially formatted USS resident exclude list file name. All files included in this list will be excluded from the selected operation.
FILEDELETE **(Backups only)**	Y or N	N	Y = Delete the files which were successfully backed up. N = Do not delete the files which were successfully backed up.
FILES	Valid USS File Path Information	none	The file specification to be backed up or restored or the name of the job to run. This can include wildcards. This is a required parameter.
FILETRANSFER	Y / N	N	Y = This is a file transfer N = This is a backup or restore function.
HIDDENFILES **(Backups only)**	Y or N	Y	Whether hidden and system files should be backed up as well as normal files.
HOSTFILENAME **(File Transfer only)**	Valid MVS Dataset Name	(See Description)	If specified, the name of the MVS dataset used in a file transfer operation. If not specified, then FDR/UPSTREAM MVS will generate a name for USS sends, or will use the latest recorded file transfer for USS receives.
HOSTRECORD **(File Transfer USS sends only)**			Y = Transferred files are recorded in the FDR/UPSTREAM MVS database for easy retrieval. N = Transferred files are not recorded in the database.
HOSTSORT **(Restores only)**	Y / N	N	Y = You wish the host sort utility used for restores. N = You do not wish the host sort utility used for restores.
INQOPTIONS **(Merge Inquiries and Restores)**	bitmap value	2	(New value) A bit map of options used during an inquiry and restore: 0 = Inquiries and restores only show normal files and the highlighted backup. 1 = Inquires show migrated files as well as normal files. 2 = Inquires and restores use Highlighted back to full. 4 = Inquires operate from the currently highlighted backup to the first version Highlighted back to oldest

USS Process Parameter	Range	Default	Description
			8 = (not used) 16 = Only display migrated files in an inquiry. 32 = Reserved 64 = Expiration date is displayed for migrated files.
JOBOPTIONS **(Request job)**	bitmap value	0	A bit map of options used when a job is requested and started: 0 = Start job and immediately terminate UPSTREAM. 1 = Start job and do not terminate UPSTREAM. 2 = Wait for job to be terminated. 4 = Not used 8 = No job just terminate UPSTREAM USS 16 = Run the job using exec() (Internal use only) 32 = Write the STDOUT and STDERR output from the job to the UPSTREAM log and back to the mainframe (if CONV=WAIT and value 1 is specified above). Implicitly sets value 2 and 4 above.
JOBRETURNCODEMAP **(Run JOB Function)**		0:0, ?:8	For CONV=WAIT jobs, a mapping between the Client return code and the host job return code. You can specify multiple mappings (including Client return code ranges), the ,? is used for all unassigned Client return codes.
LASTACCESS **(Backups only)**	Y or N	N	Y = Only include files which have not been accessed for the number of days (or more) specified in the DAYSOLD parameter. N = Don't restrict by last access date.
LATESTDATE **(Backups only)**	date in the format MM-DD-YY	none	This parameter is only used if you specify DATELIMIT=Y. This field must be 8 characters
LATESTTIME	Time in the format HH:MM:SS	none	The time, within the LATESTDATE to back up the files.
LATESTVERSION **(Restores only)**	Y or N	N	Y No Y = You wish to restore the latest version available for the backup profile. N = You wish to use a specific version date.
LINEBLOCK **(File Transfer only)**	Y or N	N	Y = Records are separated by line feed characters (LF) for USS sends; LF's are added at the end of each record for USS receives. N = All records are separated by the record size for USS sends.
LINETRUNC **(File Transfer only)**	Y or N	N	(Only used if LINEBLOCK=Y for Client sends) Y = Data exceeding the record size is truncated. N = Data exceeding the record size is sent as a separate record.
LOGNONFATAL	Y, N, or 2	N	0 = (or N) Nonfatal errors during a backup or restore are not logged or displayed. 1= (or Y) = Nonfatal errors encountered during function requests are logged and displayed. 2 = Only messages during a backup which result in a skipped file are transmitted to the host.
MAXKFILESIZE	file size in Kb	zero (0)	Allows you to exclude files which are larger than the specified size (in 1024 byte multiples). 0 indicates no file size exclusion.
MERGE **(Backups only)**	0, 1,2, 3	0	The merge backup type to use: 0 = No merge used 1 = Full merge 2 = Incremental merge 3 = First-time merge backup
MIGRBITS **(Restores only)**	1, 2	0	How migrated files should be treated in a restore: 1 = Include migrated files in the restore. 2 = Include only migrated files (no regular files).
MODIFYFILE	Y or N	N	Y = Files to be selected for an incremental backup are determined by the last date/time that FDR/UPSTREAM was run (This is stored in the modification file).

USS Process Parameter	Range	Default	Description
			N = Files to be selected for an incremental backup are determined by the setting of the archive bit.
PACKFLUSHAFTERFILE	Y or N	N	Y = Forces a packed record in a backup to be transmitted after each file. N = Records are fully packed.
PACKRECSIZE	0 - 32700	32700	The maximum number of bytes transmitted or received per packed text record from the host. Specify 0 to disable record packing.
PARAMETER	Valid USS Filename	upstream.dat	The name (and optionally the path) of the parameter file to read FDR/UPSTREAM USS parameters from.
PASSWORD		none	Your password. This is usually required if the user ID is required. You can specify up to 32 characters. If FDR/UPSTREAM generates this field in a parameter file, then it is encrypted. In attended mode the password is not read from a parameter file (but can be accepted from the command line or environment).
PERFORMBITMAP	bitmap value	96	A bit map of performance tests you wish to run: 1 = CPU test 2 = Screen I/O test. 4 = File I/O (read) test. 8 = Backup, No I/O test 16 = VSAM performance test 32 = Raw communications test, PC send 64 = Raw communications test, MVS send.
PERFORMNUMRECORDS	1 - 9999	500	The number of records sent or received via the raw communications performance tests.
PERFORMRECORDSIZE	1 - 32700	8192	The size of records sent or received via the raw communications performance tests.
PLUGIN	Valid USS Filename	none	PLUGIN None No Allows you to specify the name of a shared library which can be used to extend UPSTREAM's functionality. PLUGINs must be in the /plugin directory directly beneath the UPSTREAM directory.
PLUGINPARAMETERS	user specifiable string	none	PLUGINPARAMETERS None No Parameters specific to the plugin. See the documentation for the plugin for more details.
POSTJOB	Valid USS Filename	None	If defined, this is the file name of a program, batch file or script file which will be run after the unattended UPSTREAM function.
PREJOB	Valid USS Filename	None	If defined, this is the name of a program, batch file or script file which will be run before the unattended FDR/UPSTREAM function.
RECORDSIZE	1 - 32700	8192	The data blocking size. This is a memory/performance tool.
REPORTNAME	Valid USS Filename	us.rpt	The name of the file to write reporting information to.
REPORTOPTIONS	bitmap value	0	A bit map describing any of the report features you wish to enable: 1 = Files backed up/restored 2 = Files skipped during the backup 4 = Files automatically deleted 8 = Inquire versions 16 = Inquire files 32 = Specified parameters
RESTARTTYPE	0, 1, 2	0	Specifies the action to be performed, at a restart point (usually the next time FDR/UPSTREAM is run), if there is a restartable error: 0 = Never restart. 1 = (Backups only) Restart failed files and incomplete backups 2 = Restart only incomplete backups.
RESTORECHECKPOINT	0 - 256	120	The number of seconds between automatic

USS Process Parameter	Range	Default	Description
			checkpoints when performing a restartable restore.
RETAIN **(Migration specs only)**	0 -9999	90	In a migration spec, the number of days that the file should be merged forward onto new full backups.
SENDHOSTDETAILS	Y or N	N	N = Only the first line of an error is sent to the host. Y = All message lines of a message are sent except additional description lines from the message file.
SKIP **(Restores only)**	0, 1, 2, 3, 4, 5	0	For restores using "List and Restore", a set of options of how to process existing files: 0 = Restore all files regardless of whether there are existing files. 1 = Restore only files where there is no existing file of the same name. 2 = Restore only files where the existing file's modification date/time and size are not the same. 3 = Restore only files which have been marked for FDR/UPSTREAM NetWare auto-recall. 4 = Restore only files which have 0 length. 5 = Restore only files which are older than those stored on disk.
SKIPOLD **(Restores only)**	Y or N	N	Y = Only those files which are newer on the mainframe will be restored. N = All files will be restored.
SPECNUMBER **(Repeating)**	ascending number starting at 1.	1	The header to this file set. Each file set begins with a SPECNUMBER definition. This is a required parameter.
SPECTYPE **(Repeating)**	0, 1, 2	0	0 = File specification is files to be included in the backup or restore. 1 = File specification is files to be excluded from the backup or restore. 2 = File specification is files to be migrated during the backup.
STORAGETYPE	0, 1, 2, 3	3	How the data is stored on the mainframe. 0 = Archive backup. Will be merged to tape when the next archive is performed on the mainframe. 1 = Keyed/duplicate backup. Stored on mainframe disk until rolled off. 2 = Sequential disk. Stored on mainframe DASD. 3 = Sequential tape. Stored directly on mainframe TAPE
SUBDIRECTORIES **(Repeating)**	Y or N	Y	Y = All subdirectories under the specified one will be checked for files which match the file specification. N = Only those files in the specified or default directory which match the file specification will be transferred.
USERID		none	Your security identifier. This may be required by some MVS systems (see your system administrator). You can specify up to 32 characters.
VERSIONDATE **(Restores Only)**	format: yymmddhh mmss	none	For a restore, if you specified LATESTVERSION=N, then you are required to specify a complete version date. This is usually used with an inquire versions command. The version date is exactly 12 numeric characters.
XFERECORDSIZE **(File Transfers Only)**	1 - 32700	8192	The record blocking size for file transfers. Users will often use 80 for text files as well.

15.3 USS Process Environment Variable Reference

The FDR/UPSTREAM USS product makes use of certain predefined environment variables when initializing the system and processing requests. The system reads file “usenv.dat” from the current workpath to determine the setting for these values. The format of this file is a single line for each variable you wish to set of the form “variable_name=value”.

The following are the documented FDR/UPSTREAM USS specific environment variables.

Environment Variable Name	Range	Default	Description
BACKUPBUFFERSIZE	0 - 65500	32768	The number of bytes requested in each file block read and write. Since BACKUPBUFFERSIZE is used for file I/O, the RECORDSIZE parameter is thus only used for blocking to the host, not in reading/writing data off the disk. Very large numbers may significantly degrade performance on Novell LANs.
HOME	Valid USS Filename	n/a	The default UPSTREAM work path.
MAXFILENAMESIZE	20 – 255	255	The maximum number of bytes that can be accepted in a file name. Smaller values reduce the backup file size, but may cause long names to be skipped.
UPSTREAMPATH	Valid USS path name	none	The path used to find the UPSTREAM resource and help files.
USDONTLOGEXCLUDED FILES	n/a	Not defined	UPSTREAM will log the names of files that are excluded from a restore. Setting this environment variable to any value will cause UPSTREAM to not log these messages.
USDONTRESTOREDIRABOVE	n/a	Not defined	If enabled, UPSTREAM will not restore directories above when they are created.
USHARDLINKSET	1-65535	65535	The maximum number of hard link files that can be restored in a secondary hard link pass.
USMAXBACKUPSIZE		none	Restricts the maximum size of a backup in bytes.
USMAXCPU	1 - 999999	system defined default	Sets the maximum number of minutes of CPU time that can be consumed by FDR/UPSTREAM before being ABEND’ed.
USNOFREENOTES	n/a	Not defined	If set to any value, UPSTREAM will not free the Notes library when it has completed running with the PlugIn.
USNOOPENDIR2	n/a	Not defined	If set to Y, disables the use of the opendir2/readdir2 APIs which gets around bugs in zFS. If you have zFS backup problems see APAR OW57194.
USNOREUSEADDR	n/a	n/a	If defined, UPSTREAM will not enable the SO_REUSEADDR socket option. This may potentially lock out inbound sockets after UPSTREAM terminates.
USNORMT	enabled or disabled	disabled	USNORMT disabled Disables check for remote initiates.
USNOSIGNAL	n/a	Not defined	If set to any value, UPSTREAM will not install its signal handler.
USNOTATTMGR	n/a	Not defined	If defined, the listening UPSTREAM will process all inbound requests without starting a new process.
USNOTESALLOWLOGRESTORE	n/a	disabled	If set, UPSTREAM will allow an archived transaction log to be restored manually. You may want to set this if there are errors doing the restore during the automatic recall.
USNOTESINI	n/a	notes.ini	Points to the fully qualified file name where the notes.ini file can be found.
USREMOTECHECK INTERVAL	1 - 999999	15000	How often UPSTREAM checks for remote initiates (in milliseconds).
USTRACE	enabled or	disabled	Activates tracing before configuration/parameter processing.

Environment Variable Name	Range	Default	Description
	disabled		
USUSEINODETIME FORINCR	enabled or disabled	disabled	If enabled, the I-Node time is used as well as the last modified time to indicate whether a file has changed (in incremental backups). NOTE: If you use this method and then perform restores, all restored files will be backed up on the next backup. If you restore a large number of files you should immediately after the restore perform a small non-relevant backup using the same backup profile to have the incremental date/time file updated.

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16 FDR/UPSTREAM Repository Command Reference

This chapter documents, in a tabular reference type format, all the system commands of the FDR/UPSTREAM MVS product. These commands can be invoked via a OS/390 console interface MODIFY command or via the USTBATCH utility program.

FDR/UPSTREAM MVS Commands

Command	Parameter(s)	Description
ABENDM		**Format: ABENDM=nnn**
		Description: This command is used to cause a diagnostic ABEND dump to be produced when a particular FDR/UPSTREAM MVS error message number is produced by the product. The dump taken causes the task that issued the message in question to be terminated. This command should only be used at the instruction of a Innovation Technical Support Representative.
	nnn	**Required:** This parameter is the three digit number of the error message to scan for when performing ABEND message processing.
CLOSE		**Format: CLOSE DD=xxxxxxxx**
		Description: This command causes the closure and subsequent reopening of the specified FDR/UPSTREAM Database File. This command is useful to reset the last used date for the specified Database file so that products like FDRABR can identify for inclusion in an incremental backup.
	DD	**Required:** This parameter specifies the OS/390 DDNAME of the FDR/UPSTREAM MVS Started Task Database that you wish to close and reopen. You may use one of the following DDNAMEs: **USTCATLG** - The CATALOG Database **USTFILEI** - The FILEINFO Database **USTFILEC** - The Duplicate File Database
COMTRACE		**Format: COMTRACE ON | OFF**
		Description: This command enables/disables the FDR/UPSTREAM MVS Communications tracing facility. When enabled, this facility will consume considerable resources and slow the processing of the FDR/UPSTREAM system. This command should only be used at the instruction of a Innovation Technical Support Representative.
	ON	Enable the FDR/UPSTREAM MVS Communications Trace.
	OFF	Disable the FDR/UPSTREAM MVS Communications Trace.
FLUSHLOG		**Format: FLUSHLOG**
		Description: This command causes the closure and subsequent reopening of the FDR/UPSTREAM MVS Started Task USTLOG and USTSUMM datasets. This command is useful to flush the messages that are contained in the in-storage buffers to the log files so that they can be viewed with the installations SYSOUT viewing utilities.
MAINT		**Format:** MAINT
		Description: This command is used to remove entries for sequential tape and disk backups from the FDR/UPSTREAM/MVS Database. When your DASD and tape management systems delete these backup datasets, the USTMAINT utility will detect that they are no longer cataloged and remove the information regarding these deleted backups from the database. USTMAINT also deletes history records from the database when they exceed the retention specified in your configuration.
	none	There are no valid parameters for the MAINT command.

FDR/UPSTREAM MVS Commands

Command	Parameter(s)	Description
MAINTF		**Format: MAINTF**
		Description: This command is used to remove entries from the FDR/UPSTREAM/MVS FILEINFO Database. When FDR/UPSTREAM system ABENDs or OS/390 system failures occur, some "orphaned" control records can be left in the FILEINFO file. These records will not be removed by normal MAINT utility processing. It is suggested that this utility be run every time you run the MAINT utility program. This utility has no effect on the FDR/UPSTREAM CATALOG or Duplicate File Databases.
	none	There are no valid parameters for the MAINTF command.
MIGRTxx		**Format: MIGRTxx PROFILE=xxxxxxxx,NEWTAPE,FORWARD**
		Description: This command will "migrate" recently created sequential disk backups to tape. This may be especially useful if you want to do daily incremental backups to disk but do not have enough available disk space to hold the entire set of incrementals between full backups. This command can process many backups, for many workstations, to the same set of tapes, reducing the number of tape volumes compared to direct backups to tape. You control the number of backups selected for a specific Backup Profile via the MIGTHRESH parameter specified in the Backup Profile configuration.
	xx	**Required:** This two character alphanumeric suffix specifies the matching two character suffix of the USTMIGxx Migration Profile to be associated with this request. The USTMIGxx Migration Profile is used by a Migration request to identify the Tape Retention Dataset Name that is created as the first file of the Migration Tape Set.
	PROFILE	**Optional:** The 1-8 character Backup Profile name that is to be processed by this invocation of the Migration Utility. A trailing "*" character of the value specified will indicate that all profiles that begin with the specified characters are to be selected for processing.
	NEWTAPE	**Optional:** This parameter causes each individual Backup Profile's backup datasets that are selected for processing by the Migration utility program to be placed on separate TAPE volumes.
	FORWARD	**Optional:** This option requests that USTMIGRT do a "forward merge" of any incremental backups previously moved to tape by USTMIGRT (back to the last full backup) by reading those backups and merging the data with the current file being written to tape. It will require a second tape drive for the input tapes. This will create one file on the output tape for each profile processed, containing data from all of the preceding incremental backups. When USTMIGRT is migrating several backups for the same profile from disk in one execution, it already combines them into one file on the output tape. The FORWARD option simply enhances this to add backups that were previous migrated to this merge. No dummy file will be created at the beginning of the tape.
LOGBLKN		**Format: LOGBLKN=nnn**
		Description: Change the number of 64K internal buffers used to save USTLOG messages for display at a workstation. This command is infrequently used.
	nnn	**Required:** This parameter is the three digit number of the count of 64KB USTLOG message buffers to maintain.
MERGExx		**Format: MERGExx,PROFILE=xxxxxxxx,NEWTAPE,FORCE**
		Description:
	xx	**Required:** This two character suffix specifies the corresponding USTMERxx profile name to use when performing MERGE processing.
	PROFILE	**Optional:** The 1-8 character Backup Profile name that is to be processed by this invocation of the Merge Utility. A trailing "*" character of the value specified will indicate that all profiles that begin with the specified characters are to be selected for processing.
	NEWTAPE	**Optional:** This parameter causes each individual Backup Profile's backup datasets that are selected for processing by the Merge utility program to be placed on separate TAPE volumes.
	FORCE	**Optional:**
MAXTAPEB		**Format: MAXTAPEB=nnn**
		Description: Specifies the maximum number of tape devices to be used for backup operations.
	nnn	**Required:** Specifies the 1-3 digit numeric limit on the number of tape devices to be used for backup type requests.
MAXTAPER		**Format: MAXTAPER=nnn**

FDR/UPSTREAM MVS Commands

Command	Parameter(s)	Description
		Description: Specifies the maximum number of tape devices to be used for restore operations. Function requests that cause this limit to be exceeded will wait till units become available.
	nnn	**Required:** Specifies the 1-3 digit numeric limit on the number of tape devices to be used for restore type requests.
MAXTASKS		**Format: MAXTASKS=nnn**
		Description: Specifies the maximum number of concurrent UPSTREAM Repository subtasks that will be allowed to simultaneously execute. Function requests that cause this limit to be exceeded are terminated.
	nnn	**Required:** Specifies the 1-3 digit numeric limit on the number of simultaneous Upstream subtasks.
QUIT		**Format: QUIT**
		Description: This command causes an orderly shutdown of the UPSTREAM MVS Started Task. Any requests that are already in progress are allowed to complete and then the Started task ends.
	none	There are no valid parameters for the Quit command.
REFRESH		**Format: REFRESH**
		Description: This command causes the FDR/UPSTREAM configuration dataset to be reloaded. This is required to make changes made to the configuration dataset active without recycling the UPSTREAM MVS Repository Started Task. This command will also cause many of the FDR/UPSTREAM modules which have had fixes applied (via zaps) to be activated. Most FDR/UPSTREAM-MVS modules are loaded once during startup, so fixes applied to the load library are not immediately available. The REFRESH command will cause current copies of all loaded modules to be deleted (as soon as they are no longer in use) and refreshed with the modified copies.
	MEMBER	**Optional:** specifies the name of an alternate configuration dataset member name to be used in reloading the FDR/UPSTREAM Started Task configuration. This member will only be used until another REFRESH command is issued for a different member or the Upstream MVS Started Task is restarted. The start up member name is specified in the Upstream MVS Started Task JCL with a DDNAME of USTCONFG.
REGEN		**Format: REGEN DSN=xxxxxxxxxxxx**
		Description: The REGEN command is used to read in a previously created Upstream backup dataset or Vault control file and reload its control information into the Upstream MVS database.
	DSN	**Required:** This is the fully qualified MVS dataset name of the Upstream backup dataset or Vault control file that is to be used as input to the REGEN command.
REMOVEDSN		**Format: REMOVEDSN=datasetname**
		Description: The REMOVEDSN command is used to remove a previously taken backup completely from the Upstream MVS database. Once removed, the dataset will need to be REGEN'ed in order for it to be used by the Upstream system.
	dataset name	**Required:** This is the fully qualified MVS dataset name of the Upstream backup dataset that is to be removed from the Upstream MVS database.
REORG		**Format: REORG DDNAME=xxxxxxxx,%F=nnn**
		Description: This command reorganizes the specified Upstream MVS database component. It performs this function by reading the specified database and then writing the data back in place.
	DDNAME	**Required:** MVS Ddname from the Upstream MVS Started Task PROC for the database component to be reorganized. Options are: USTCATLG, USTFILEI, or USTFILEC.
	%Free	**Optional:** The specified database will only be reorganized if it is determined to be of the specified percent free.
SCHEDULE		**Format: SCHEDULE MEMBER=xxxxxxxx,LIST**
		Description: This command starts or refreshes the Upstream MVS scheduler component.
	MEMBER	**Optional:** Specifies the member name to be used for this invocation of the Upstream MVS scheduler. This name must be from 1 to 8 national characters in length. The schedule dataset name cannot be overridden with this option, only the member name.
	LIST	**Optional:** This option causes the scheduler subtask to list out pending events it has to execute.

FDR/UPSTREAM MVS Commands

Command	Parameter(s)	Description
STATUS		**Format: STAtus**
		Description: This command outputs to the MVS SYSLOG and the Upstream MVS USTLOG dataset the current status of all active Upstream MVS subtasks.
	none	There are no valid parameters for the STATUS command.
SWITCHLOG		**Format: SWITCHLOG**
		Description: This command causes the Upstream MVS system to be switched from its current output DD (USTLOG) to the alternate DD (USTLOG2) or back if it has already been switched.
	none	There are no valid parameters for the SWITCHLOG command.
TIMEOUT		**Format: TIMEOUT=nnn**
		Description:
	nnn	Number of minutes to elapse before the request should be timed out.
TRACE		**Format: TRACE ON | OFF**
		Description: This command enables/disables the Upstream MVS internal tracing function. This command should only be issued under the guidance of a member of the Upstream technical support team.
	ON	Enable the FDR/UPSTREAM MVS Internal Trace.
	OFF	Disable the FDR/UPSTREAM MVS Internal Trace.
VAULTxx		**Format: VAULTxx,COPY=n,PROFILE=xxxxxxxx,NOINCR,NOFULL,NOVCHK**
		Description: The Vault utility command causes the USTCATLG database file to be scanned for any backups that have been performed and not previously vaulted, back to and including the previous Full backup. Secondary copies of these backup datasets are then made to Vault tapes. A control file is maintained on disk during this process and it is appended to the last vault volume for use by the REGEN utility.
	xx	**Required:** This two character alphanumeric suffix specifies the matching two-character suffix of the USTVLTxx Vault Profile to be associated with this request. The USTVLTxx Vault Profile is used by a VAULT request to identify the Vault Retention Dataset Name and the Vault Control File Dataset Name. There is no default value.
	COPY=n	**Optional:** Specifies the substitution number that should replace the "?" special substitution character in the generated VAULT copy dataset names. The default value is "2".
	PROFILE	**Optional:** The 1-8 character Backup Profile name that is to be processed by this invocation of the VAULT Utility. A trailing "*" character of the value specified will indicate that all profiles that begin with the specified characters are to be selected for processing.
	NOFULL	**Optional:** Specifies that First Time Full and Full Merge type backups should NOT be selected for this invocation of the VAULT utility.
	NOINCR	**Optional:** Specifies that incremental type merge backups should NOT be selected for this invocation of the VAULT utility.

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17 UPSTREAM MVS Message Reference

These messages are generated by the online FDR/UPSTREAM-MVS task. In general they are written to the UPSTREAM log (USTLOG). Messages with an asterisk (*****) following the message ID may also be written to the system console.For messages that indicate an error condition: if you are unable to resolve the problem, please save all documentation (usually the UPSTREAM log and the system SYSLOG for the time of the problem) and contact Innovation Technical Support for assistance.

UST001 TO DSN: *backup file data set name* APPENDING TO PREVIOUS BACKUP PC FILE=*pcfilename*

Reason: This informational message is issued by the sequential backup processes to log the name of the sequential data set dynamically allocated to contain the backup data for this version. The optional text APPENDING TO PREVIOUS BACKUP indicates that the backup is being added to an existing backup data set. For file transfers only, the PC FILE= specifies the name of the workstation file that was transfered.

UST002E* OPEN *clustername* CLUSTER FAILED COMP=*rrrr* CODE=*cccc* -- TERMINATING

Reason: The FDR/UPSTREAM-MVS Main task was unable to open the indicated "clustername", either "CATALOG", "FILE-INFO", or "FILE-DATA". FDR/UPSTREAM will terminate. "rrrr" is the return code in R15 after the open, and "cccc" is the ACBERFLG error code.

Action: Verify your JCL specification for the "USTCATLG", "USTFILEI" or "USTFILEC" DD statement. Refer to the IBM "VSAM MACRO REFERENCE" or "MACRO INSTRUCTIONS FOR DATA SETS" manual (depending on the level of your operating system) to understand the OPEN error codes reported.

UST004E TCP/IP ERROR REQUEST=*xx* COMP=*ccccc reason*

Reason: A TCP/IP error when FDR/UPSTREAM was connecting to TCP/IP during initialization, or when a mainframe-initiated request (USTBATCH) attempted to connect to a TCP/IP-attached target workstation. "xx" is an internal FDR/UPSTREAM request code. "ccccc" is the TCP/IP completion code from register 15 in decimal, and reason is a brief explanation of the error. For IBM's TCP/IP, common error codes include:

42 PROTOCOL NOT AVAILABLE - port in use or improper PORT statement in the TCP/IP profile (see Section 2.8). Can also occur after FDR/UPSTREAM-MVS abend if UPSTREAM is restarted too quickly.
60 CONNECTION TIMED OUT - workstation not active or wrong IP address specified
61 CONNECTION REFUSED - wrong workstation port number specified or FDR/UPSTREAM- PC not active on workstation.

For Sterling SOLVE:TCPaccess, "reason" will be in one of two formats:
TCPACCESS ERROR CODE=X'*rrrrrrrr*' or
CODE=*nnnnn* TCPACCESS ERROR DIAG=X'*ddddd*'
Error codes may be found in the SOLVE:TCPaccess Programmers Reference.

Action: Determine the cause, correct it, and repeat the operation (or restart FDR/UPSTREAM).

UST005 *function* COMPLETED SUCCESSFULLY

Reason: A management function requested from a workstation has completed successfully. "function" may be **UPDATE OF PROFILE**, **REFRESH REQUEST**, or **LOGIN REQUEST**.

Action: None.

UST005E *function* COMPLETED WITH ERRORS - REASON=*reason*

Reason: A management function from a workstation has completed abnormally. "reason", if present, explains the error.

Action: Determine the cause, correct it, and repeat the request. If necessary, contact Innovation for assistance.

UST006E* OPEN CONFIGURATION-FILE FAILED -- TERMINATING

Reason: The FDR/UPSTREAM-MVS Main task, "USTMAIN", was unable to open the Configuration File, "USTCONFG" DD statement. FDR/UPSTREAM will terminate.

Action: Verify your JCL specification for the "USTCONFG" DD statement. Review the most recent Configurator output for possible errors which may have made the file unusable.

UST007E* OPEN FOR VTAM ACB FAILED -- ACBERFLG=*nn - reason*

Reason: The FDR/UPSTREAM-MVS main task was unable to open the VTAM "ACB". FDR/UPSTREAM will terminate. "reason" indicates the meaning of the ACBERFLG error code.

Action: For certain errors, FDR/UPSTREAM will retry the OPEN once a minute for up to 5 minutes, in case the error is due to VTAM not being fully initialized. In this case, the message will be printed every minute until the OPEN is successful or the 5th attempt fails (which will cause FDR/UPSTREAM to terminate). If FDR/UPSTREAM does fail, correct the error, if possible. Review the VTAM "APPL" definition for FDR/UPSTREAM-MVS to be sure the VTAM "APPLID" (or "ACBNAME" , if used) matches the "APPLID=" specification in your Configuration file "MAIN" record. Be sure the VTAM application IDs for UPSTREAM are active.

UST007W OPEN FOR VTAM ACB BYPASSED

Reason: The VTAM ACB was not opened because you specified APPLID=NONE in the FDR/UPSTREAM-MVS configuration. Only TCP/IP connections will be supported. Note that mainframe-initiated operations via USTBATCH will not be possible.

UST007W OPEN FOR TCP/IP OR TCPACCESS BYPASSED

Reason: The TCP/IP connection was not established because you specified TCPIP=NONE in the FDR/UPSTREAM-MVS configuration, or because the required TCP/IP interface module was not found (probably because TCP/IP is not installed on your system). Only VTAM APPC connections will be supported.

Action: None.

UST008* FDR/UPSTREAM STOP ACCEPTED -- SHUTDOWN IN PROGRESS

Reason: A P UPSTREAM console command has been entered, requesting an orderly shutdown ofFDR/UPSTREAM.

UST009* SESSION STARTED TO *luname* BIND=*bindimage x*

Reason: This is an information message only. It is logged only for VTAM LUs at the time the session is initiated to the workstation. "bindimage" is the first 16 bytes of the SNA bind, in hex, used for this session. "x" will be "L" for dependant LUs and "S" for independent LUs. If the "WTOCOMP" option was selected in the UPSTREAM configuration "MAIN" record, this message will also be written to the system log (SYSLOG).

UST010E* UNABLE TO ENQUEUE CONTROL FILE

Reason: The FDR/UPSTREAM online task detected that a FDR/UPSTREAM utility function which updates the FDR/UPSTREAM repository files is running. The two cannot execute together.

Action: Wait until the utility job terminates, then start the online task again.

UST011W INQUIRE-FILES MAY NOT BE IN ORDER DUE TO INSUFFICIENT MEMORY

Reason: An inquire-files request that required sorting of UPSTREAM records, such as request against a MERGE backup profile, failed due to insufficient above-the-line storage for the sort. This could be due to multiple such requests running concurrently. The displayed files may not be in the correct order.

Action: If you need the files properly sorted, try the request again. If these requests fail frequently, you may have to increase the REGION= value in the FDR/UPSTREAM-MVS startup JCL (values over 32M will increase the above-the-line region size).

UST011E RESTORE-FILES TERMINATED DUE TO INSUFFICIENT MEMORY

Reason: A restore request that required sorting of UPSTREAM records, such as a "restore-to-full" or "restore-as-of" from a MERGE backup, failed due to insufficient above-the-line storage for the sort. This could be due to multiple such requests running concurrently.

Action: Try the request again later. If it still fails, you may have to increase the REGION= value in the FDR/UPSTREAM-MVS startup JCL (values over 32M will increase the above-the-line region size).

UST012E* UPSTREAM COMMAND NOT RECOGNIZED - *command*

Reason: **A command issued from the System Console to FDR/UPSTREAM-MVS was not STOP(P) or MODIFY(F). The command received is shown.**

Action: Refer to Section 5 "OPERATION" for the valid commands for FDR/UPSTREAM-MVS.

UST012E* MODIFY REQUEST NOT RECOGNIZED REQ: *request*

Reason: An MVS MODIFY(F) command issued from the System Console was not recognized by FDR/UPSTREAM-MVS. The invalid request is shown.

Action: Recall the command and check the spelling and syntax. Refer to Section 5 "OPERATION" for the valid commands for FDR/UPSTREAM-MVS.

UST013* *(PART OF STATUS DISPLAY GROUP)*

Reason: This message is issued as part of a message group when a "STATUS" inquiry request is issued from the System Console.

Action: None.

UST014* *(PART OF STATUS DISPLAY GROUP)*

Reason: This message is issued as part of a message group when a "STATUS" inquiry request is issued from the System Console.

Action: None.

UST015* *(PART OF STATUS DISPLAY GROUP)*

Reason: This message is issued as part of a message group when a "STATUS" inquiry request is issued from the System Console.

Action: None.

UST016* NO TASKS CURRENTLY ACTIVE V*n.n.n*

Reason: This message is issued as part of a message group when a "STATUS" inquiry request is issued from the System Console.

Action: None.

UST017E APPCCMD RCVFMH5 REQUEST FAILED

Reason: The FDR/UPSTREAM-MVS main task received an error indication during an "APPC" request to receive the SNA Function Management Header (FMH) type-5 for the conversation allocation.

Action: VTAM error codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST018E START CONVERSATION RECEIVE FAILED

Reason: The FDR/UPSTREAM-MVS subtask received an error indication while trying to start a conversation with a workstation.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST019E INITIAL RECEIVE NOT START-CONVERSATION

Reason: The FDR/UPSTREAM-MVS subtask received an unexpected data type during it's conversation initialization.

Action: This is an internal error. Retain the error log and contact Innovation Data Processing Technical Support for assistance.

UST020E PROFILE NAME FAILED CONFIGURATION VERIFICATION

Reason: The FDR/UPSTREAM-MVS subtask was unable to validate the Workstation Profile Name received for this conversation.

Action: Verify that the Profile Name sent by the Workstation is correct and was included in the Configuration file that last time the FDR/UPSTREAM-MVS Configurator was run.

UST021 COMM. PERFORMANCE TEST (WORKSTATION SEND) REQUESTED

Reason: An UPSTREAM workstation has requested the communication performance (WS send) test. This message is informational only.

Action: None.

UST022E RECEIVED STRUCTURE NOT RECOGNIZED

Reason: The FDR/UPSTREAM-MVS subtask received a data or control structure it did not recognize.

Action: This is an internal error. Retain the error log and contact Innovation Data Processing Technical Support for assistance.

UST023 COMM. PERFORMANCE TEST (M/F SEND) COMPLETED *n* BYTES PER SECOND

Reason: The communications performance test (M/F send) logic has completed the request and achieved a data rate of "n" bytes per second. This message is informational only.

Action: None.

UST024E SEND FOR BACKUP-STARTED FAILED

Reason: The FDR/UPSTREAM-MVS Backup process received a communication error indication trying to send control information to the Workstation.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST025E RECEIVE ERROR

Reason: FDR/UPSTREAM-MVS received a communication error indication while receiving data or control information from the Workstation.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST026E RECEIVED DATA *xxxxxxxx* UNRECOGNIZED -- EXPECTED FILE-INFORMATION

Reason: The FDR/UPSTREAM-MVS Backup process received an unrecognized data or control structure.

Action: This is an internal error. Retain the error log and contact Innovation Data Processing Technical Support for assistance.

UST027E RECEIVED DATA *xxxxxxxx* UNRECOGNIZED -- EXPECTED FILE-DATA

Reason: The FDR/UPSTREAM-MVS Backup process received an unexpected data or control structure.

Action: This is an internal error. Retain the error log and contact Innovation Data Processing Technical Support for assistance.

UST028E UNEXPECTED DEALLOCATE RECEIVED

Reason: The FDR/UPSTREAM-MVS Backup process received an unexpected APPC DEALLOCATE-CONVERSATION request. This is most likely the result of an error having occurred on the Workstation.

Action: Review the Workstation log file for the error.

UST029 COMM. PERFORMANCE TEST (M/F SEND) REQUESTED

Reason: The communications performance test (M/F send) requested by a workstation has begun. Message UST023 will be logged at its completion. This message is informational only.

Action: None.

UST030E REQUESTED DATA BLOCK-SIZE LESS THAN 10 BYTES

Reason: The communications performance test (M/F send) requested by a workstation has found that the requested block size for the test transmission was less than 10 bytes.

Action: Reissue the request from the workstation specifying a valid test block size.

UST031E REQUESTED DATA BLOCK SIZE EXCEEDS 32760 BYTES

Reason: The communications performance test (M/F send) requested by a workstation has found that the requested block size for the test transmission exceeded 32760 bytes.

Action: Reissue the request from the workstation specifying a valid test block size.

UST032E REQUESTED SEND-COUNT INVALID

Reason: The communications performance test (M/F send) requested by a workstation has found that the requested data block send count was invalid.

Action: Reissue the request from the workstation specifying a valid send count.

UST033E APPC ERROR ON SEND OF DATA BLOCK

Reason: The communications performance test (M/F send) requested by a workstation has received a communication error indication after issuing a SEND-DATA request.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance. Retry the communications performance test.

UST034E ERROR ON CONFIRM TO WORKSTATION

Reason: The communications performance test (M/F send) requested by a workstation has received a communication error indication after issuing a CONFIRM request at the completion of the test.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST035 FDR/UPSTREAM V*n.n.n* INITIALIZATION COMPLETE - CONFIG=*member* APPLID=*applid* SECLVL=*n*

Reason: This is an informational message only. It is issued by the FDR/UPSTREAM-MVS main task when it's initialization process has completed. If shows the configuration membername used (if the configuration data set is a PDS), the VTAM application ID used, and the security level (0, 1, or 2) in effect.

Action: None.

UST036E* CONFIGURATION FILE FORMAT ERROR -- TERMINATING

Reason: During loading the Configuration Table, the FDR/UPSTREAM-MVS Main task found the file contained an error. FDR/UPSTREAM terminates with a non-zero return code.

Action: Review the most recent output from the FDR/UPSTREAM-MVS Configurator for errors. Correct them, rerun the Configurator, and restart the task.

UST037E* ATTACH FOR SUBTASK FAILED -- SESSION DENIED LU=luname

Reason: The FDR/UPSTREAM-MVS Main task was unable to attach a processing subtask for the indicated logical unit. This may be a result of a storage shortage.

Action: Try increasing the REGION size for the UPSTREAM task and retry the operation.

UST038E *VTAM error return codes and sense information*

Reason: This message is written by an error processing routine used for VTAM APPC and control-type requests. It contains the VTAM error codes from the "RPL" control block. In most cases it will also contain a brief text description of the error, to save you the effort of trying to interpret the error codes manually from VTAM manuals. This message is usually written to the log along with other messages indicating the location of the error.

Action: See the "Action" for the accompanying message.

UST039E PROFILE NAME IS INVALID

Reason: The profile name received from a workstation had a length greater than 8.

Action: This is an internal error. Retain the error log and contact Innovation Data Processing Technical Support for assistance.

UST040E* LU=*luname* USERID IS MISSING OR INVALID

Reason: The userid received from a workstation had a length of 0 or greater than 8.

Action: This error message may be issued if you have specified a non-zero security level parameter (SECLVL=) in the FDR/UPSTREAM-MVS configuration and the request being processed specified no USERID value. Otherwise, this is internal error; Retain the error log and contact Innovation Data Processing Technical Support for assistance.

UST041E* LU=*luname* PASSWORD IS MISSING OR INVALID

Reason: The password received from a workstation had a length of 0 or greater than 8.

Action: This error message may be issued if you have specified a non-zero security level parameter (SECLVL=) in the FDR/UPSTREAM-MVS configuration and no password was specified. Otherwise, this is internal error; Retain the error log and contact Innovation Data Processing Technical Support for assistance.

UST042E RECEIVE-DATA ERROR

Reason: The FDR/UPSTREAM-MVS subtask received a communication error indication during an RECEIVE-DATA request.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST043E UNEXPECTED DEALLOCATE RECEIVED

Reason: The FDR/UPSTREAM-MVS subtask received an unexpected DEALLOCATE-CONVERSATION indication. This is most likely the result of an error condition on the Workstation.

Action: Review the error log on the Workstation to resolve the problem.

UST044W NON-KEYED BACKUP DISALLOWED BY CONFIGURATION

Reason: This Profile Name was not permitted to perform any *non-keyed* Backups by the mainframe Configuration file. The "ARCHIVE=" parameter of this profile was specified as zero.

Action: If this Profile Name should be allowed to perform *non-keyed* Backups, execute USTCONFG to MODIFY the "ARCHIVE=" parameter for this profile to a non-zero value (see Section 3 "Configuration"), and refresh the configuration.

UST045W KEYED BACKUP DISALLOWED BY CONFIGURATION

Reason: This Profile Name was not permitted to perform any *keyed* Backups by the mainframe Configuration file. The "ONLINE=" parameter of this profile was specified as zero.

Action: If this Profile Name should be allowed to perform *keyed* Backups, execute USTCONFG to MODIFY the "ONLINE=" parameter for this profile to a non-zero value (see Section 3 "Configuration"), and refresh the configuration.

UST046E RECEIVE BACKUP-DESC REPEATED STRUCTURE FAILED

Reason: The FDR/UPSTREAM-MVS Backup process received an error indication during an RECEIVE-DATA request.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST047E RECEIVE FOR FILE-INFORMATION FAILED

Reason: The FDR/UPSTREAM-MVS Backup process received a communication error indication during an RECEIVE-DATA request.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST048E MAIN SUBEND UNABLE TO LOCATE ATB FOR TCB=*tcbaddress*

Reason: This is an internal error.

Action: Retain all error information and contact Innovation Data Processing Technical Support for assistance.

UST049E SEND CONFIRMED-RESPONSE FAILED

Reason: The FDR/UPSTREAM-MVS Backup process received a communication error indication attempting to send an CONFIRMED response.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST050 *event information reported from workstation LU*

Reason: This message contains text sent from the Workstation. It is usually used to report an error condition at the Workstation.

Action: None.

UST051E *general VSAM error diagnostic information*

Reason: This message is logged by the VSAM error diagnosis routine. It contains specific error codes from the VSAM "RPL" control block. If possible, the message also contains a brief text description of the error. This message is accompanied by others indicating the location of the error.

Action: If necessary, refer to the IBM "VSAM MACRO REFERENCE" or "MACRO INSTRUCTIONS FOR DATA SETS" manual (depending on the level of your operating system) to understand the error codes reported. Correct the error or contact Innovation for assistance.

UST052E COMM ERROR ON RECEIVE DATA REQUEST

Reason: The communications performance test (PC send) requested by a workstation has received an error indication after issuing a RECEIVE request.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST053E RECEIVE FOR RESTORE-DESC REPEATED STRUCTURE FAILED

Reason: The FDR/UPSTREAM-MVS Restore process received a communication error indication during a RECEIVE-DATA request.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST054E SEND OF BACKUP-DESCRIPTION FAILED

Reason: The FDR/UPSTREAM-MVS Restore process received a communication error indication during an SEND-DATA request.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST054E SEND OF PROFILE-DESCRIPTION FAILED -- *reason*

Reason: A workstation requested display or update of a profile definition, but the request failed for the reason given.

Action: If possible, correct the error and resubmit the request. If necessary, contact Innovation for assistance.

UST055 COMM. PERFORMANCE TEST (WORKSTATION SEND) COMPLETED *n* BYTES PER SECOND

Reason: The communications performance test (PC send) requested by a workstation has completed and achieved a data rate of "n" bytes per second. This message is informational only.

UST056W NO CATALOG RECORD FOUND FOR THIS PROFILE NAME

Reason: This message is issued by the FDR/UPSTREAM-MVS Restore process. While searching for a Catalog Version record for the supplied Workstation Profile Name, no record was found. The specified Profile Name has no versions currently recorded. There may have been no prior backup done specifying this name.

Action: Review the available backups and select the proper one. If you need assistance, contact Innovation Technical Support.

UST057E NO F-RECORDS FOUND FOR THIS FILENAME

Reason: During the Restore process, FDR/UPSTREAM-MVS was unable to locate a record for the requested filename. The requested filename may not have been backed up in a prior Backup request.

Action: Review the available backups and select the proper one. If you need assistance, contact Innovation Technical Support.

UST058E APPC SEND OF F-RECORD FAILED

Reason: The FDR/UPSTREAM-MVS Restore process received a communication error indication after requesting an SEND-DATA for control information to the Workstation.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST0059 SEND OF FILE-DATA RECORD FAILED

Reason: The FDR/UPSTREAM-MVS Restore logic received a communication error indication after an SEND-DATA request to send File Data to the Workstation.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST060E UNEXPECTED DEALLOCATE RECEIVED FROM WORKSTATION

Reason: The communications performance test (WS send) requested by a workstation has received an unexpected conversation deallocation indication from the workstation.

Action: Use these error codes to determine the cause of the error and correct it. Retry the communications performance test. Review the workstation UPSTREAM log to determine the cause of the APPC DEALLOCATE request.

UST061E DEALLOCATE-CONFIRM REQUEST FAILED

Reason: The FDR/UPSTREAM-MVS Restore logic attempted to normally terminate the conversation by issuing an DEALLOCATE-CONFIRM request But got a communication error indication.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST062E UNEXPECTED DEALLOCATE RECEIVED FROM WORKSTATION

Reason: The FDR/UPSTREAM-MVS Restore logic received an unexpected DEALLOCATE-CONVERSATION request from the Workstation. This is most likely the result of an error condition having occurred on the Workstation.

Action: Review the Workstation error log to determine the reason the DEALLOCATE request was sent. Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST063E* UNABLE TO LOAD CONFIG TABLE -- ENQ FAILED

Reason: The FDR/UPSTREAM-MVS Main task was unable to acquire an exclusive ENQ in order to load the Configuration Table.

Action: Ensure that you were not trying to start more than one copy of the FDR/UPSTREAM main task. If not, this may be an internal error. Retain all error information and contact Innovation Data Processing Technical Support for assistance.

UST064E* CONFIGURATION TABLE LOAD FAILED -- TERMINATING

Reason: The FDR/UPSTREAM-MVS Main task was unable to load the Configuration Table, and is terminating as a result.

Action: This is an internal error. Retain all error information and contact Innovation Data Processing Technical Support for assistance.

UST065E INQUIRE-VERSIONS INVALID FLAG BYTE FOUND

Reason: The FDR/UPSTREAM-MVS Version Inquiry logic detected an invalid value in an internal structure.

Action: This is an internal error. Retain all error information and contact Innovation Data Processing Technical Support for assistance.

UST066E INVALID *value* IN INQUIRE-FILES REQUEST

Reason: The FDR/UPSTREAM-MVS Version Inquiry logic detected an invalid value in an internal structure. "value" will be either "LENGTH VALUE" or "DIRECTORY STRUCTURE".

Action: This is an internal error. Retain all error information and contact Innovation Data Processing Technical Support for assistance.

UST067E SEND OF BACKUP-DESC FAILED -- VERSIONDATE

Reason: The FDR/UPSTREAM-MVS Version Inquiry logic received a communication error indication after issuing an APPC SEND-DATA request.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST068E SEND OF BACKUP-DESC FAILED -- ALL VERSIONS

Reason: The FDR/UPSTREAM-MVS Version Inquiry logic received a communication error indication after issuing an SEND-DATA request.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST069E SEND OF BACKUP-DESC FAILED -- LATESTVERSION

Reason: The FDR/UPSTREAM-MVS Version Inquiry logic received a communication error indication after issuing an SEND-DATA request.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST070W NO RECORDS FOUND FOR INQUIRE-VERSIONS REQUEST

Reason: The FDR/UPSTREAM-MVS Version Inquiry logic found no records for the inquiry request.

Action: Verify the Profile Name and the VERSIONDATE requested are valid. Verify that a successful Backup had been performed previously for this Profile.

UST071E SEND FOR FILE-INFORMATION RECORD FAILED

Reason: The FDR/UPSTREAM-MVS File Inquiry logic received a communication error indication after issuing an SEND-DATA for an internal control structure.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST072W NO FILES FOUND FOR VERDATE=*versiondate* PATH=*fileid*

Reason: The FDR/UPSTREAM-MVS File Inquiry logic was unable to find a match for the request.

Action: Verify the requested Profile Name and VERSIONDATE are correct and retry the operation.

UST073E ATTNEXIT FOUND *function* IN PROGRESS -- REJECTED

Reason: The requested conversation initiation was denied due to a FDR/UPSTREAM-MVS having a status which prevents new workstation functions from starting. If "function" is SHUTDOWN, then UPSTREAM received a System Console STOP request and is waiting for all currently active subtasks to terminate. If it is REORG, then one or more of the UPSTREAM files is being reorganized in response to a console REORG request.

Action: The workstation can retry the request after FDR/UPSTREAM-MVS is restarted or after the REORG completes.

UST074E ATTNEXIT FMH5 CONV TYPE NOT BASIC -- REJECTED

Reason: The FDR/UPSTREAM-MVS Main task found an invalid value in the received Function Management Header (FMH) type-5 from the Workstation.

Action: This is an internal error. Retain all error information and contact Innovation Data Processing Technical Support for assistance.

UST075E ATTNEXIT FMH5 SYNC LEVEL NOT CONFIRM -- REJECTED

Reason: The FDR/UPSTREAM-MVS Main task found an invalid value in the received Function Management Header (FMH) type-5 from the Workstation.

Action: This is an internal error. Retain all error information and contact Innovation Data Processing Technical Support for assistance.

UST076E ROLLOFF -- NO C-RECORDS FOUND FOR ROLLOFF

Reason: This is an internal error.

Action: Retain all error information and contact Innovation Data Processing Technical Support for assistance.

UST077E ROLLOFF -- VSAM ERROR

Reason: The FDR/UPSTREAM-MVS Backup "Version Rolloff" logic encountered an error during a VSAM I/O request. This message is accompanied by message UST051E containing the VSAM error codes as reported.

Action: Retain all error information and contact Innovation Data Processing Technical Support.

UST078 BACKUP STATISTICS (TOTALS RECEIVED):

Reason: This is the first of a three message group. Statistics are logged to the UPSTREAM log file for each backup performed. This message is accompanied by messages UST079 and UST080 containing the statistics for the backup just ended.

Action: None.

UST079 VERSIONDATE: *vvvvvvvvvvvv; nnnnnnnnnnnnn* FILES *function mmmmmmmmm* DIRECTORIES *function*

Reason: If "function" is RECEIVED, this is the second message of a three message group (including UST078 and UST080); it shows the "versiondate" used to store the files being backed up as well as the number of files and the number of subdirectories backed up. If "function" is RESTORED, the message is issued with UST080 to show the number of files and subdirectories sent to the workstation from the indicated "versiondate" (the workstation may not restore all of them).

Action: None.

UST080 *nnnnnnnnnnn* DATA-BLOCKS; *mmmmmmmmmmm* DATA-BYTES RECEIVED

Reason: This is the last of a multi-message group. This message is preceded by messages UST078 and UST079 containing the statistics for the function just ended. This message contains the total count of transmission data blocks and bytes send to or from the workstation.

Action: None.

UST081W RESTORE: C-RECORD NOT FOUND FOR SPECIFIC VERSIONDATE=*versiondate*

Reason: During FDR/UPSTREAM-MVS Restore processing, the logic was unable to locate a Repository Catalog record for the specific version requested by the End User.

Action: Use the "INQUIRE VERSIONS" function of the Restore panel to locate the version you are attempting to Restore. If the version is shown, this is an internal error. Otherwise, select a version listed, and retry the Restore request.

UST082E RESTART: MODCB FOR RPL-C FAILED

Reason: During a Restarted Backup, the FDR/UPSTREAM-MVS logic received an error indication from a VSAM "MODCB" request. This message is accompanied by message UST051E containing the VSAM error codes as reported.

Action: Refer to the IBM "VSAM MACRO REFERENCE" or "MACRO INSTRUCTIONS FOR DATA SETS" manual (depending on the level of your operating system) to understand the error codes reported.

UST083E UNABLE TO RESTART BACKUP -- *reason*

Reason: During a Restarted Backup, FDR/UPSTREAM-MVS could not restart the backup for the reason given. This generally occurs when a Backup is interrupted for any reason prior to FDR/UPSTREAM-MVS having received sufficient data to consider the Backup committed, i.e. the interrupt occurred too early in the Backup process to retain the Backup information.

Action: You will have to rerun the Backup -- it is not restartable.

UST084E RESTART: SEND OF BACKUP-DESC FAILED

Reason: During a Restarted Backup, FDR/UPSTREAM-MVS received a communications error indication, having issued an SEND-DATA request.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST085W WARNING -- FILES BACK TO FULL IGNORED FOR NON-MERGE

Reason: A workstation user requested a "back-to-full" restore, but the backups to be restored were not MERGE backups, so the option was ignored. The restore will proceed.

Action: None.

UST086E COMM RECEIVE REQUEST TIMEOUT -- *function* TERMINATED

Reason: A function in progress will be terminated after a period of ten minutes if no data is received from the workstation.

Action: Review the UPSTREAM log on the workstation to determine the cause of the timeout.

UST087E* LU=*luname* USERID/PASSWORD OR PROFILE VALIDATION UNSUCCESSFUL

Reason: The SAF (security) call to verify the userid and password or profile nameprovided by the workstation user (as requested by SECLVL=1 or 2 in the UPSTREAM Configuration) has failed. The user may have specified the wrong userid, password or profile name.

Action: Verify the specified userid, password and profile are correct and are defined correctly to your security system.

UST088E ROLLOFF -- VSAM POINT REQUEST FOR "R" RECORD FAILED

Reason: During "Version Rolloff" processing, a VSAM error indication was return to a POINT request. This message is accompanied by message UST051E containing the VSAM error codes as reported.

Action: Refer to the IBM "VSAM MACRO REFERENCE" or "MACRO INSTRUCTIONS FOR DATA SETS" manual (depending on the level of your operating system) to understand the error codes reported.

UST089E ROLLOFF -- NO "R" RECORD FOUND FOR ROLLOFF

Reason: The FDR/UPSTREAM-MVS "Version Rolloff" routine was called in error.

Action: This is an internal error. Please retain all error information and contract Innovation Data Processing Technical Support for assistance.

UST090E ROLLOFF -- VSAM ERASE FOR "R" RECORD FAILED

Reason: The FDR/UPSTREAM-MVS "Version Rolloff" routine received a VSAM error indication from an ERASE request. This message is accompanied by message UST051E containing the VSAM error codes as reported.

Action: Refer to the IBM "VSAM MACRO REFERENCE" or "MACRO INSTRUCTIONS FOR DATA SETS" manual (depending on the level of your operating system) to understand the error codes reported.

UST091E ROLLOFF -- VSAM PUT FOR "R" RECORD FAILED

Reason: The FDR/UPSTREAM-MVS "Version Rolloff" routines received a VSAM error indication from a PUT request. This message is accompanied by message UST051E containing the VSAM error codes as reported.

Action: Refer to the IBM "VSAM MACRO REFERENCE" or "MACRO INSTRUCTIONS FOR DATA SETS" manual (depending on the level of your operating system) to understand the error codes reported.

UST092E ROLLOFF -- VSAM GET FOR "R" RECORD FAILED

Reason: The FDR/UPSTREAM-MVS "Version Rolloff routines received a VSAM error indication from a GET request. This message is accompanied by message UST051E containing the VSAM error codes as reported.

Action: Refer to the IBM "VSAM MACRO REFERENCE" or "MACRO INSTRUCTIONS FOR DATA SETS" manual (depending on the level of your operating system) to understand the error codes reported.

UST093W RESTORE: CATALOG ARCHIVE-RECORD NOT FOUND

Reason: During FDR/UPSTREAM-MVS Restore processing for a specified "versiondate", no records were found.

Action: Use the "Inquire Versions" request on the Restore menu to list all available versions, to verify your request was correct. If your request was correct, this is an internal error; retain all error information and contact Innovation Data Processing Technical Support for assistance.

UST094E OPEN FOR ARCHOLD DATASET FAILED

Reason: During FDR/UPSTREAM-MVS Restore processing, an error indication was received trying to open the Archive data set.

Action: Refer to your System log for any additional messages to resolve the problem.

UST095E DYNALLOC ERROR: *reason*
R15=*rrrr* CODE=*cccc* INFO=*iiii* DSN=*dsname*
DYNALLOC MSGS: *messages*

Reason: This message is issued when the dynamic allocation (SVC 99) request for a tape or disk sequential data set fails with a non-zero return code. If the error code is a common one, a brief explanation of the cause is shown as "reason". In any case, the return code (rrrr), return code (cccc) and information code (iiii) returned by SVC 99 are shown, as well as the name of the data set whose allocation failed. If SVC 99 also returned any messages (such as SMS errors) they are also displayed.

Action: If you cannot determine the cause of the error from the messages printed, dynamic allocation error codes are listed in various IBM manuals, depending on your MVS level:
XA -- "SPL: SYSTEM MACROS AND FACILITIES"
ESA3 -- "SPL: APPLICATION DEVELOPMENT GUIDE
ESA4/ESA5 -- "AUTHORIZED ASSEMBLER PROGRAMMING GUIDE"
and are also listed in Appendix A of the IBM ISPF online HELP.
If you are unable to resolve the problem, please retain all error information, including your System log, and contact Innovation Technical Support for assistance.

UST096E RESTORE: ARCHIVE VOLUME NOT IN CURRENT SET -- FILE NOT ACCESSIBLE

Reason: During a Restore from the Archive data set, FDR/UPSTREAM-MVS was unable to mount the correct volume.

Action: This indicates an internal error in the Repository Catalog records. Please retain all error information, including your System log, and contact Innovation Data Processing Technical Support for assistance.

UST097W IMMEDIATE SHUTDOWN REQUESTED -- *function* TERMINATED

Reason: The indicated function was in progress when FDR/UPSTREAM-MVS received an immediate shutdown request from the System Operator. The function is terminated.

Action: None.

UST099 PARM --> *parmdata*

Reason: If parameters were passed to FDR/UPSTREAM via the PARM= JCL operand on the EXEC statement in the startup proc, the parameters are shown here.

Action: None.

UST099E PARM KEYWORD UNKNOWN

Reason: One of the startup parameters shown in the UST099 message is invalid.

Action: Check Section 5 for valid parameters.

UST100W 'QUIT' REQUESTED -- INITIATION ABORTED

Reason: A **F UPSTREAM,TERM** or **F UPSTREAM,QUIT** console command was entered to request immediate termination of UPSTREAM. This workstation was in the process of initiating a conversion; it is terminated.

Action: None.

UST101E *type* EXIT -- CHECK FOR ACTSESS ERROR

Reason: This message indicates VTAM returned an error indication to an APPC "CHECK" request to activate the pending active session to the workstation.

Action: Communication **e**rror codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST102W PROFILE NAME ALREADY IN USE -- DISALLOWED

Reason: A workstation attempted to use a Profile Name which was already in use by another workstation currently in conversation with UPSTREAM.

Action: Verify that the same Profile Name has not been accidentally assigned to two workstations, and that the two workstations involved are using the correct Profile Names.

UST102W PROFILE NAME *profilename* NOT AUTHORIZED -- DISALLOWED

Reason: A workstation user requested display or update of a profile in the FDR/UPSTREAM configuration, and SECLVL=2 or 3 was in effect, but the userid entered by the user was not authorized for ALTER access to the profile name requested.

Action: Repeat the request using a userid that is authorized to ALTER the profile name, or update your security system to authorize the userid.

UST103E LOGON EXIT -- INQUIRE SESSPARM ERROR

Reason: The Main Task VTAM LOGON EXIT was unable to issue an INQUIRE request to verify the suggested BIND image. The session request is denied.

Action: Communication **e**rror codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST104W LU=*luname* - USING DEFAULT BIND

Reason: This message is issued from within the Main Task VTAM LOGON exit. The supplied BIND image failed LU 6.2 standard verification. FDR/UPSTREAM-MVS will attempt to use the internal default Bind image to establish the session.

Action: If you are using the IBM-supplied #INTER log mode table entry for FDR/UPSTREAM sessions (See Section 2.6), this is normal and can be ignored. Otherwise, verify that the specified parameters in the mode table entry you are using are correct for an LU 6.2 session.

UST105E RESTORE: RECEIVE FOR EVENT RECORD FAILED

Reason: The RESTORE logic received a communication error while trying to retrieve a record describing a workstation error.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST106 FDR/UPSTREAM CUSTOMER NUMBER *nnnnnnnn*

Reason: This message is informational only. It is issued by the FDR/UPSTREAM-MVS main task during its initialization. If this is a FDR/UPSTREAM trial, the text "TRIAL VERSION" will appear instead of a customer number.

Action: None.

UST107W* *nnnn* DAYS TO UPSTREAM EXPIRATION

Reason: This message is issued during main task initialization to indicate the FDR/UPSTREAM-MVS product authorization time period is about to expire.

Action: Contact Innovation Data Processing technical support if you have any questions.

UST108 MAXIMUM WORKSTATIONS PERMITTED = *nnnn*

Reason: This message is informational only. It is issued during main task initialization to indicate the number of workstations licensed for use.

Action: None.

UST109E AUTHORIZATION FAILED, CODE = *nn*

Reason: During initialization, the FDR/UPSTREAM-MVS main task found an authorization violation. The "CODE=nn" value indicates the type of authorization failure.

Action: Retain the error log and contact Innovation Data Processing Technical Support for assistance.

UST110E* UPSTREAM MAX WORKSTATIONS EXCEEDED CODE = *nn* LU = *luname*

Reason: This message is issued by the UPSTREAM main task to indicate you have exceeded the maximum number of workstations licensed. The value of "nn" is the number of licensed workstations, and the "luname" value is the LUname of the workstation UPSTREAM is attempting to add.

Action: Contact Innovation Data Processing technical support for assistance.

UST111E* UPSTREAM USE HAS EXPIRED, CONTACT INNOVATION DATA FOR ASSISTANCE

Reason: This message is issued by the UPSTREAM main task to indicate that the timed use of the product has expired. FDR/UPSTREAM-MVS will not start.

Action: Contact Innovation Data Processing Technical Support for assistance.

UST112 WS FILE SKIPPED: *wsfilename*

Reason: This message is informational, it is issued during a Backup process to indicate that the workstation notified the mainframe it is skipping a file. This is a normal condition and is encountered if the workstation finds a file inaccessible during the Backup process.

Action: None.

UST113W CHECKSUM ERROR:checksm1-checksm2 wsfilename

Reason: During a full MERGE backup, the checksum validation option was requested. For files which are already on the backup and do not need to be translated, FDR/UPSTREAM will calculate a checksum of each workstation file on the workstation and also on MVS (from the backup). This message is issued if the checksums do not match; "checksm1" is the checksum from MVS, "checksm2" is the checksum from the workstation. This detects files which have changed on the workstation since the last backup but were not flagged as requiring backup.

Action: The workstation file whose checksum did not match will be retransmitted from the workstation.

UST114E MAINFRAME VSAM ERROR

Reason: This message is issued during a Backup process along with a group of other messages indicating an error was encountered during a VSAM request. This message is also sent to the workstation.

Action: Review the other messages associated with the VSAM error.

UST115E REQUESTED RECORDSIZE EXCEEDS ALLOWED BLKSIZE -- TERMINATING

Reason: The "RECORDSIZE" value specified in the workstation backup parameters exceeded the allowable blocksize for the target device.

Action: Verify that a valid "RECORDSIZE" value was specified for the backup request. If the request is for a "sequential DASD" backup, you may increase the "DASDBLK" value in the FDR/UPSTREAM-MVS mainframe configuration to accommodate the request.

UST116E ATTNEXIT: APPC ERROR RCVFMH5 REJECT FAILED

Reason: A FMH5 was received in error; a request to REJECT it did not complete successfully.

Action: Communication error codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance. Review the UPSTREAM log on the workstation for information as to the cause of the failure.

UST117 INQUIRE-VERSIONS PROCESS STARTED

Reason: An inquire-versions request was received from a workstation.

Action: None.

UST118E PRIMARY RECEIVE PACING=ZERO -- SESSION DISALLOWED ***

Reason: The UPSTREAM main task VTAM logon exit found, during session initiation, that the bind contained a zero value for the primary receive pacing count. Using this value could result in serious mainframe problems. The logon exit instead disallowed the requested session.

Action: Verify that the VTAM APPL definition for FDR/UPSTREAM-MVS contains a valid "VPACING" value. Contact Innovation Data Processing Technical Support for assistance.

UST119E* APF AUTHORIZATION CHECK FAILED -- CANNOT CONTINUE

Reason: During initialization, an FDR/UPSTREAM-MVS component has determined that it is not running as an APF authorized task. FDR/UPSTREAM terminates.

Action: Verify that the load library from which FDR/UPSTREAM-MVS is being run is APF authorized in the MVS system.

UST120E RECEIVE FOR RESTORE-DESC REPEATED STRUCTURE FAILED

Reason: The Sequential Restore process received a communication error indication after issuing an receive request.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST121E UNEXPECTED DEALLOCATE RECEIVED FROM WORKSTATION

Reason: The Sequential Restore process received an unexpected Deallocate indication, terminating the active conversation.

Action: Review the UPSTREAM log file on the workstation for an indication as to the error cause. Contact Innovation Technical Support for assistance.

UST122W RESTORE: C-RECORD NOT FOUND FOR SPECIFIC VERSIONDATE

Reason: The sequential restore processor was unable to locate a catalog record for the requested versiondate. It is possible that the original backup was not committed prior to it's termination.

Action: Perform an "inquire versions" function to verify that you are requesting a valid versiondate as recorded in the VSAM repository.

UST123E ARCHIVE RESTORE DISALLOWED -- SECURITY CHECK FAILED

Reason: SECLVL=2 or 3 was specified in the configuration, and the security check for tape restores failed.

Action: See Section 4 "Security" for details on authorizing restores from tape.

UST124E SEND OF BACKUP-DESCRIPTION FAILED

Reason: FDR/UPSTREAM-MVS received an error indication after issuing an Send request.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST125E RESTORE: CATALOG S-RECORD NOT FOUND

Reason: The sequential restore process was unable to locate the catalog record requested. It is possible that the backup was terminated before it was committed.

Action: Perform an "inquire versions" request to determine whether the backup information does exist. Verify that you are using the correct version information in the request. Verify that the sequential backup data set exists and is cataloged in the system.

UST126E DYNALLOC ERROR: R15=*rrrrrrrr* CODE=*cccc* INFO=*iiii*

Reason: The sequential restore process was unable to dynamically allocate the requested sequential backup data set. The additional information fields contain the return codes and information reason codes associated with the failed dynamic allocation request.

Action: Verify that the requested sequential backup data set exists and is cataloged in the system. See message UST095E for information on interpreting the error codes.

UST127E OPEN FOR RESTORE DATASET FAILED

Reason: The sequential restore process was unable to open the sequential data set to perform the restore.

Action: Verify that the requested sequential backup data set exists and is cataloged in the system. Use another system utility to verify that the backup sequential data set is the correct format and has not been altered, copied to a different format, or corrupted in any way.

UST128W NO CATALOG RECORD FOUND FOR THIS PROFILE NAME

Reason: The sequential restore process was unable to locate the FDR/UPSTREAM-MVS catalog record for the requested sequential backup.

Action: Perform an "inquire versions" request to verify that you are requesting the correct Profile Name and versiondate.

UST129E SEND FOR F-RECORD FAILED

Reason: The sequential restore process received a communication error indication after issuing an Send-Data request for a File-Information Record.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance. Review the UPSTREAM log on the workstation for information as to the cause of the failure.

UST130E INSUFFICIENT STORAGE FOR MERGE BACKUP

Reason: The MERGE BACKUP function requires storage above the 16MB line; the amount varies by the number of files involved and the number of concurrent backups in progress. Insufficient storage was available for the MERGE BACKUP requested by this workstation and the backup is terminated.

Action: Increase the above the line storage available to FDR/UPSTREAM-MVS by coding a REGION= value on the EXEC statement in the UPSTREAM startup proc, with a value greater than 32M (32MB is the default above the line storage size), or schedule the MERGE BACKUPs so that fewer are running concurrently.

UST131W IMMEDIATE SHUTDOWN REQUESTED -- RESTORE TERMINATED

Reason: The sequential restore process was notified that the system operator requested an immediate UPSTREAM shutdown.

Action: None.

UST132E RESTART: BACKUP ALREADY ARCHIVED -- CANCELLED

Reason: Restart of an interrupted backup was attempted, but UPSTREAM records indicate that the backup was successfully completed.

Action: No restart is required.

UST133E DEALLOCATE-CONFIRM REQUEST FAILED

Reason: The sequential restore process received a communication error indication at the end of the restore process after issuing an Confirm request.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance. Review the UPSTREAM log on the workstation for information as to the cause of the failure.

UST134E SEND FILE-DATA RECORD FAILED

Reason: The sequential restore process received a communication error indication after issuing an Send-Data request for a File-Data Record.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

Review the UPSTREAM log on the workstation for information as to the cause of the failure.

UST135E RECEIVE FOR EVENT RECORD FAILED

Reason: The sequential restore process received a communication error indication after issuing an Receive request for a workstation event record.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance. Review the UPSTREAM log on the workstation for information as to the cause of the failure.

UST136E RESTORE: DATA RECORD NOT FOUND IN BLOCK EXPECTED

Reason: The sequential restore process was unable to locate a data record during the restore in the block in which it was expected.

Action: Verify that you are restoring from the correct data set, that it is not a copy of the current backup data set. You may have to run the USTREGEN utility to make the copied data set current in the VSAM control clusters.

UST137E RESTORE: UNABLE TO LOCATE BACKUP FILE FOR RESTORE

Reason: The sequential restore process was unable to dynamically allocate a *sequential disk* backup file to perform the restore. It received an indication that the file does not exist or is not cataloged. You may be attempting to restore from a sequential backup file that has been deleted or uncataloged in the system. This message is accompanied by message UST138E containing the data set name FDR/UPSTREAM-MVS was attempting to dynamically allocate.

Action: Verify that the data set exists and is cataloged.

UST138E DSN=*dsname*

Reason: This message accompanies message UST137E above. It contains the data set nameFDR/UPSTREAM-MVS was attempting to dynamically allocate.

Action: None.

UST139E UNABLE TO LOCATE BACKUP DATASET FOR RESTORE

Reason: The sequential restore process was unable to dynamically allocate a *sequential tape* backup file to perform the restore. It received an indication that the file does not exist or is not cataloged. You may be attempting to restore from a sequential backup file that has been deleted or uncataloged in the system. This message is accompanied by message UST159E containing the data set name FDR/UPSTREAM-MVS was attempting to dynamically allocate.

Action: Verify that the data set exists and is cataloged.

UST140E COMMUNICATIONS ERROR

Reason: The sequential backup process received a communication error indication .

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance. Review the UPSTREAM log on the workstation for information as to the cause of the failure.

UST141 *text of a message from the workstation*

Reason: This message is issued when a workstation in session with FDR/UPSTREAM-MVS sends an error or informational message. This message is a workstation message.

UST142W *function* DISALLOWED BY CONFIGURATION

Reason: The profile in use is not enabled for the function indicated.

Action: Review the FDR/UPSTREAM-MVS configuration file to determine whether this profile should be permitted to perform the requested function.

UST143E RECEIVE FOR BACKUP-DESC-REP FAILED

Reason: The sequential backup process received a communication error .

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

Review the UPSTREAM log on the workstation for information as to the cause of the failure.

UST144E RECEIVED UNRECOGNIZED STRUCTURE

Reason: The sequential backup process received an unrecognized structure from the workstation. This is most likely an internal UPSTREAM error.

Action: Review the UPSTREAM log on the workstation for information as to the cause of the failure.

UST145E DYNALLOC ERROR: R15=*rrrrrrrr* CODE=*cccc* INFO=*iiii*

Reason: The sequential backup process was unable to dynamically allocate the backup sequential backup data set.

Action: Verify that the requested sequential backup data set exists and is cataloged in the system. See message UST095E for information on interpreting the error codes.

UST146E * OPEN FOR BACKUP DATASET FAILED ***

Reason: The sequential backup process was unable to open the sequential backup output data set.

Action: If you are unable to resolve the problem, contact Innovation Data Processing technical support for assistance.

UST147E SEND BACKUP-STARTED STRUCTURE FAILED

Reason: The sequential backup process received a communication error indication.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance. Review the UPSTREAM log on the workstation for information as to the cause of the failure.

UST148E * MAINFRAME VSAM ERROR ***

Reason: The sequential backup process sends this message to the workstation to indicate an error occurred during a mainframe VSAM request.

Action: None.

UST149E DEALLOCATE_CONFIRM ERROR

Reason: The sequential backup process received a communication error indication after issuing an Deallocate request.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance. Review the UPSTREAM log on the workstation for information as to the cause of the failure.

UST150E BACKUP_DESC FLAG LENGTH ERROR

Reason: The sequential backup process received an invalid internal structure from the workstation. The most probable cause for this problem is that the workstation is using an old, unsupported version of UPSTREAM.

Action: If you are unable to resolve the problem, contact Innovation Data Processing technical support for assistance.

UST151W DASD BACKUP DISALLOWED BY CONFIGURATION

Reason: The sequential backup process has determined that this workstation profile name was not configured to allow sequential backups to mainframe DASD.

Action: Review your mainframe configuration file. Verify that this Profile Name is permitted to perform *sequential disk* backups.

UST152W TAPE BACKUP DISALLOWED BY CONFIGURATION

Reason: The sequential backup process has determined that this workstation profile name was not configured to allow sequential backups to mainframe tape.

Action: Review your mainframe configuration file. Verify that this Profile Name is permitted to perform *sequential tape* backups.

UST153E REMOVE-FILE NAME MISMATCH -- IGNORED

Reason: The sequential backup process received a REMOVE-FILE request from the workstation for a file other than the current file being processed.
Action: This is an internal error. Notify Innovation Technical Support as soon as possible.

UST154W CATALOG RECORD NOT FOUND FOR BACKUP RESTART

Reason: The sequential backup process was unable to locate the control record to restart the backup. The prior backup may not have progressed far enough to be committed.
Action: Perform an "inquire versions" process to determine whether you are attempting to restart an interrupted backup, whether this backup actually exists.

UST155E ERROR READING CATALOG RECORD -- UNABLE TO RESTART BACKUP

Reason: The sequential backup process was unable to read the required control record to restart the backup. The prior backup may not have progressed far enough to be committed.
Action: Perform an "inquire versions" process to determine whether you are attempting to restart an interrupted backup, whether this backup

UST156E TAPE BACKUP DISALLOWED -- NO UNIT VALUE SPECIFIED IN CONFIGURATION

Reason: The *sequential tape* backup process is unable to build the dynamic allocation request because the "TUNIT" value was not specified in the FDR/UPSTREAM-MVS configurator input "DEFINE" record for this Profile Name.
Action: This may be perfectly valid if you intended to disallow this workstation Profile Name from performing *sequential tape* backups. Otherwise, verify that the configuration "DEFINE" record for this Profile Name contains the "TUNIT" parameter to specify the MVS "unitname" to be used for the dynamic allocation request.

UST157E MERGE BACKUP ERROR -- REASON=reason text

Reason: A MERGE BACKUP was requested by the workstation, but it failed for the reason indicated. Possible reason codes and the actions to be taken are:

1 PREVIOUS FULL BACKUP NOT FOUND
FDR/UPSTREAM-MVS cannot find a record of a previous full backup taken under this profile. Either it has expired or one was never taken. Take a "first time full" backup.

2 ERROR READING CATALOG FOR PREVIOUS BACKUP
FDR/UPSTREAM-MVS could not successfully read its catalog records to locate the previous backup under this profile. Contact Innovation for assistance. If necessary, take a "first time full" backup.

3 PROFILE DOES NOT ALLOW MERGE BACKUP
The profile does not have the MERGE attribute, so MERGE BACKUPs cannot be done. Use a different profile with MERGE, or update the configuration to add MERGE to this profile, or do a "non-MERGE backup".

4 OPERATOR CANCELLED MOUNT OF PREVIOUS TAPE -- CALLING FOR SCRATCH
The console operator replied NO to the console messages requesting that a previous backup tape be mounted so that UPSTREAM can append data to it. UPSTREAM will call for the mount of a SCRATCH tape instead.

5 OPERATOR CANCELLED MOUNT OF MERGE BACKUP
The console operator replied NO to the console messages requesting that a previous backup tape be mounted. If message UST157 REASON=Z is issued, UPSTREAM will recover by requesting the missing files from the workstation. Otherwise, a "first-time full" backup will have to be done.

6 PREVIOUS FULL BACKUP FAILED TO OPEN
An OPEN error occurred when trying to open a previous backup. See the MVS SYSLOG or the UPSTREAM JOBLOG for IBM messages indicating the error. Contact Innovation for assistance. UPSTREAM will recover by requesting the missing files from the workstation.

7 DYNAMIC ALLOCATE FAILED FOR PREVIOUS FULL BACKUP COMP=*cccc* DSN=*dsn*
FDR/UPSTREAM-MVS had an error (completion code "cccc") trying to dynamically allocate the previous full backup file named "dsn". See message UST095E for codes. UPSTREAM will recover by requesting the missing files from the workstation.

8 DEBLOCKING ERROR

FDR/UPSTREAM-MVS found an invalidly formatted block when reading a previous backup tape. That backup is probably not usable. UPSTREAM will recover by requesting the missing files from the workstation.

9 NO PREVIOUS BACKUPS WILL REQUEST FILES FROM PC

FDR/UPSTREAM-MVS could not find a catalog record for a previous backup for this profile. Either it has expired or one was never taken. All required files will be requested from the workstation.

A FILEDATA WITHOUT FILEINFO

FDR/UPSTREAM-MVS did not find expected file-info records on a previous backup tape. This is probably due to a backup taken with a version of UPSTREAM prior to V2.3.2 after MERGE BACKUPs were taken under this profile. A "first-time full" backup will have to be done. If necessary, contact Innovation for assistance.

B FILE=*filename*

Internal error during MERGE processing. Contact Innovation for assistance.

C BAD COUNT

Internal error during MERGE processing. Contact Innovation for assistance.

D PREVIOUS BACKUP WAS INTERRUPTED

During MERGE processing, a backup required as input was interupted and never completed..If possible, complete the backup and rerun MERGE. If this backup can no longer be completed, it might be necessary to exclude it from the MERGE process. Contact Innovation for assistance if necessary.

E VSAM ERROR KEY=*keyvalue*

While writing FILEINFO records to the FILEINFO database file, a VSAM error was encountered.. The key of the record in error is displayed. Review additional messages to determine the actual reason for the error. Contact Innovation for assistance if necessary.

F COPYINCR DSN=*dsname*

During MERGE processing, the system was performing the COPYINCR function and encountered a VSAM error updating the UPSTREAM database with the new information about the location of the COPYINCR datasets... Review additional messages to determine the actual reason for the error. Contact Innovation for assistance if necessary.

G SCRATCH ERROR COMP=*cccc* DSN=*dsname*

During MERGE processing, an error was encountered when attempting to UNCATALOG/SCRATCH a MVS dataset...Review the COMP field value to determine the actual error code associated with the operation (CATALOG). Contact Innovation for assistance if necessary.

H READ I/O ERROR DSN=*dsname*

While deblocking records during normal MERGE processing an error was encountered on the backup dataset name listed in the error message. Contact Innovation for assistance if necessary.

J DUPLICATE MISSING RECORDS KEY=*keyvalue*

While processing files associated with the DUPLICATE database during MERGE processing an error was encountered on the key listed in the error message. Contact Innovation for assistance if necessary.

Q OPERATOR CANCELLED MERGE BACKUP

During MERGE processing, the MVS system operator (or someone with system operator privileges) requested that this UPSTREAM function be terminated. Review the UPSTREAM MVS USTLOG output as well as the MVS SYSLOG to determine who issued the request and their reasoning.

V DUPLICATE VSAM ERROR KEY=*keyvalue*

While processing files associated with the DUPLICATE database during MERGE processing an error was encountered on the key listed in the error message. Contact Innovation for assistance if necessary.

Y DUE TO PRIOR ERROR MERGE TERMINATED

A preceding message indicates that an error occured during a Full Merge Migration. No recovery is possible so the Merge was terminated. See Section 1.6 for the necessary actions you must take before rerunning the Migration.

Z DUE TO PRIOR ERROR WILL REQUEST MISSED FILES FROM PC

This is an information message which follows another message and indicates that the

previous error is one that UPSTREAM can recover from by requesting files from the workstation to replace those that it was unable to copy from a previous backup.

UST158 ***aaaaaaaa*** **MERGE FILES:** ***bbbbbbbb*** **COPIED FROM BACKUP**
cccccccc **ALREADY ON BACKUP** ***dddddddd*** **FROM PC IN PHASE3**
eeeeeeee **DEFERRED MERGE FILES**
ffffffff **FILES MIGRATED:** ***gggggggg*** **MIGRATED FILES COPIED**
hhhhhhhh **MIGRATED FILES DELETED**
iiiiiiii **COPYINCR FILES:** ***mmmmmmmm*** **COPYINCR DIRECTORIES**
nnnnnnnn **BACKUPS COPIED TO FULL**
oooooooo **FILES COPIED FROM DUPLICATE DATABASE**
pppppppp **FILES SAVED IN DUPLICATE DATABASE**

Reason: At the end of a successful MERGE BACKUP, this message indicates what work the MERGE had to do. Not all parts of the message shown will appear, depending on what parts of the MERGE BACKUP process were required for this backup.

Action: None.

UST159E **DSN=*dsname***

Reason: This message accompanies message UST139E. It contains the data set name FDR/UPSTREAM-MVS was attempting to dynamically allocate.

Action: None.

UST160W **NO RECORDS MATCH RESTORE SPECIFICATION**

Reason: The *sequential tape* restore process was unable to locate any backup records which match the requested restore specification..

Action: Verify that you are using a correct Profile Name and VersionDate value. You should perform an Inquire-Versions to verify that the backup version exists. Also, verify that the workstation path name you are requesting was contained in the backup you are attempting to restore. You should perform an Inquire-Files process to verify this.

UST161E **SEND OF FILE-INFO RECORD FAILED**

Reason: The *sequential tape* restore process received a communication error indication after issuing a SEND-DATA request to send a File-Information record to the workstation.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST162E **OPEN FOR SEQUENTIAL BACKUP FILE FAILED**

Reason: The *sequential tape* restore process received an error indication trying to OPEN the *sequential tape* backup data set.

Action: If you are unable to resolve the problem, retain all error information and contact Innovation Data Processing Technical Support for assistance as soon as possible.

UST163E **SEND OF FILE-DATA RECORD FAILED**

Reason: The *sequential tape* restore process received a communication error indication after issuing a SEND-DATA request to send a File-Data record to the workstation.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST164E **DYNALLOC ERROR: R15=*rrrrrrrr* CODE=*cccc* INFO=*iiii***

Reason: The *sequential tape* restore process received an error indication trying to dynamically allocate the tape backup data set to perform the restore process.

Action: Verify that the requested sequential backup data set exists and is cataloged in the system. See message UST095E for information on interpreting the error codes.

UST165E **GOTEVENT RECEIVE ERROR**

Reason: The *sequential tape* restore process received a communication error indication while attempting to receive an "event" information record from the workstation.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST166W **NO FILES MEET RESTORE SPECIFICATION *versiondate filespec***

Reason: The *sequential tape* restore process was unable to locate any files which match the requested restore specification.

Action: Verify that the workstation has specified the correct Profile Name and Versiondate for the restore request; perform an Inquire-Versions request to verify this. Verify that the workstation has specified a valid restore file specification path name that is contained in the backup version being requested; run a Inquire-Files request on this version to verify this.

UST167E OPEN FOR SEQUENTIAL BACKUP FILE FAILED

Reason: The *sequential tape* restore process was unable to OPEN the sequential backup file to perform the restore.

Action: If you are unable to resolve the problem, retain all error information and contact Innovation Data Processing Technical Support for assistance as soon as possible.

UST168E SEND OF FILE-INFO RECORD FAILED

Reason: The *sequential tape* restore process received a communication error indication while attempting to send a File-Information record to the workstation.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST169E SEND OF FILE-DATA RECORD FAILED

Reason: The *sequential tape* restore process received a communication error indication while attempting to send a File-Data record to the workstation.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST170E EVENT HANDLER RECEIVE ERROR

Reason: The *sequential tape* restore process received a communication error indication while attempting to receive an event record from the workstation.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST171E DATA RECORD NOT FOUND FOR RESTORE

Reason: The *sequential tape* restore process found that the data requested by the workstation for restore was not where FDR/UPSTREAM records indicate it should be located.

Action: Verify that the correct tape data set is being used for the restore and that it is not a copy of the tape backup. If so, you will need to run the USTREGEN utility to make that tape data set useable for restore processing.

UST172E *error type* FOR RESTORE OF FILE=*file description*

Reason: The *sequential tape* restore process found that the data requested by the workstation for restore was not where FDR/UPSTREAM records indicate it should be located.
"error type" will be
NO DATA RECORD FOUND - if no records were found at all
DATA RECORDS MISSING - if some records were found
VSAM RECORD ERROR - if an error occured reading the FDR/UPSTREAM repository, or
PREMATURE END-OF-FILE - if the end of the backup was encountered when not expected.
"file description" will include the data set name, volume serial, and location information describing the backup file where the error occurred.

Action: Verify that the correct tape data set is being used for the restore and that it is not a copy of the tape backup. If so, you will need to run the USTREGEN utility to make that tape data set useable for restore processing.

UST173 *function* COMPLETED SUCCESSFULLY (LU=luname)

Reason: This message is issued by all processes to show that the indicated function has completed successfully. This message may optionally be written to the system log (SYSLOG) if the "WTOCOMP" option was specified in the FDR/UPSTREAM-MVS configurator "MAIN" record.

Action: None.

UST174W *function* COMPLETED WITH ERRORS (LU=luname)

Reason: This message is issued by all processes to show that the indicated function has completed with some potential errors. This may simply indicate that one or more of the files requested for backup were not available for one reason or another at the time the backup was performed ("skipped files"). This message may optionally be written to the system log (SYSLOG) if the "WTOCOMP" option was specified in the FDR/UPSTREAM-MVS configurator "MAIN" record.

Action: None.

UST175E *function* FAILED *reason* (LU=*luname*)

Reason: This message is issued by all processes to indicate the indicated function has failed. This message may optionally be written to the system log (SYSLOG) if the "WTOCOMP" option was specified in the FDR/UPSTREAM-MVS configurator "MAIN" record. "reason" may be "WAS SUSPENDED" if the workstation requested suspension or "COMMUNICATIONS" if the failure was due to a communications error; otherwise it will be blank.

Action: Review any preceding messages in the FDR/UPSTREAM-MVS log file, the MVS system log (SYSLOG), and the workstation UPSTREAM log file for the causes of the process failure.

UST176 RESTORE COMPLETED SUCCESSFULLY (LU=*luname*)

Reason: This message is issued by all restore processes to indicate a restore has completed successfully. This message may optionally be written to the system log (SYSLOG) if the "WTOCOMP" option was specified in the FDR/UPSTREAM-MVS configurator "MAIN" record.

Action: None.

UST177W RESTORE COMPLETED WITH ERRORS (LU=*luname*)

Reason: This message is issued by all restore processes to indicate a restore process has encountered errors. This message may optionally be written to the system log (SYSLOG) if the "WTOCOMP" option was specified in the FDR/UPSTREAM-MVS configurator "MAIN" record.

Action: Review any preceding messages in the FDR/UPSTREAM-MVS log file, the MVS system log (SYSLOG), and the workstation UPSTREAM log file for the causes of the process errors.

UST178E RESTORE FAILED *reason* (LU=*luname*)

Reason: This message is issued by all restore processes to indicate a restore process has failed. This message may optionally be written to the system log (SYSLOG) if the "WTOCOMP" option was specified in the FDR/UPSTREAM-MVS configurator "MAIN" record. "reason" may be "WAS CANCELLED" if the workstation requested termination or "COMMUNICATIONS" if the failure was due to a communications error; otherwise it will be blank.

Action: Review any preceding messages in the FDR/UPSTREAM-MVS log file, the MVS system log (SYSLOG), and the workstation UPSTREAM log file for the causes of the process errors.

UST179E FILE-INFO VOL=*vvvvvv* AND BACKUP CATALOG DO NOT MATCH ON DSN=*dsname*

Reason: The volume information in the FDR/UPSTREAM File-Info data set and that in the system catalog entry for the backup data set do not match.

Action: Attempt to determine the reason for the mismatch. If you can determine which volume list is correct, either recatalog the backup data set (e.g., IDCAMS DEFINE NONVSAM) or run USTREGEN against the backup tapes to update the UPSTREAM information (see Section 8).

UST180E SUBTASK PROCESS FAILED *profilename luname* COMP=S*nnn Unnn*

Reason: This message is issued by the FDR/UPSTREAM-MVS main task to indicate that a subtask process has abnormally terminated; "Snnn" is the OS/390 System subtask completion or abend code if applicable, Unnn is the User completion code. This message may optionally be written to the system log (SYSLOG) if the "WTOCOMP" option was specified in the FDR/UPSTREAM-MVS configurator "MAIN" record.

Action: Review the FDR/UPSTREAM-MVS JES "joblog" to determine the cause of the subtask failure.

UST181W NO FILES FOUND FOR VERDATE=*versiondate* PATH=*fileid*

Reason: This message is issued by the FDR/UPSTREAM-MVS sequential restore processes to indicate they were unable to locate any File-Information records which matched the requested restore specification.

Action: Verify that the workstation is using the correct Profile Name and VersionDate to perform the restore; perform an Inquire-Versions request to verify this. Verify that the workstation is using a valid file path name for the restore that was included in this backup version; perform an Inquire-Files request to verify this.

UST182E CNOS REQUEST FAILED

Reason: During an initiation request an "CNOS" request returned a communication error indication..

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST183E SEND-DATA RUN-FUNCTION STRUCTURE FAILED

Reason: During an initiation request an "send data" request returned a communication error indication.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST184E ERROR ON RECEIVE FROM REQUESTOR

Reason: During an initiation request an "receive data" request returned a communication error indication.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST185E ERROR ON SEND-DATA TO WORKSTATION

Reason: During an initiation request an "send-data" request returned a communication error indication.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST186E ERROR ON DEALLOC-CONFIRM TO WORKSTATION

Reason: During an initiation request an "deallocate-confirm" request returned a communication error indication.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST187E ERROR RECEIVING TYPE-90 EVENT RECORD FROM WORKSTATION

Reason: During an initiation request an "receive data" request for an error notification message from the workstation returned a communication error indication.

Action: Communication error codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST188E INVALID STRUCTURE RECEIVED FROM WORKSTATION -- EXPECTED TYPE-*xx* EVENT

Reason: During an initiation request an invalid structure was received from the workstation LU. This is most likely an internal UPSTREAM error.

Action: Please retain all the error information and contact Innovation Data Processing Technical Support for assistance.

UST189E SEND-CONFIRMED TO REQUESTOR FAILED

Reason: During an initiation request an "send-confrmd" request to the USTBATCH requestor returned a communication error indication.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST190E APPC/TCP ALLOCATE ERROR

Reason: VTAM or TCP/IP returned an error indication as the result of the FDR/UPSTREAM-MVS mainframe-initiator module having issued an "ALLOCATE" request to initialize a conversation to the indicated workstation.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST191E UNEXPECTED DEALLOCATE RECEIVED FROM WORKSTATION

Reason: An "deallocate" indication was detected prematurely

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST192E DEALLOCATE RECEIVED FROM REQUESTOR -- REQUEST TERMINATED

Reason: During an initiation request an "deallocate" indication was received from the requestor prematurely. The initiation request is being discarded.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST0193E *reason* -- REQUEST FAILED

Reason: During an remote initiation attempt (USTBATCH), the request could not be initiated due to the reason indicated.

Action: Validate that the target workstation name is valid and that the workstation is active and eligible for a session and conversation request (for TCP/IP-connected workstations, FDR/UPSTREAM may need to started on the workstation before the remote initiation is attempted).

UST194E TARGET LU IS INVALID - REQUEST FAILED

Reason: The USTBATCH utility found the specified "TARGLU" value to be invalid. This can also occur if TARGNAME= was specified but the indicated name was not registered.

Action: Verify that the "TARGLU" value specified to USTBATCH is correct. If the target name was not registered, ensure that the name is registered and resubmit the request.

UST195E LOGMODE NAME IS INVALID - REQUEST FAILED

Reason: The USTBATCH utility found the value specified for the "LOGMODE" parameter was invalid.

Action: Verify that the "LOGMODE" parameter value specified to the USTBATCH utility is valid.

UST196E REQUEST PARAMETER ERROR RC='*xxxxxxxx*'

Reason: The USTBATCH utility found an invalid parameter in the input stream.

Action: Correct the indicated parameter statement.

UST197 REMOTE INITIATION TO *lu1* FROM *lu2* - USTBATCH JOBNAME=*jobname* USERID=*userid*

Reason: This is an informational message indicating a remote initiation is in progress from an LU named "lu2" to an LU named "lu1'. If the request is from USTBATCH, the batch

jobname or TSO userid running USTBATCH is shown. If the security userid was successfully extracted from that job or TSO session, it is also shown.

Action: None.

UST198E ERROR RECEIVING RUN_FUNCTION FROM REQUESTOR

Reason: During an initiation request an "receive data" request returned a communication error indication.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST199E INITIATOR UNABLE TO GENERATE A VTAM RPL - POSSIBLE STORAGE SHORTAGE

Reason: During an initiation request the online initiator was unable to generate a VTAM RPL control block. This may indicate a storage shortage.

Action: Communication error codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST200E RESTORE BACKUP DENIED DUE TO DUMMY (SIMULATE) PROFILE

Reason: A request was received from a workstation to restore from a backup taken under a special DUMMYxxx profile used for backup testing and simulation. Such backups do not contain file data and cannot be restored.

Action: None.

UST200E REMOVE BACKUP DENIED DUE TO DUPLICATE=NOCOPY OPTION

Reason: A request was received from a workstation to remove a *keyed* backup under the special USTDUPFL profile used for duplicate file support. The USTDUPFL profile has the DUPLICATE=NODELETE option which inhibits this function. The backup was not removed.

Action: None.

UST201E VSAM MODCB/POINT REQUEST FAILED

Reason: The "remove-backup" processor encountered a VSAM error. This message is accompanied by message UST051E containing the VSAM error indicators.

Action: Refer to message UST051E for details on interpreting the error.

UST202E REMOVE BACKUP ERROR REASON=*reason*

Reason: The 'remove-backup" processor encountered an error for the reason shown.

Action: Based on the reason code, correct the error and resubmit the request.

UST203E VSAM ERASE REQUEST FAILED

Reason: The "remove-backup" processor encountered a VSAM error. This message is accompanied by message UST051E containing the VSAM error indicators.

Action: Refer to message UST051E for details on interpreting the error.

UST204E *reqtype* REQUEST FAILED -- R15=*nnnnnnnn* DSN=*dsname*

Reason: The "remove-backup" processor encountered an error attempting to delete a sequential data set. "reqtype" is LOCATE, SCRATCH, or UNCATALOG. "nnnnnnnn" is the return code in hex.

Action: If you are unable to resolve the problem, please retain all the error information and contact Innovation Data Processing Technical Support for assistance.

UST206E SEND CONFIRMED RESPONSE ERROR

Reason: The "remove-backup" processor encountered a communication error attempting to return an "confirmed" response to the requestor.

Action: Communication **e**rror codes will be reported in a following message. Consult TCP/IP or IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST207 REMOVE-BACKUP ENTERED BY USER *username*

Reason: The "remove-backup" processor has been entered on request by the user indicated. This message is informational only.

Action: None.

UST208 REMOVING: *profile versiondate backup-type - nnnnnnnn* FILE RECORDS ERASED

Reason: The "remove-backup" function (REMOVEDSN) has been entered and is deleting the specified backup version. This may also occur during Full Merge Migration as Simple Migration files are copied to the full backup and deleted. "nnnnnnnn" includes both file records and directory records. If backups under the special USTDUPFL profile for duplicate files are being deleted, the text will say "DUPLICATE FILES ERASED". This message is informational only.

Action: None.

UST209E PREMATURE END-OF-FILE ON DSN=*dsname*

Reason: The restore processor encountered the end of the tape backup file before finding all expected data. Possibly the catalog entry was corrupted so that not all volumes are recorded.

Action: Verify that the tape data set requested during the restore is the correct one, and that this is not a copy of the original backup file data data set.

UST210E TARGET LU NOT AVAILABLE -- *function* TIMEOUT

Reason: The FDR/UPSTREAM-MVS mainframe initiator has determined that the target LU is not available to respond to a conversation initiation request.

Action: Verify that the target LU is specified correctly in the batch requestor job. Verify that the target LU is available and configured for session and conversation requests. Review the UPSTREAM log on the target LU for error messages. assistance.

UST211 ENTERING WAIT FOR RETRY

Reason: The FDR/UPSTREAM-MVS mainframe initiator was unable to allocate the requested conversation with the target UPSTREAM LU. It is entering a 10-minute wait period prior to attempting a retry operation. This message is informational only.

Action: None.

UST212 ATTEMPTING CONVERSATION RETRY

Reason: The FDR/UPSTREAM-MVS mainframe initiator task has completed it's wait period and is attempting to retry the conversation initiation to the specified target UPSTREAM LU. This message is informational only.

Action: None.

UST213E TARGET LU NOT AVAILABLE - CONFIRM TIMEOUT

Reason: The FDR/UPSTREAM-MVS mainframe initiator has sent the specified request to the target LU; but, has not received a confirmation response within the 5 minute timeout window.

Action: Verify that the target UPSTREAM LU is still functional. Review the UPSTREAM log on the target LU for errors.

UST214E INVALID STRUCTURE RECEIVED - REQUEST ABORTED

Reason: The FDR/UPSTREAM-MVS mainframe initiator received an invalid response from the target LU. This is most likely an internal UPSTREAM error.

Action: Please retain all the error information and contact Innovation Technical Support for assistance.

UST215E IMMEDIATE SHUTDOWN REQUESTED - REQUEST ABORTED

Reason: The FDR/UPSTREAM-MVS mainframe initiator was notified that the system operator requested an immediate FDR/UPSTREAM-MVS shutdown. The indicated process was aborted.

Action: None.

UST216W IMMEDIATE SHUTDOWN REQUESTED - *function* TERMINATED

Reason: The indicated function was in progress when FDR/UPSTREAM-MVS received an immediate shutdown request from the System Operator. The function is terminated.

Action: None.

UST217 TCPACCESS TCP CONNECTED TO SSN=*ssss*,PORT=*ppppp*

Reason: A connection has been made between FDR/UPSTREAM and a workstation via Sterling's SOLVE:TCPaccess. The subsystem id (ssss) and port number used (ppppp) are displayed.

Action: None.

UST218E TAPE RESTORE DISALLOWED -- TAPEMOUNT SECURITY CHECK FAILED

Reason: SECLVL=2 or 3 was specified in the configuration, and the security check for tape restores failed.

Action: See Section 4 "Security" for details on authorizing restores from tape.

UST219E CATALOG RECORD NOT FOUND FOR RESTORE OF *versiondate*

Reason: During FDR/UPSTREAM-MVS Restore processing for a specified "versiondate", no records were found.

Action: Use the "Inquire Versions" request on the Restore menu to list all available versions, to verify that your request was correct. If it was correct, this is an internal error.

UST220E SECURITY: INVALID USERID FORMAT

Reason: During security authorization checking, FDR/UPSTREAM-MVS determined there was an invalid format in a control structure containing the specified UserID.

Action: This is an internal error. Retain all error information and contact Innovation Data Processing Technical Support for assistance.

UST221E SECURITY: INVALID PASSWORD FORMAT

Reason: During security authorization checking, FDR/UPSTREAM-MVS detected an invalid format item in a received control structure.

Action: This is an internal error. Please retain all error information and contact Innovation Data Processing Technical Support for assistance.

UST222E SECURITY CHECK FAILED SAF COMP=X'*ssss*', RACF COMP=X'*rrrr*' CODE=X'cccc' reason

Reason: During security authorization checking, FDR/UPSTREAM-MVS received a non-zero return code from the MVS SAF Router (ssss) or from your security system (rrrr and cccc). "reason" will have a brief description of the error for common error codes. However, if a check for authority to a given resource failed, "reason" will display the class and entity names, e.g.,

CLASS=$UPSTRM ENTITY=profile

Action: Verify the specified Userid and Password are correct and defined to your security system. A SAF error may mean that your security system is not functioning.

UST223E SECURITY: LEVEL-2 VERIFICATION FAILED

Reason: The SAF (security) call to verify the user's authority to the UPSTREAM Profile Name (as requested by SECLVL=2 or 3 in the UPSTREAM Configuration) has failed. The user is not authorized.

Action: If appropriate, authorize the user to use the Profile Name.

UST224 ***profilename ssssss.sss* CPU SECONDs USED IN *process***

Reason: The indicated number of CPU seconds were used in processing the just-completed request for the indicated Profile name

Action: None.

UST226 **VERSION ROLLOFF STARTED**

Reason: This informational message is issued by the *keyed* and *non-keyed* (archive) backup processes to indicate a "version rolloff" is occurring for the specified Profile Name.

Action: None.

UST227 **ROLLOFF -- ERASE C-RECORD *aaaaaaaa nnnnnnnnnnnn***

Reason: This informational message is issued by the *keyed* and *non-keyed* backup "rolloff" processes to indicate a "version rolloff" is occurring for the specified Profile Name "aaaaaaaa" with the VersionDate or workstation path name of "nnnnnnnnnnn".

Action: None.

UST228 **CONFIGURATION TABLE [RE]LOADED**

Reason: This informational message confirms that the FDR/UPSTREAM configuration table has been successfully LOADED during online initialization or successfully RELOADED in response to a F UPSTREAM,REFRESH console command.

Action: None.

UST229 **REQUEST USING *"profname"* CONFIGURATION ENTRY**

Reason: The profile name entered at the workstation has no entry in the FDR/UPSTREAM-MVS configuration, but there was either a profile defined with WSPREF=prefix which matched the beginning of the entered profile name, or a profile defined with the special name "GLOBAL". The characteristics of this profile were used for this request.

Action: None.

UST230 **INQUIRE-FILES PROCESS STARTED**

Reason: An inquire-files request was received from a workstation.

Action: None.

UST231 **RESTARTED-BACKUP PROCESS ENTERED**

Reason: This informational message is issued by the backup "restart" process to indicate it has accepted the workstation request and has begun the restart process.

Action: None.

UST232 **RESTARTED-BACKUP PROCESS ENDING**

Reason: This informational message is issued by the backup "restart" process to indicate it has completed the "backup restart" process. Any errors that may have occurred will be indicated by other messages in the log file.

Action: None.

UST233* **STARTING BACKUP PROCESS, TYPE=*tttt* LU=*nnnnnnnn*[BACKUP=*bbbbb*]**

Reason: This informational message is issued by all backup processes at the time the backup begins. The "type" value (tttt) may be any of the four backup types supported by FDR/UPSTREAM-MVS: "KEYED", "ARCH", "DASD", or "TAPE". The LU value contains the network LU name of theworkstation. If this is a sequential backup, the "backup" value (bbbbb) indicates the type of sequential backup: "FULL" (first-time full), "FULLM" (full merge), "INCR" (incremental merge), "USER" (non-merge under a profile enabled for MERGE) or "NON-M" (non-merge under a non-merge profile). If the "WTOCOMP" option was specified on the FDR/UPSTREAM-MVS configurator "MAIN" record, this message is also written to the system console and the system log (SYSLOG) via a "WTO". If this is a simulated backup (using a DUMMYxxx profile

name), "STARTING" is changed to "SIMULATE". For a file transfer, "STARTING" is changed to "TRANSFER".

Action: None.

UST234 BACKUP DATE: *mm/dd/yyyy*- ESTIMATED SIZE: *kkkkkkkkkk* KB

Reason: All backup processes issue this informational message at the time the backup begins. It indicates the date the backup began on the mainframe and the estimated size in kilobytes.

Action: None.

UST235 STARTING BACKUP NON-I/O TEST

Reason: This informational message indicates that the non-I/O backup test routine has started.

Action: None.

UST236 INQUIRE-VERSIONS PROCESS ENDING

Reason: An inquire-versions request from a workstation was completed.

Action: None.

UST237 INQUIRE-FILES PROCESS ENDING *nnnnnnn* FILES SENT FROM *mmmmmmm* VERSIONS

Reason: An inquire-files request from a workstation was completed.

Action: None.

UST238 SEQUENTIAL RESTORE PROCESS STARTED

Reason: This informational message indicates that a sequential restore has begun.

Action: None.

UST239* RESTORE PROCESS STARTED, TYPE=*tttt* LU=*nnnnnnnn*

Reason: This informational message is issued for all restore processes at the time the restore begins. The "type" value (tttt) may be any of the four backup types supported by FDR/UPSTREAM-MVS: "KEYED", "ARCH", "DASD" or "TAPE". The LU value contains the network LU name of the workstation. If the "WTOCOMP" option was specified on the FDR/UPSTREAM-MVS configurator "MAIN" record, this message is also written in the system console and the system log (SYSLOG)via a "WTO".

Action: None.

UST240W* ACTIVE TASK FOUND -REPLY W(AIT)-FOR TASK TERM,TERM ID=NNNN, C(ANCEL),S(TATUS) OR I(GNORE)

Reason: The operator issued a console CANCEL command for the FDR/UPSTREAM online task, but FDR/UPSTREAM CANCEL protection (see Section 5.3) detected that there were active backup, restore, or utility subtasks. This message is preceded by the UST013/014/015 messages showing the active subtasks.

Action: The operator may reply:

WAIT - to wait for all tasks to end naturally before terminating FDR/UPSTREAM
TERM ID=nnnn - to terminate the specified task (nnnn is the task ID from the status display)
CANCEL - to process the CANCEL command after closing all open data sets.
STATUS - to redisplay the subtask status
IGNORE - to ignore the CANCEL and return to normal operation

All of the replies (except TERM) can be abbreviated by the first character.

UST240W* ACTIVE TASK FOUND - function AWAITING TASK TERMINATION

Reason: The operator requested termination of FDR/UPSTREAM via a STOP (P) console command (*function*=SHUTDOWN) or via a CANCEL (C) console command (*function*=CANCEL) but there were active backup/restore/utility tasks in progress.

For CANCEL, this message is issued if the operator replies WAIT to the preceding UST240W message.

Action: FDR/UPSTREAM will terminate when all subtasks have completed.

UST241* *function* NOW ACTIVE

Reason: A trace or utility function has been started. See Section 5 for details on starting traces and utility functions.

Action: None.

UST241* *function* COMPLETED RC=*nn*

Reason: A trace or utility function has completed with completion code "nn".

Action: None.

UST242* QUIT ACCEPTED -- SHUTDOWN IN PROGRESS

Reason: A console command has been entered requesting immediate shutdown of FDR/UPSTREAM. See Section 5 "Operating" for details on shutting down UPSTREAM.

Action: If there were active backup/restore tasks, they will be signaled to interrupt their processing. FDR/UPSTREAM will terminate when all subtasks have terminated.

UST243* QUIT ACCEPTED -- LU=*luname* TERMINATED

Reason: A console command has been entered requesting immediate termination of the UPSTREAM session with the specified logical unit. The termination was successful.

Action: None.

UST244E* QUIT REJECTED -- LU=*luname* INVALID OR NOT ACTIVE

Reason: A console command has been entered requesting immediate termination of the UPSTREAM session with the specified logical unit. The luname is either not a valid name or is not currently in session with UPSTREAM.

Action: Determine the proper value to specify for LUNAME and resubmit the request.

UST245 STARTING VSAM WRITE TEST PROCESS

Reason: This informational message indicates that the VSAM write test has begun.

Action: None.

UST246 *xxxx* FILE-DATA, *xxxx* FILE-INFO

Reason: This informational message indicates the number of records written per second to the File-Data and File-Info files during the VSAM write test.

Action: None.

UST247 *luname* * SNA SESSION DEACTIVATED *

Reason: The SNA session with the indicated logical unit has been terminated.

Action: None.

UST248 *profilename luname* * PROCESS DETACHED *

Reason: The backup or restore subtask for the indicated profile name and logical unit has been terminated.

Action: None.

UST249* MODIFY COMMAND COMPLETED - REQUEST: *parms*

Reason: An F UPSTREAM command entered on the system console has been completely processed by UPSTREAM.

Action: None.

UST250E DATA RECORD(S) NOT FOUND ON REPOSITORY

Reason: Data records were not found where they were expected.

Action: The FDR/UPSTREAM repository may be corrupted. Contact Innovation for assistance.

UST253E* MAXTASKS EXCEEDED - LU=*luname* REJECTED

Reason: The FDR/UPSTREAM-MVS received a request to initiate a new conversation, but the maximum number of active UPSTREAM tasks specified in the UPSTREAM configuration (see Section 3) has been reached. This conversion request is rejected.
Action: Retry the request at a later time, after some other UPSTREAM tasks have terminated.

UST254W FDRSOS/RAW BACKUP FROM *versiondate* BYPASSED. USE FDRSOS/PHYSICAL BACKUP PANEL.

Reason: One or more of the backups selected for restore are either "raw" backups or FDRSOS backups. These cannot be restored from the normal restore panels; select the raw backup panel to restore them.
Action: The FDRSOS/RAW backup is bypassed. If no other backups were selected, the restore is terminated.

UST263* UPSTREAM LOG SWITCH WAS SUCCESSFUL

Reason: A F UPSTREAM,SWITCHLOG console command was successfully executed, to switch the UPSTREAM log to the alternate log file.

UST263E* UPSTREAM LOG SWITCH FAILED

Reason: A F UPSTREAM,SWITCHLOG console command was entered, but the switch to the alternate log file failed, probably due to errors opening the alternate log. Logging to the current log file continues.
Action: Check the FDR/UPSTREAM job log for IBM error messages relating to this error. Correct the problem if possible.

UST265E* REORG COMMAND BYPASSED REASON=*reason text*

Reason: A F UPSTREAM,REORG console command was entered, but the reorganization request was rejected for the reason indicated, which may be:
TASK ACTIVE -- a REORG cannot be initiated when another task other than a REORG of another file is already active
DD NOT FOUND -- the DDNAME specified was not one of the 3 permitted.
FILE IS NOT BELOW %FREE -- %F=nn was specified and the file has more that nn% free space.
%F KEYWORD INVALID - an invalid value was specified for the %F= operand.

UST266E OPERATOR CANCELLED MOUNT OF BACKUP VOLUME

Reason: The console operator replied NO to the console messages requesting that a previous backup tape be mounted.
Action: The requested restore is terminated. If the tape can be mounted at a later time, resubmit the request at that time.

UST267E C-STRUCTURE NOT FOUND

Reason: A catalog record was not found where expected.
Action: The FDR/UPSTREAM repository may be corrupted. Contact Innovation for assistance.

UST268E INVALID TCP ADDRESS RECEIVED - REQUEST ABORTED

Reason: For a mainframe-initiated request (via USTBATCH) an invalid TCP/IP target address was specified.

Action: Verify and correct the TCPTARG= value and resubmit the USTBATCH job.

UST269E REQUEST CONTROL REJECT FAILED

Reason: For a mainframe-initiated request (via USTBATCH) a VTAM APPC REQUEST-CONTROL request to the workstation failed.

Action: Check the workstation. Make sure that its APPC software is operating correctly.

UST270E NOTIFY SEND TO USTBATCH FAILED

Reason: The FDR/UPSTREAM online initiator attempted to communicate with the USTBATCH job that initiated the request, but the APPC SEND request failed. A UST038E message will follow with deatils.

UST280 TCP *type* CONNECT TO SOCKET=*sssss*,PORT=*pppp*,IPA=*aaa.bbb.ccc.ddd*

Reason: A connection has been made between FDR/UPSTREAM and IBM's TCP/IP. The socket number and port number used, and the network address (in dotted decimal format) are displayed. If "type" is MAIN, this is the UPSTREAM connecting to TCP/IP during initialization and the IPA is UPSTREAM's primary address (there may be others if your host has multiple TCP/IP connections to the network). If "type" is USER, this is a workstation connecting to UPSTREAM and the address is that of the workstation.

UST281E TCPACCESS MSG: *text*

Reason: Sterling's SOLVE:TCPaccess reported an error. "text" is the descriptive error text returned by TCPaccess.

Action: This is usually accompanied by other messages. See the Action for those messages.

UST283 BYTES PER SECOND

Reason: A FDR/UPSTREAM performance test was requested from a workstation. This message is the header on a histrogram which shows the range of instantaneous data rates that were measured during that test.

UST284 BACKUP EXCEEDS MAXIMUM VOLUMES - BACKUP TERMINATED

Reason: A single tape backup file has required more than 100 tape volumes

Action: The backup is terminated. To rerun the backup, you must reduce the number of tapes required. If the hardware supports it, you might use larger capacity tapes, or you might enable IDRC compaction by adding the TAPECOMP operand to the workstation profile in the FDR/UPSTREAM configuration (see Section 3). If necessary, change the backup file specifications to reduce the amount of data to be backed up (you may need to break the backup into 2 pieces, under different profile names).

UST285 TARGET *pcversion* NAME=*targname* IS REGISTERED TO *netname*

Reason: A workstation has used the FDR/UPSTREAM-MVS "Registered Name Service" to report that it has been configured with FDR/UPSTREAM workstation name "targname" (up to 16 characters). "netname" will be "LU=luname" for VTAM/SNA workstations and will be "IP=nnn.nnn.nnn.nnn..port" for TCP/IP-connected workstations. "pcversion" will display the version of FDR/UPSTREAM in use on the workstation, if available. The target name name can now be used with the TARGNAME= parameter of USTBATCH (see Section 8.8 for details).

If the target name is being deleted from the table due to a request from the workstation or from the FDR/UPSTREAM-MVS ISPF dialog, the additional text " WAS DELETED" appears at the end of the message. The target name is no longer usable unless it is registered again. If the target name is marked for automatic FDR/UPSTREAM software updates, the additional text "AUTO-UPDATE" appears.

UST286W DUPLICATE INDEX BYPASSED - *reason*

Reason: A backup was being done under the special profile USTDUPFL for duplicate files (See Section 1.4). The workstation file identified by the UST113 message which follows was not included in the index of duplicate files for the reason given:
FILE EXCEEDS 30 CHARACTERS - for workstations that support long file names, a filename over 30 characters cannot be included in the duplicate file list.
FILE ALREADY EXISTS - a workstation file with the same file name, update timestamp and size has already been backed up under USTDUPFL.
FILENAME IS INVALID - the file name is invalid or is missing

Action: No action is normally required, but in some circumstances you may want to rename the failing file and delete and redo the USTDUPFL backup.

UST287* UPSTREAM TAPE UNIT NOT AVAILABLE, VARY ONE ONLINE OR REPLY 'RETRY', 'WAIT', 'CANCEL' OR 'DISPLAY'

Reason: To avoid allocation interlocks, FDR/UPSTREAM does dynamic allocation of tape drives with a flag indicating it is not to wait if no drives are available. An allocation received an error indicating that all eligible tape drives are offline or in use. This message is displayed on the system console as a WTOR.

Action: If the operator does not reply to the message, FDR/UPSTREAM will retry the allocation at 5 second intervals; if the operator varies a drive online or a drive is deallocated by another task, the allocation will succeed and the message will be deleted. The operator may also reply:
RETRY - retry the allocation. The message will be reissued if there are still no available drives.
WAIT - same as not replying except that the message is deleted.
CANCEL - fail the allocation, which will fail the backup.
DISPLAY - retry the allocation, allowing MVS allocation recovery to take place. MVS messages on the console will indicate which offline tape drives are eligible.
WARNING: if you reply DISPLAY you must reply to the MVS allocation messages promptly to avoid potential allocation interlocks.

UST288E I/O ERROR *type* BACKUP FILE CHECK MVS LOG

Reason: A sequential backup or restore has encountered an I/O error on the backup file. "type" is either "WRITING TO" or "READING THE". The backup or restore is interrupted.

Action: Check the MVS job log of the FDR/UPSTREAM-MVS tasks for MVS messages which may indicate the type of I/O error which occured. It will probably not be possible to restart the backup, but you should be able to restore any files which were successfully written and recorded.. If necessary, contact Innovation Technical Support for assistance.

UST289E ERROR DURING POINT TO A BACKUP FILE

Reason: A sequential restore has encountered an error issuing a POINT to position to a record in the backup file. The restore is interrupted. This may be due to an invalid pointer in the FDR/UPSTREAM repository.

Action: Execute the USTREGEN utility against this backup to refresh the pointers in the repository. If necessary, contact Innovation Technical Support for assistance.

UST290W HISTORY RECORD BYPASSED *reason*

Reason: A FDR/UPSTREAM history record was not recorded in the FDR/UPSTREAM catalog file for the reason indicated, which may be:
CATALOG NOT OPEN - probably because it is being reorganized
DUE TO CATALOG ERROR COMP=*xxxxxxxx* - the "comp" is the VSAM RPL feedback word.

Action: The operation completed, only the history record was lost. If multiple catalog errors occur, you may need to reorganize the catalog file. If necessary, contact Innovation Technical Support for assistance.

UST291W ACQUIRING THE USERID OF USTBATCH BYPASSED REASON=*reason*

Reason: FDR/UPSTREAM attempted to extract the security userid from the address space of a USTBATCH job which has requested a UPSTREAM function, but the attempt was unsuccessful. Reason codes are:
1 - CROSS-MEMORY ALREADY SETUP indicates an internal error.
2 - AXSET MACRO ERROR indicates an internal error.
3 - ERROR FINDING USTBATCH TCB indicates that could not locate a TCB (Task Control Block) in the other address space. May indicate that the indicated address space was not really a batch job or TSO user.
4 - JOB PACK QUEUE ERROR indicates that the list of programs loaded in the address space could not be located. May indicate that the indicated address space was not really executing a batch job.
5 - PROGRAM NAME NOT USTBATCH indicates that UPSTREAM could not find a program called USTBATCH in the address space. May indicate that the address space was not really executing USTBATCH.

6 - USTBATCH IS NOT AUTHORIZED indicates that the USTBATCH program in the address space is not an authorized program. When USTBATCH is executed directly under TSO, this will occur unless USTBATCH is added to the list of authorized TSO programs (See Section 2.12).
7 - MISMATCH ON INTERNAL FIELD indicates a validation check failed.
8 - NO ACEE (SECURITY) POINTER indicates there was no ACEE (security control block) associated with the address space, so no userid could be extracted.
9 - NO USERID ON USTBATCH JOB indicates that there was no security userid stored in the ACEE.
A - USTBATCH NOT ON SAME CPU indicates that the USTBATCH job was not executing on the same MVS image as the FDR/UPSTREAM online task, so the userid could not be extracted.

Action: Since a validated userid could not be extracted from the USTBATCH job, FDR/UPSTREAM will require that a security password be provided (as well as a userid) for validation. This security infomation could be specified at the workstation or could be in the USTBATCH parameters. If a validated userid was extracted and it matched the userid associated with the USTBATCH request, no password would be necessary.

If necessary, contract Innovation for assistance. Existing USTBATCH users might get this message and the resulting return code 4 in jobstreams which used to get RC=0.

UST292 BACKUP SIZE EXCEEDS DASD MAX SIZE - SWITCHING TO TAPE

Reason: An incremental MERGE backup was directed to sequential DASD, but the estimated size of the backup exceeded the DASDMAXSIZE= value in the profile, so the backup was directed to tape instead.

UST295E FDRSOS LOCAL BACKUP ERROR VOL=*vvvvvv reason*

Reason: FDR/UPSTREAM/SOS attempted to use the volume with serial "vvvvvv" as an FDRSOS Local Backup volume (see section 1.7) but an error occurred. Reason codes are:
MVS VOLSER NOT PSEUDO ONLINE - the volume has not been made available by a FDRSOS VARYON command since the last IPL.
VOLSER LENGTH IS INVALID - the pseudo volume serial passed by FDR/UPSTREAM on the workstation was too long. Internal error.
DUE TO DYNAMIC ALLOCATE ERROR - dynamic allocation of the local backup volume failed. A UST095 message will be printed to document the dynamic allocation error.
UNABLE TO ACQUIRE STORAGE - a GETMAIN for required local backup working storage failed. You may need to increase the region for the FDR/UPSTREAM task or reduce the number of concurrent UPSTREAM operations.
I/O ERROR READING/WRITING DISK - an I/O error occurred on the local backup disk.
PROFILE CONTROL RECORD ERROR - the profile records written to the local backup by the LOCALBACKUP statement of FDRSOS are not valid. You may need to run the FDRSOS LOCALBACKUP again.
CANNOT ACQUIRE SPACE ON VOLUME - FDR/UPSTREAM has deleted all of the eligible backups from the local backup volume (if any) but is still unable to allocate sufficient space on that volume for the current backup. You may need to use a different local backup volume, or reconfigure/reformat this volume to be larger.
DUE TO TIOT/DEBCHK ERROR - internal error.
PROFILE NAME NOT FOUND - the profile name was not found in the records of the local backup disk. Internal error.
MAXIMUM # OF BACKUPS EXCEEDED - more than 255 backups have been retained on the local disk for the current profile.
MAXIMUM # OF PROFILES EXCEEDED, but the number of profiles currently recorded exceeds MAX#PROF=nnn. You must either update MAX#PROF or use a different local backup disk for this profile.

BACKUP VERSIONDATE NOT FOUND - FDR/UPSTREAM was attempting to delete a backup from the local backup disk, but it was not found in the records of the disk. This is probably an internal error.
RELEASE UNUSED SPACE ERROR - internal error.
MISSING INTERNAL STRUCTURE - internal error
NOT ALLOWED TO ADD NEW PROFILE - when the volume was initialized (the LOCALBACKUP statement of FDRSOS), DYNADDPROF=NO was specified, to prevent new profile names from being dynamically added, and the current profile name is not among those already recorded on the disk.
UNKNOWN RECORD TYPE - *xxxxxxxx* - invalid local backup record. Internal error
RECORDSIZE EXCEEDS BUFFER SIZE - internal error
SEGMENT NUMBER NOT IN EXTENTS - internal error
VERSION NUMBER IS STILL IN USE - internal error
UNABLE TO ACQUIRE PERMA-CACHE - internal warning, can be ignored (message number changes to UST295W).

Action: If possible, correct the error and reexecute. If necessary, contract Innovation for assistance.

UST296 FDRSOS LOCAL BACKUP *#nnn-versiondate status* VOL=*vvvvvv*

Reason: FDR/UPSTREAM/SOS successfully used a FDRSOS Local Backup volume (vvvvvv) for the backup indicated by "versiondate". "nnn" is an internal backup number on the local disk. "status" may be:
WAS ALLOCATED TO
WAS DELETED FROM
WAS ROLLED OFF

CONFIGURATOR MESSAGES (UST301 - UST399)

These messages are generated by the FDR/UPSTREAM-MVS configurator program, USTCONFG. They are written to the UPSTREAM log (DD "USTLOG") which is usually a SYSOUT data set. Please refer to Section 3 for the correct syntax of all USTCONFG input statements and parameters.For messages that indicate an error condition: if you are unable to resolve the problem, please save all output from USTCONFG and contact Innovation Technical Support for assistance.

UST301E NO APPLID FOUND IN "MAIN" RECORD - TERMINATING

Reason: While parsing the configuration input file "MAIN" record, the FDR/UPSTREAM-MVS Configurator, USTCONFG, was unable to locate the "APPLID=" parameter. The "APPLID" parameter is required in the configuration input file "MAIN" record.

Action: Add the "APPLID" parameter and rerun the Configurator.

UST305W WSNAME/WSPREF MISSING IN COMMAND - RECORD BYPASSED:

Reason: While parsing a DEFINE/MODIFY/COPY statement, the FDR/UPSTREAM-MVS Configurator, USTCONFG, found no WSNAME= or WSPREF= parameter in the listed record.

Action: Correct the input configuration source file and rerun the Configurator.

UST306W NEWNAME/NEWPREF MISSING IN COMMAND - RECORD BYPASSED:

Reason: While parsing a COPY statement, the FDR/UPSTREAM-MVS Configurator, USTCONFG, found no NEWNAME= or NEWPREF= parameter in the listed record.

Action: Correct the input configuration source file and rerun the Configurator.

UST307W DEFAULTS TAKEN - ONE ONLINE BACKUP PERMITTED FOR FOLLOWING RECORD:

Reason: This message is a warning message. It indicates that the Configurator was unable to find the "ONLINE" and "ARCHIVE" parameters and their associated values in the record listed. The Configurator, USTCONFG, has taken the default values for these parameters.

Action: If necessary, correct the input configuration source file and rerun the Configurator.

UST313E CONTINUATION STATEMENT EXPECTED - NOT FOUND

Reason: The previous statement indicated that it should continue on the next statement (trailing comma) but a valid continuation statement was not found.

Action: Correct the continuation syntax and rerun the configurator.

UST319W SUBSYS PARAMETER NOT FOUND - DEFAULTED TO UPSTREAM

Reason: This is a warning message. The FDR/UPSTREAM-MVS Configurator, USTCONFG, did not find a "SUBSYS=" parameter in the input configuration "MAIN" record. The "SUBSYS" parameter value has been defaulted to "UPSTREAM".

UST322E NO CONFIGURATION RECORD GENERATED - FILE IS NOT USABLE

Reason: Due to catastrophic errors, the FDR/UPSTREAM-MVS Configurator, USTCONFG, was unable to generate the configuration table.

Action: Review the Configurator output log for errors, correct them, and rerun the Configurator.

UST323E VAULT CANNOT BE SPECIFIED ON RESERVED PROFILES

Reason: A DEFINE/MODIFY/COPY for one of the reserved profile names (see Section 3.8) contained the VAULT parameter. This is not valid.

Action: Remove VAULT, and rerun the Configurator.

UST324E DASDPREF/TAPEPREF MUST CONTAIN "?" MASK WITH VAULT OPTION

Reason: For profiles with the VAULT parameter specified, the DASDPREF= and TAPEPREF= parameters must contain a question mark (?) somewhere within the name, anywhere except as the first character of an index level. This will be replaced with the copy number (1 to 9).

Action: Correct the prefix, or specify NOVAULT, and rerun the Configurator.

UST325 *nnnnnnnn* PROFILE ENTRIES IN CONFIG ON *mm/dd/yy* AT *hh:mm:ss*

Reason: This in a informational message issued at the conclusion of a Configurator run. This message contains the count of profile entries in the configuration table after applying all updates from your current Configurator input.

UST326E OPEN FOR CONFIGURATION FILE FAILED - ABEND IN PROGRESS

Reason: The FDR/UPSTREAM-MVS Configurator, USTCONFG, was unable to open the output configuration file.

Action: Review your JCL specifications and DCB attributes for the output configuration file, correct any errors,and rerun the Configurator.

UST327E OPEN FOR INPUT SOURCE FILE FAILED - ABEND IN PROGRESS

Reason: The FDR/UPSTREAM-MVS Configurator, USTCONFG, was unable to open the input source configuration file.

Action: Review your JCL specifications and DCB attributes for the input source configuration file, correct any errors,and rerun the Configurator.

UST328E UNABLE TO FIND "MAIN" RECORD - CONFIGURATOR TERMINATING

Reason: The FDR/UPSTREAM-MVS Configurator, USTCONFG, found the first input record was not a configuration "MAIN" record. It cannot continue.

Action: Correct the error and rerun the configurator.

UST329E CONFIGURATION FILE DEFINITION ERROR - LRECL MUST BE DEFINED AS 120

Reason: The configuration data set does not have proper DCB characteristics. It must be RECFM=FB and LRECL=120 (any blocksize a multiple of 120 is acceptable).

Action: Define a new configuration data set with proper characteristics. Innovation recommends using the FDR/UPSTREAM ISPF dialog (see Section 2.4).

UST330W/E UNABLE TO OPEN DDNAME=*ddname* - MISSING OR MISSPECIFIED

Reason: USTCONFG was unable to open the indicated DDNAME. It may have been omitted or misspelled. If the file was required, this will be an Error message, otherwise it is a Warning.

Action: If necessary, correct the USTCONFG JCL and resubmit.

UST331 *ddname=dsname,VOL=volser*

Reason: This informational message documents that the indicated DDNAME points to the indicated data set name, on the indicated volume.

UST342W DSNAME TOO LONG WITHOUT "GDG" SPECIFIED - RECORD BYPASSED:

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found an invalid value specified for the "DASDPREF=" or "TAPEPREF=" parameter in the listed DEFINE/MODIFY/COPY record. The value specified exceeded the 19 allowable characters without the "DASDGDG" or "TAPEGDG" parameter also being specified.

Action: Correct the value or specify the appropriate GDG parameter, and rerun the configurator.

UST343W WARNING: "DASDBLK" NOT FOUND IN "MAIN" RECORD - DEFAULTING TO 10752

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, was unable to locate the "DASDBLK" keyword parameter in the configuration "MAIN" record. This message warns that when appropriate, the "DASDBLK" value will default to 10752.

Action: If this is not appropriate for your installation, add the DASDBLK parameter with the correct value and rerun the configurator.

UST344W DSNAME TOO LONG FOR RESERVED PROFILE - RECORD BYPASSED

Reason: On a DEFINE/MODIFY/COPY statement specifing a WSNAME= of one of the reserved profiles (see Section 3.8), the DASDGDG or TAPEGDG option was not specified, and the data set name prefix (DASDPREF= or TAPEPREF=) specified exceeds 26 characters.

Action: Correct the data set name and rerun the configurator.

UST345E "DASDPREF" REQUIRES "DASD" - RECORD BYPASSED

Reason: On a DEFINE/MODIFY/COPY statement, DASDPREF= was specified without DASD.

Action: Correct the parameters and rerun the configurator.

UST346E "DASDGDG" REQUIRES "DASDPREF=" AND "DASD" - RECORD BYPASSED

Reason: On a DEFINE/MODIFY/COPY statement, DASDGDG was specified without DASD and DASDPREF=.

Action: Correct the parameters and rerun the configurator.

UST347E INVALID VALUE SPECIFIED FOR *xxxxxxxx* - RECORD BYPASSED

Reason: An invalid value was specified for the parameter "xxxxxxxx".

Action: Check Section 3 for valid values. Correct the parameters and rerun the configurator.

UST348E "WSNAME/WSPREF" SPECIFIED IS A RESERVED NAME - ENTRY NOT ADDED

Reason: A DEFINE/MODIFY was entered which specified a profile name which may not be used.

Action: Check Section 3 for valid values. Correct the parameters and rerun the configurator.

UST349E "DASDBLK" REQUIRES "DASD" AND "DSNPREF" - RECORD BYPASSED:

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found the "DASDBLK" parameter in the listed record, but was unable to find the "DASD" and/or "DASDPREF" additional required parameters.

Action: Correct the parameters and rerun the configurator.

UST350E "GROUPID" MUST BE EXACTLY 2 ALPHA-NUMERIC CHARACTERS - RECORD BYPASSED:

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found that the "GROUPID" parameter in the listed record did not have the correct syntax.

Action: Correct the parameters and rerun the configurator.

UST351E "DUNIT" REQUIRES "DASD" AND "DSNPREF" - RECORD BYPASSED:

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found the "DUNIT" parameter in the listed DEFINE/MODIFY/COPY record, but was unable to find additional required parameters.

Action: Correct the "DEFINE" record definition and rerun the configurator.

UST352E "TUNIT" REQUIRES "TAPE" AND "DSNPREF" - RECORD BYPASSED:

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found the "TUNIT" parameter in the listed DEFINE/MODIFY/COPY record, but was unable to find additional required parameters.

Action: Correct the parameters and rerun the configurator.

UST353E "TAPE" REQUIRES "TUNIT" AND "DSNPREF" - RECORD BYPASSED:

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found the "TAPE" parameter in the listed record, but was unable to find additional required parameters.

Action: Correct the parameters and rerun the configurator.

UST354E "DASD" REQUIRES "DSNPREF/DASDPREF" - RECORD BYPASSED:

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found the "DASD" parameter in the listed record, but was unable to find the "DSNPREF" or "DASDPREF" required parameter.

Action: Correct the parameters and rerun the configurator.

UST355E "DSNPREF" REQUIRES "TAPE" OR "DASD" - RECORD BYPASSED:

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found the "DSNPREF" parameter in the listed DEFINE/MODIFY/COPY record, but was unable to find additional required parameters.

Action: Correct the parameters and rerun the configurator.

UST356E "GDG" REQUIRES "DSNPREF" AND "TAPE" OR "DASD" - RECORD BYPASSED:

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found the "GDG" parameter in the listed DEFINE/MODIFY/COPY record, but was unable to find additional required parameters.

Action: Correct the parameters and rerun the configurator.

UST357E "STORCLAS" REQUIRES "DASD" - RECORD BYPASSED:

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found the "STORCLAS" parameter in the listed record, but was unable to find additional required parameters.

Action: Correct the parameters and rerun the configurator.

UST358E "MGMTCLAS" REQUIRES "DASD" - RECORD BYPASSED:

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found the "MGMTCLAS" parameter in the listed DEFINE/MODIFY/COPY record, but was unable to find additional required parameters.

Action: Correct the parameters and rerun the configurator.

UST359W "SORTUNIT" NOT FOUND IN MAIN RECORD - DEFAULTING TO "SYSDA"

Reason: The FDR/UPSTREAM-MVS Configurator was unable to find the "SORTUNIT" keyword parameter in the listed configuration "MAIN" record. The sort unitname will be defaulted to "SYSDA" for any *sequential tape* restores performed..

Action: This message is mostly informational. If you do not intend doing any *sequential tape* backups and restores, or if the unitname of "SYSDA" is acceptable for temporary sort work data sets, you can safely ignore this message.

UST360E PROFILE NOT IN CONFIGURATION - CAN NOT UPDATE

Reason: A MODIFY/COPY statement was entered, but the WSNAME= or WSPREF= parameter specified a profile nane that does not exist in the input configuration, so it cannot be processed.

Action: Change the MODIFY/COPY to a DEFINE or remove it and rerun the configurator.

UST361E ENQ CONTENTION FOR THE CONFIGURATION FILE. TRY AGAIN LATER.

Reason: The FDR/UPSTREAM-MVS configurator, USTCONFG, found online UPSTREAM held the ENQ on the UPSTREAM configuration file and did not release it within a reasonable period of time. UPSTREAM only holds the ENQ while it is actually reading the configuration file, so this indicates that something is wrong.

Action: Rerun the configurator at a later time. If it still fails, you may have to terminate the UPSTREAM online task before running the configurator.

UST362E EXPDT= MUST BE 5 DIGIT NUMERIC - RECORD BYPASSED

Reason: EXPDT= did not have a 5-digit value in the format "yyddd".

Action: Correct the parameter and rerun the configurator.

UST363E MEMBER DOES NOT EXIST IN CONFIGURATION DATASET

Reason: The member name specified on the USTCFGIN DD statement does not exist in the configuration PDS.

Action: Correct the USTCFGIN member name and rerun the configurator.

UST364W ONLY ONE "GLOBAL" DEFINE PERMITTED IN CONFIGURATION FILE

Reason: The FDR/UPSTREAM-MVS Configurator found multiple configuration entries with the reserved profile name "WSNAME=GLOBAL".

Action: Correct your configuration input to contain only one "GLOBAL" definition record and rerun the configurator.

UST365E "GLOBAL" RECORD MUST BE FIRST IN CONFIGURATION

Reason: The FDR/UPSTREAM-MVS Configurator found the "WSNAME=GLOBAL" definition record was not the first record in the configuration file.

Action: Correct your configuration input file placing the "GLOBAL" definition record as the first "DEFINE" record of the file and rerun the configurator.

UST366 "GLOBAL" RECORD INCLUDED IN CONFIGURATION

Reason: This informational message documents that a DEFINE record with "WSNAME=GLOBAL" was found in the configuration file.

UST367W WARNING: NO "GLOBAL" RECORD FOUND IN CONFIGURATION

Reason: The FDR/UPSTREAM-MVS Configurator found no "GLOBAL" definition record in your input configuration file. This message is a warning only.

UST368 NO CHANGES MADE TO CONFIGURATION. FILE NOT REWRITTEN

Reason: The input configuration was not altered (perhaps because of syntax errors in configuration statements) so the output configuration was not written to DD name USTCONFG.

UST369E PROFILE ALREADY EXISTS CANNOT ADD TO CONFIGURATION

Reason: A DEFINE statement specified a WSNAME= or WSPREF= name that already exists in the input configuration

UST370 MAIN STATEMENT ACCEPTED. MAIN WILL BE ADDED TO CONFIGURATION

Reason: The MAIN statement passed syntax checking. The options will be added to the output configuration.

UST371W DELETE "ALL" REQUEST INVALID. STATEMENT IGNORED

Reason: The DELETE statement specified "ALL" instead of a specific WSNAME= workstation profile name. This is not allowed.

Action: Remove or correct the DELETE statement. If your intention was to delete the entire configuration file, delete the configuration data set or (if it is a PDS) delete the desired member.

UST372 DELETE REQUEST ACCEPTED. PROFILE WILL BE DROPPED FROM CONFIGURATION

Reason: This informational message indicates that the requested workstation profile will be deleted from the configuration.

UST373W DELETE FUNCTION FAILED. WORKSTATION NOT FOUND IN CONFIGURATION

Reason: The workstation profile specified by WSNAME= was not found in the existing configuration and could not be deleted.

Action: Correct the workstation profile name and resubmit. If necessary, use the PRINT function to display existing profile names.

UST374 REQUEST ACCEPTED. PROFILE WILL BE ADDED TO THE CONFIGURATION

Reason: This informational message indicates that the specified workstation profile name will be added to the configuration.

UST375W WARNING: WORKSTATION ALREADY DEFINED. PROFILE WILL BE REPLACED

Reason: The workstation profile name specified on a DEFINE statement by WSNAME= already exists. The existing profile will be deleted and redefined as specified by the DEFINE statement.

Action: If your intention was to replace the profile, no action is required. If you intended to modify an existing profile, but neglected to use the MODIFY statement instead of DEFINE, review the profile to be sure that all required options have been specified.

UST376W PRINT FUNCTION FAILED. WORKSTATION NOT FOUND IN CONFIGURATION

Reason: A PRINT statement specified a workstation profile name which does not exist in the configuration.

Action: Correct the WSNAME= and resubmit.

UST377 PRINT FUNCTION COMPLETED

Reason: This informational message indicates that a PRINT function has completed successfully.

UST378W WARNING: "MAIN" RECORD ALREADY IN FILE. ABOVE STATEMENT IGNORED.

Reason: A MAIN statement was encountered in the USTCONFG input, and the configuration file is not NEW, i.e., an existing configuration is being modified. The MAIN statement is ignored.

Action: If your intention was to modify an existing configuration, you can ignore the message or remove the MAIN statement and resubmit. If you intended to create a new configuration, change your JCL to specify a new configuration data set or member and resubmit.

UST379W WARNING: MAIN STATEMENT ALREADY IN CONFIG - REPLACING MAIN STATEMENT

Reason: A MAIN statement was entered for an update to an existing configuration. All the original MAIN options will be replaced by options (and defaults) on the new MAIN statement.

UST380W WARNING: NOTHING TO MODIFY - RECORD BYPASSED:

Reason: A MODIFY statement did not contain any operands indicating which attributes of the workstation profile to modify. The MODIFY is ignored.

Action: If necessary, correct the MODIFY statement and resubmit.

UST381W WARNING: RECORD NOT FOUND IN CONFIG FILE CHANGING TO DEFINE

Reason: The workstation profile name specified by WSNAME= on a MODIFY statement was not found in the configuration. The MODIFY is treated as a DEFINE and the profile is added to the configuration.

Action: Verify that the profile name is correct and that all required attributes have been specified. If necessary, DELETE the incorrect profile name and MODIFY the correct one.

UST382W DELETE 'GLOBAL' INVALID. STATEMENT IGNORED

Reason: A DELETE WSNAME=GLOBAL statement was encountered. You cannot delete the GLOBAL profile. The statement is ignored.

Action: If necessary, correct the input and resubmit.

UST383W WARNING: "GLOBAL" RECORD ALREADY IN FILE - ABOVE STATEMENT IGNORED

Reason: A DEFINE WSNAME=GLOBAL statement was encountered, and the GLOBAL profile already exists in the configuration. This DEFINE was ignored.

Action: Remove the DEFINE, or change the DEFINE to a MODIFY if you intend to change the attributes of the GLOBAL profile, and resubmit.

UST384W MODIFY REQUEST ACCEPTED. PROFILE WILL BE CHANGED IN CONFIGURATION

Reason: This informational message indicates that a MODIFY statement was successfully processed.

UST385W REQUEST FAILED. PROFILE NOT UPDATED IN THE OUTPUT CONFIGURATION

Reason: A MODIFY statement was rejected for some reason. The workstation profile will not be updated.

Action: Correct the MODIFY and resubmit.

UST386W PRINT REQUEST FAILED. CONFIGURATION FILE IS EMPTY.

Reason: A PRINT statement could not be executed because the configuration file does not contain a configuration definition.

UST387E INVALID MEMBER NAME, CONFIG FILE IS NOT A PDS

Reason: A member name was specified for the output configuration, but the configuration file is not a PDS.

Action: Specify a PDS for the output configuration or omit the member name.

UST388E PC DRIVEN CONFIGURATION UPDATE ERROR

Reason: The configuration was being updated from FDR/UPSTREAM at a workstation, but an error occured. The configuration was not updated.

Action: Correct the error, if possible, and update the configuration again.

UST389E CONFIGURATION ERROR - *reason*

Reason: An invalid parameter or another error was encontered. "reason" is a short description of the error.

Action: Correct the error and rerun the configurator.

UST390 ACCEPTED CHANGES NOW APPLIED. CONFIGURATION FILE UPDATED SUCCESSFULLY

Reason: One or more changes have been successfully applied to the configuration and the configuration file has been rewritten with the new configuration.

UST391E SERIOUS CONFIGURATION PROCESSOR CHAIN ERROR. ABEND IN PROGRESS

Reason: A serious error in the configuration file format has been detected.

Action: Save the abend dump and contact Innovation for assistance.

UST392E SERIOUS ERROR DURING PRINT PROCESSING. ABEND IN PROGRESS

Reason: A serious error in the configuration file format has been detected.

Action: Save the abend dump and contact Innovation for assistance.

UST399E *error text from control statement processor*

Reason: The FDR/UPSTREAM-MVS control statement processor detected a syntax or usage error in a USTCONFG or USTRPORT control statement. The text indicates the error and where on the control statement it occurred. The job is terminated.

Action: Correct the control statement and resubmit. See Section 3 for details on syntax and usage of USTCONFG control statements or Section 7 for details on of USTRPORT control statements.

USTREGEN AND USTRPORT UTILITY MESSAGES (UST400 - UST499)

These messages are generated by the FDR/UPSTREAM-MVS "regen" utility, USTREGEN, or the generalized report writer, USTRPORT. They are written to the UPSTREAM log (DD "USTLOG") which is usually a SYSOUT data set. For messages that indicate an error condition: if you are unable to resolve the problem, please save all output from USTREGEN and contact Innovation Technical Support for assistance.

UST400E* * ONLINE UPSTREAM IS ACTIVE - CANNOT CONTINUE ***

Reason: The USTREGEN utility found the online FDR/UPSTREAM component active upon starting.

Action: Stop Online FDR/UPSTREAM while the Regen utility is run or run REGEN under the online task (see Section 5) .

UST401E* USTREGEN UNABLE TO OPEN LOG FILE - TERMINATING

Reason: The USTREGEN utility was unable to open the Log File (DD name "USTLOG"). For obvious reasons, this is written as a WTO to the system console only.

Action: Verify that the USTLOG DD statement is correctly specified.

UST402E* USTREGEN APF AUTHORIZATION CHECK FAILED - CANNOT CONTINUE

Reason: The USTREGEN utility detected it was not being run as an MVS APF authorized program.

Action: Verify that the load library containing the USTREGEN utility is currently APF authorized.

UST403E* **OPEN FOR CATALOG CLUSTER FAILED - TERMINATING**

Reason: USTREGEN was unable to open the VSAM UPSTREAM Catalog cluster.

Action: Review your JCL to be sure it is correct. Review the USTREGEN job log for error messages which may indicate the cause of the problem.

UST404E* **OPEN FOR FILE-INFO CLUSTER FAILED - TERMINATING**

Reason: USTREGEN was unable to open the VSAM UPSTREAM File-Information cluster.

Action: Review your JCL to be sure it is correct. Review the USTREGEN job log for error messages which may indicate the cause of the problem.

UST405E **DYNAMIC ALLOCATION ERROR R15=*rr* CODE=*cccc* INFO=*iiii***

Reason: USTREGEN encountered an error trying to dynamically allocate the backup file to be read.

Action: See message UST095E for details on the error codes and possible actions.

UST406E* **OPEN FOR ARCHOLD DD FAILED - TERMINATING**

Reason: USTREGEN was unable to open the ARCHOLD file.

Action: Review your JCL to be sure it is correct. Review the USTREGEN job log for error messages which may indicate the cause of the problem.

UST407E **BACKUP DATASET NOT FOUND DSN=*dsname***

Reason: USTREGEN was executing as a subtask of the FDR/UPSTREAM online task, as the result of a console command (See Section 5, "Operation"). The backup data set specified in that command was not cataloged.

Action: Verify that the backup data set name was properly specified, and that the name is currently cataloged in the MVS catalogs.

UST408E* **VSAM ERROR - SNAP-002 TAKEN**

Reason: USTREGEN encountered an error on one of the VSAM clusters. A diagnostic SNAP dump with ID 002 was taken to the USTSNAP DD, if present. It is accompanied by message UST409E with VSAM diagnostic codes.

Action: See message UST409E.

UST409E **VSAM error indicators**

Reason: This message is logged by the VSAM error diagnosis routine. It contains specific error codes from the VSAM "RPL" control block and also indicates the location in USTREGEN of the error.

Action: Refer to the IBM "VSAM MACRO REFERENCE" or "MACRO INSTRUCTIONS FOR DATA SETS" manual (depending on the level of your operating system) to understand the error codes reported. The job log or SYSLOG may contain additional diagnostic messages. If you are unable to resolve the problem, contact Innovation Technical Support.

UST410 **UPSTREAM REGEN PROCESS STARTED**

Reason: This informational message indicates that the USTREGEN process has begun.

Action: None.

UST411 **ARCHOLD DSN: *dsname***

Reason: This informational message indicates the dsname of the ARCHOLD data set.

Action: None.

UST412 **ARCHOLD VOL: *volser***

Reason: This informational message indicates the volume serial of the ARCHOLD data set.

Action: None.

UST413 FILE INFORMATION RECORDS UPDATED: *nnnnnnn* ADDED: *mmmmmmmm*

Reason: This informational message indicates the number of records in the FILE-INFO data set that were updated and added during this execution of USTREGEN.

Action: None.

UST414 FILE DATA RECORDS READ: *nnnnnnnn*

Reason: This informational message indicates the number of data records read from the ARCHOLD data set.

Action: None.

UST415 UPDATE FILE-INFO: *profilename versiondate filename*

Reason: The FILE-INFO record for the indicated profile name, versiondate, and filename has been updated with data from the ARCHOLD data set.

Action: None.

UST416E MISSING FILE-INFO RECORD FOR PROFILE=*profilename locator*

Reason: File descriptors were not found on the backup tape for the indicated profilename.

Action: Contact Innovation for assistance.

UST417E C-RECORD MISSING ON BACKUP

Reason: A catalog record was not found on the backup tape.

Action: Contact Innovation for assistance.

UST418E C-RECORD ERROR IN CONTROL FILE

Reason: USTREGEN had an error reading a control record from the online repository.

Action: Contact Innovation for assistance.

UST419E F-RECORD IN CONTROL FILE MISSED UPDATE FILE=*filename*

Reason: A file record was not updated properly.

Action: Contact Innovation for assistance.

UST420E F-RECORD GET PREVIOUS VERSION NOT FOUND FILE=*filename*

Reason: An expected file record was not found.

Action: Contact Innovation for assistance.

UST421 USTREGEN COMPLETED SUCCESSFULLY

Reason: USTREGEN completed with no errors.

Action: None.

UST422W USTREGEN COMPLETED WITH ERRORS

Reason: USTREGEN completed with warnings or errors.

Action: Review the USTREGEN messages for the specific error.

UST423E F-RECORD TIMESTAMP NOT FOUND ON BACKUP FILE=*filename*

Reason: An expected file record was not found.

Action: Contact Innovation for assistance.

UST424 VAULT REGEN STARTED FOR DSN=*dsname*

Reason: USTREGEN determined that the backup data set being read was the control file for a vault tape created by USTVAULT. The FDR/UPSTREAM control records will be updated to point to the secondary (vault) copy of the backups, as recorded in that control file.

Action: None.

UST425 UPSTREAM REGENED *nnnnnn* BACKUP VERSIONS

Reason: USTREGEN updated the control records for the indicated number of versiondates.

Action: None.

UST426E UNKNOWN RECORD TYPE *data*

Reason: USTREGEN found a record which it could not identify in the backup data set being read. Part of the record is displayed.

Action: Contact Innovation for assistance.

UST427E VAULT BACKUP DATA SET NOT CATALOGED VOL=*vvvvvv* DSN=*dsname*

Reason: USTREGEN was reading a vault control file created by USTVAULT (See Section 7.8) but a backup data set pointed to by the control records was no longer cataloged in the system catalog. The backup would not be usable.

Action: USTREGEN does not add the records for that backup to the online repository. If the backup file still exists, you may be able to manually recatalog it and run USTREGEN again.

UST428W BACKUP CATALOGED TO ANOTHER VOLUME - REGEN FROM LASTEST COPY ONLY
CATALOGED TO *cccccc* VAULT COPY IS *vvvvvv* DSN=*dsname*

Reason: USTREGEN was reading a vault control file created by USTVAULT (See Section 7.8) but a backup data set pointed to by the control records is currently cataloged in the system catalog to a different tape volume. "cccccc" is the volser in the catalog, while "vvvvvv" is the volser in the vault records. This probably occured because you vaulted a copy of the same backup file multiple times. For example, an incremental MERGE BACKUP will normally append data to the previous incremental. If you vault that backup every day, you will have multiple vaulted copies with each copy containing an additional day's data. You only need to regen the most recent vault copy of that backup.

Action: USTREGEN does not add the records for that backup to the online repository. The message can be ignored, as long as you do eventually regen from the proper vault copy.

UST429 VAULT BACKUP REGENED PROF=*profile* DATE=*versiondate* DSN=*dsname*

Reason: USTREGEN was reading a vault control file created by USTVAULT (See Section 7.8). The records for the indicated backup (profile, versiondate, and backup dsn) have been successfully updated in the FDR/UPSTREAM repository.

UST430 UPSTREAM BACKUP REGENED PROF=*profile* VERDATE=*versiondate* FLAGS=X'*xxxx*'

Reason: USTREGEN was reading an FDR/UPSTREAM backup. The records for the indicated backup (profile and versiondate) have been successfully updated in the FDR/UPSTREAM repository.

Action: None.

UST431 UPSTREAM CANNOT REGEN A NON-FDRSOS BACKUP

Reason: The input tape to REGEN was apparently a FDR backup, but it was not a FDRSOS backup, so it cannot be processed by USTREGEN.

Action: None.

UST480E FILEINFO POINT FAILED KEY=*kkkkkkkkkkkkkkkk*

Reason: A VSAM POINT in the FILE-INFO data set for the specified key failed.

Action: Contact Innovation for assistance.

UST481E FILEINFO GET FAILED KEY=*kkkkkkkkkkkkkkkk*

Reason: A VSAM GET in the FILE-INFO data set for the specified key failed.
Action: Contact Innovation for assistance.

UST482E CATALOG CLUSTER POINT FAILED KEY=*kkkkkkkkkkkkkkk*
Reason: A VSAM POINT in the catalog data set for the specified key failed.
Action: Contact Innovation for assistance.

UST483E CATALOG CLUSTER GET FAILED KEY=*kkkkkkkkkkkkkkk*
Reason: A VSAM GET in the catalog data set for the specified key failed.
Action: Contact Innovation for assistance.

UST488E* error text
Reason: USTRPORT encountered an error opening or processing some data set that made it impossible to continue. This may be due to missing DD statements. The text indicates the error.
Action: Correct the error and resubmit the USTRPORT job.

UST494 USTRPTPC - REPORT STARTED
Reason: A USTRPORT request was received from a workstation.
Action: None.

UST495 USTRPTPC - REPORT ENDED
Reason: A USTRPORT request from a workstation was completed.
Action: None.

UST496 USTRPTPC - REPORT CANCELED BY USER OR SEND ERROR
Reason: A USTRPORT request from a workstation was terminated because of user request at the workstation or because of a transmission error.
Action: None.

UST498E NO ENTRIES FOUND MATCHING SELECTION CRITERIA
Reason: USTRPORT did not find any records which met the critieria specified on SELECT statements.
Action: Correct the SELECT statements (See Section 7.3) and reexecute USTRPORT.

UST499 TOTAL HISTORY RECORDS READ: *nnnnnnnn* TOTAL RECORDS SELECTED: *mmmmmmm*
Reason: For RPTYPE=HISTORY or BACKUP, shows the total records read, and the total records selected for reporting.
Action: None.

USTMAINT/USTREORG UTILITY MESSAGES (UST500-UST599)

These messages are generated by the FDR/UPSTREAM-MVS utility programs, USTMAINT and USTREORG. They are written to the UPSTREAM log (DD "USTLOG"). USTMAINT is automatically executed during initialization of the FDR/UPSTREAM-MVS online task unless PARM=NOMAINTis specified. USTREORG is executed as a subtask of the FDR/UPSTREAM online task when a F UPSTREAM,REORG console command is entered.

For messages that indicate an error condition: if you are unable to resolve the problem, please save all output from USTMAINT and contact Innovation Technical Support for assistance.

UST500 * UPSTREAM USTMAINT PROCESS STARTED ***
Reason: This informational message indicates that USTMAINT has begun execution.
Action: None.

UST501E* USTMAINT UNABLE TO OPEN LOG FILE - TERMINATING

Reason: The USTMAINT utility was unable to open the USTLOG data set. It will not continue processing. For obvious reasons, this message is issued as a WTO to the system console only.

Action: Verify that you have correctly specified the USTLOG data set in your UPSTREAM JCL.

UST503E* OPEN FOR CATALOG CLUSTER FAILED - TERMINATING

Reason: USTMAINT was unable to open the VSAM UPSTREAM Catalog cluster.

Action: Review your UPSTREAM JCL to be sure it is correct. Review the UPSTREAM job log for error messages which may indicate the cause of the problem.

UST504E* OPEN FOR FILE-INFO CLUSTER FAILED - TERMINATING

Reason: USTMAINT was unable to open the VSAM UPSTREAM File-Information cluster.

Action: Review your UPSTREAM JCL to be sure it is correct. Review the UPSTREAM job log for error messages which may indicate the cause of the problem.

UST505 PURGING: PROFILE=*profilename* DATE/TIME=*versiondate*

Reason: USTMAINT is purging a backup version with the indicated profile name and versiondate. This message is informational only.

Action: None.

UST506 DSN: *data set name* WAS DELETED - *nnnnnnnn* FILE RECORDS ERASED

Reason: USTMAINT is purging a backup version having found the above named data set is no longer cataloged on the MVS system. This message is issued along with message UST505 and is informational only.

Action: None.

UST507 *nnnnnnnn* OF *nnnnnnnn* HISTORY RECORDS ERASED FOR DATES EARLIER THAN *mm/dd/yy*

Reason: History records are being kept in the FDR/UPSTREAM catalog data set (MAXHIST= was specified or default other than 0 in the configuration). USTMAINT has deleted obsolete history records older than MAXHIST days, calculated as "mm/dd/yy".

Action: None.

UST508E* VSAM ERROR - SNAP 002 TAKEN

Reason: USTMAINT encountered an error on one of the VSAM clusters. A diagnostic SNAP dump with ID 002 was taken to the USTSNAP DD, if present. It is accompanied by message UST509E with VSAM diagnostic codes.

Action: See message UST509E.

UST509E *VSAM error indicators*

Reason: This message is logged by the VSAM error diagnosis routine. It contains specific error codes from the VSAM "RPL" control block and also indicates the location in USTREGEN of the error.

Action: Refer to the IBM "VSAM MACRO REFERENCE" or "MACRO INSTRUCTIONS FOR DATA SETS" manual (depending ont he level of your operating system) to understand the error codes reported. The job log or SYSLOG may contain additional diagnostic messages. If you are unable to resolve the problem, contact Innovation Technical Support.

UST510 UPSTREAM MAINT COMPLETED -- *nnnnnnnn* VERSION RECORDS ERASED

***mmmmmmmm* FILE RECORDS ERASED**

Reason: This informational message indicates the number of records erased from the FDR/UPSTREAM catalog due to USTMAINT processing.

Action: None.

UST511E UPSTREAM LOCATE ERROR COMP=*cccc* DSN=*dsname*

Reason: UPSTREAM issued a catalog LOCATE for a backup data set, and the return code was other than 0 (successful) and 8 (not found).
Action: Investigate the catalog entry for the indicated data set; correct or delete it as appropriate.

UST512 *n* OF *m* REGISTERED NAME RECORDS ERASED FOR DATES EARLIER THAN *mm/dd/yy*

Reason: This informational message indicates that of the "m" records in the Registered Name table (See Section 8.8), "n" of them have not been referenced or updated in the last 90 days and have been deleted.

Action: None.

UST513 *n* OF *m* DUPLICATE PLH RECORDS ERASED FOR DATES EARLIER THAN *mm/dd/yy*

Reason: This informational message indicates that of the "m" records of potential duplicate files (See Section 1.4), "n" of them have not been backed up from a second workstation in the number of days specified by the MAXDUPL= parameter in the configuration. Their records have been deleted.

Action: None.

UST514 *n* OF *m* DUPLICATE UNREFERENCED FILES ERASED *p* DATA-RECS ERASED

Reason: This informational message indicates that of the "m" backups of duplicate files (See Section 1.4), "n" of them have not been backed up from a third workstation in the number of days specified by the MAXDUPL= parameter in the configuration and have been deleted. "p" data records have been removed from the online repository.

Action: None.

UST550 REORG BEGUN FOR DDNAME *ddname*

Reason: A F UPSTREAM,REORG DD=ddname console command was entered to request dynamic reorganization of the FDR/UPSTREAM data set referenced by the indicated DDNAME. No other tasks were active (except possibly other reorganizations), so the requested reorganization was initiated.
Action: None.

UST551W REORG BYPASSED -- DDNAME *ddname* NOT FOUND

Reason: The ddname indicated on a F UPSTREAM,REORG DD=ddname console command is not one of the ddnames that can be reorganized.

Action: Reenter the command, specifying DD=USTCATLG, USTFILEI or USTFILEC.

UST524W REORG BYPASSED -- PROFILE *ddname* NOT IN CONFIGURATION

Reason: A profile whose name matches the ddname to be reorganized was not found in the FDR/UPSTREAM configuration currently active. The reorganization is not done.

Action: Update the configuration to specify a profile with a name matching the ddname to be reorganized. It must specify DASD or TAPE/TAPECOMP and will be used to dynamically allocate a backup file for the reorganization.

UST553W REORG BYPASSED -- PROFILE *ddname* DOES NOT ALLOW SEQUENTIAL BACKUP

Reason: The profile named "ddname" in the currently active FDR/UPSTREAM configuration is not enabled for either DASD or TAPE/TAPECOMP, so the backup file for the reorganization could not be allocated. The reorganization is not done.

Action: Update the named profile in the configuration to specify either DASD or TAPE or TAPECOMP, along with an appropriate DSNPREF.

UST554E DYNALLOC ERROR: R15=*rrrrrrrr* CODE=*cccc* INFO=*iiii*

Reason: USTREORG received an error indication trying to dynamically allocate the backup file for a data set reorganization.

Action: Verify that the specifications for DASDPREF/TAPEPREF and DUNIT/TUNIT in the profile used for the reorganization are correct. If DASD, verify that the unit or volser specified by DUNIT have enough space for the data set. See messages UST095E for information on interpreting these error codes.

UST555 BACKUP DATA SET ALLOCATED, DSN=*dsname*

Reason: USTREORG has successfully dynamically allocated the named backup file, which will be used to backup the data from the UPSTREAM data set being reorganized. It may be on tape or disk.

Action: If the reload of the FDR/UPSTREAM data set fails, you will probably have to delete and redefine the data set (possibly with more space) and manually REPRO this backup file back into the data set using the USTCAMS utility. This file will be retained until deleted by your DASD or tape management software, or until manually deleted.

UST556E OUTPUT OPEN FOR BACKUP DATA SET FAILED

Reason: The OPEN for OUTPUT on the backup file by USTREORG has failed. The FDR/UPSTREAM data set being reorganized has not been modified.

Action: Check the joblog of the FDR/UPSTREAM online task for IBM error messages. Correct the cause if possible.

UST557E INPUT OPEN FOR BACKUP DATA SET FAILED

Reason: USTREORG has completed the backup of the FDR/UPSTREAM data set being reorganized, and has closed the backup file, but the reOPEN of the backup file for input has failed. The data set being reorganized has not been modified.

Action: Check the joblog of the FDR/UPSTREAM online task for IBM error messages. Correct the cause if possible.

UST558E *general VSAM error diagnostic information*

Reason: USTREORG has received an error reading or writing the FDR/UPSTREAM data set being reorganized. The message contains specific error indicators from the VSAM RPL. If REQ=00 is displayed, this was a read error; the backup was not completed and the data set has not been modified; however, there is probably an error in that data set which should be corrected. If REQ=01, this was a write error and the data set is probably unusable.

Action: You will probably need to shutdown FDR/UPSTREAM and correct the error. If this was a write error, the backup file contains a backup of the data set. See IBM manual *"VSAM MACRO REFERENCE"* or *"MACRO INSTRUCTIONS FOR DATA SETS"* (depending on the level of your operating system) to understand the error codes.

UST559E OPEN OR CLOSE OF CLUSTER FAILED

Reason: An OPEN or CLOSE of the FDR/UPSTREAM data set being reorganized by USTREORG has failed. The data set is probably unusable.

Action: You will probably need to shutdown FDR/UPSTREAM and correct the error. Check the joblog of the FDR/UPSTREAM online task for IBM error. Check the joblog of the FDR/UPSTREAM online task for IBM error messages.

UST560E I/O ERROR ON BACKUP DATA SET

Reason: An I/O error (input or output) has occurred on the backup file being used by USTREORG during the reorganization of a FDR/UPSTREAM data set. If this is followed by message UST565, then this was a READ error during the RELOAD and the data set being reorganized is probably unusable.

Action: You will probably need to shutdown FDR/UPSTREAM and correct the error. Check the joblog of the FDR/UPSTREAM online task for IBM error messages.

UST562* REORG SUCCESSFUL FOR DDNAME *ddname* -- RELOADED WITH:

Reason: The reorganization of the FDR/UPSTREAM data set pointed to by the named ddname has been successfully reorganized by USTREORG. It will now be reOPENed by the main task, and FDR/UPSTREAM will again accept requests for backups and restores (unless another reorganization is still running).

Action: None.

UST563 *nnnnnnnnnnnnnn* DATA-BLOCKS; *nnnnnnnnnnnnnn* DATA-BYTES

Reason: This message follows message UST562 on the FDR/UPSTREAM log and indicates the number of blocks and bytes rewritten to the data set that was reorganized.

Action: None.

UST564W* REORG UNSUCCESSFUL FOR DDNAME *ddname* -- FDR/UPSTREAM FILE STILL USABLE

Reason: An error occurred during the reorganization of the FDR/UPSTREAM data set indicated, but it was before USTREORG began reloading the data set, so it is still usable, and FDR/UPSTREAM will continue.

Action: Reexecute the reorganization after correcting the error, if possible.

UST565E* REORG UNSUCCESSFUL FOR DDNAME *ddname* -- FDR/UPSTREAM FILE NOT USABLE - MUST BE RELOADED

Reason: An error occurred during the reorganization of the FDR/UPSTREAM data set indicated, while USTREORG was reloading the data set. The data set is probably not usable. This is displayed on the console as a non-scrollable message to ensure that the operator does not overlook it.

Action: You will probably need to shutdown FDR/UPSTREAM and correct the error. You may be able to correct it by manually reloading the file from the backup just created by USTREORG. You may also need to redefine the failing data set with more space.

UST566W IMMEDIATE SHUTDOWN REQUESTED - REORG TERMINATED

Reason: The operator has requested an immediate shutdown of FDR/UPSTREAM. The USTREORG operation in progress was terminated. The file being reorganized may or may not be usable.

Action: Determine by looking at subsequent UST564W or UST565W messages whether or not the file being reorganized is still usable. If it is not usable, reload the file from you most current backup of that file.

UST567 BACKUP DATASET SUCCESSFULLY CREATED

Reason: USTREORG has successfully created its backup data set. The reload of the file being reorganized will now begin.

Action: None.

UST568E* REORG FAILED WITH SYSTEM ABEND S*ssss*

Reason: The USTREORG task has failed with the indicated system abend.

Action: USTREORG will terminate. If the abend code is other than a Sx37, an abend dump will be taken before termination. If the failure occured during the reload phase, message UST565E will be issued (indicating that the file has become unusable); otherwise message UST564W is issued.

UST570E* USTBKPRT UNABLE TO OPEN REPORT FILE - TERMINATING

Reason: USTBKPRT had a failure opening its report file (USTRPRT). Probably the DD statement was missing or incorrectly specified.

Action: Correct the JCL and resubmit.

UST571E BSAM ERROR: USTBKUP DATASET - *synad info*

Reason: An I/O error occured reading the USTBKUP data set in the USTBKPRT backup report utility. The "synad info" is the description of the error generated by the IBM SYNADEF macro. This may be accompanied by an IBM message in the joblog of the USTBKPRT job. The sequential backup data set may be damaged or unusable.

Action: If this is a *sequential tape* backup, try a different tape drive. It the error cannot be corrected, the backup is not usable.

UST572E * ERROR READING USTBKUP DATASET - MAY BE EMPTY**

Reason: An I/O error or end of file occured reading the first block of the USTBKUP data set in the USTBKPRT backup report utility. This may mean that the data set was created but was never written into due to some error during the backup.

Action: If this is a *sequential tape* backup, try a different tape drive. It the error cannot be corrected, the backup is not usable.

UST573E * ERROR OPENING USTBKUP DATASET - TERMINATING ***

Reason: An error occured opening the USTBKUP data set in the USTBKPRT backup report utility. This will probably be accompanied by an IBM message in the joblog of the USTBKPRT job. This may mean that the USTBKUP DD statement was omitted or the DD name misspelled, or that the dsname of the backup data set was misspelled.

Action: Determine the error from the IBM message, and correct the error is possible.

ARCHIVE, MIGRATE, VAULT, MERGE UTILITY MESSAGES (UST600 - UST699)

These messages are generated by the FDR/UPSTREAM-MVS archive program USTARCH, the migration program USTMIGRT, the vaulting utility USTVAULT and the deferred merge utility USTMERGE. They are written to the UPSTREAM log (DD "USTLOG") which is usually a SYSOUT data set. For messages that indicate an error condition: if you are unable to resolve the problem, please save all output from USTARCH and contact Innovation Technical Support for assistance.

UST601E* USTARCH UNABLE TO OPEN LOG FILE - TERMINATING

Reason: The USTARCH utility was unable to open the Log File (DD name "USTLOG"). For obvious reasons, this is written as a WTO to the system console only.

Action: Verify that the USTLOG DD statement is correctly specified.

UST602E* USTARCH FOUND ONLINE UPSTREAM ACTIVE - REPLY "GO" TO CONTINUE, "CAN" TO CANCEL

Reason: The FDR/UPSTREAM-MVS Archive Utility, USTARCH, executing as a batch job, has detected an online FDR/UPSTREAM-MVS region is active within the System, and issues this message to the system console.

Action: The operator can reply "CAN" to terminate USTARCH, or "GO" to continue with the archive operation. **Do not reply "GO" unless the USTARCH JCL is pointing to a different, inactive, set of FDR/UPSTREAM repository data sets, otherwise damage to the repository will result.**

UST602E ONLINE UPSTREAM IS ACTIVE - OPERATOR REPLIED *xxxxxx*

Reason: This message is printed after the operator replies to the UST602E message on the console. xxxxxx is either "GO" or "CANCEL". If CANCEL, USTARCH terminates.

UST603E* OPEN FOR CATALOG CLUSTER FAILED - TERMINATING

Reason: The Archive Utility, USTARCH, was unable to open the Repository Catalog Cluster.

Action: Review your JCL to be sure it is correct. Review the USTARCH job log for error messages which may indicate the cause of the problem.

UST604E* OPEN FOR FILE-INFO CLUSTER FAILED - TERMINATING

Reason: The Archive Utility, USTARCH, was unable to open the Repository File-Information Cluster.

Action: Review your JCL to be sure it is correct. Review the USTARCH job log for error messages which may indicate the cause of the problem.

UST605E* OPEN FOR FILE-DATA CLUSTER FAILED - TERMINATING

Reason: The Archive Utility, USTARCH, was unable to open the Repository File-Data Cluster.

Action: Review your JCL to be sure it is correct. Review the USTARCH job log for error messages which may indicate the cause of the problem.

UST606E* OPEN FOR ARCHOLD DD FAILED - TERMINATING

Reason: The FDR/UPSTREAM-MVS Archive Utility, USTARCH, was unable to open the prior Archive data set, "ARCHOLD" DD statement. This message can be issued only if USTARCH is operating in MERGE mode.

Action: Review your JCL to be sure it is correct. Review the USTARCH job log for error messages which may indicate the cause of the problem.

UST607E* OPEN FOR OUTPUT ARCHNEW DD FAILED - TERMINATING

Reason: The FDR/UPSTREAM-MVS Archive Utility, USTARCH, was unable to open the new Archive data set, "ARCHNEW" DD statement.

Action: Review your JCL to be sure it is correct. Review the USTARCH job log for error messages which may indicate the cause of the problem.

UST608E* VSAM ERROR

Reason: The utility received a VSAM error indication. This message is accompanied by message UST609E containing the VSAM error codes.

UST609E *VSAM error indicators*

Reason: This message is logged by the VSAM error diagnosis routine. It contains specific error codes from the VSAM "RPL" control block and also indicates the location in the utility of the error.

Action: Refer to the IBM "VSAM MACRO REFERENCE" or "MACRO INSTRUCTIONS FOR DATA SETS" MANUAL (depending on the level of your operating system) to understand the error codes reported. The job log or SYSLOG may contain additional diagnostic messages. If you are unable to resolve the problem, contact Innovation Technical Support.

UST610E* DEVTYPE CHECK FOR *ddame* DD FAILED - TERMINATING

Reason: The DEVTYPE macro for ARCHNEW or ARCHOLD, to determine the device type, has failed.

Action: Be sure that the DD statements for ARCHNEW and ARCHOLD are correct.

UST611E* ARCHNEW DEVICE IS NOT TAPE - TERMINATING

Reason: The FDR/UPSTREAM-MVS Archive utility, USTARCH, has determined the device for the "ARCHNEW" DD statement is not a TAPE device.

Action: Change your JCL to specify a valid TAPE device to contain the new Archive data set and rerun the USTARCH job.

UST612E* APF AUTHORIZATION CHECK FAILED - TERMINATING

Reason: The FDR/UPSTREAM-MVS Archive utility, USTARCH, has determined it is not running as an MVS APF authorized program.

Action: Verify that the load library containing the USTARCH utility is currently MVS APF authorized.

UST613E* UNABLE TO MOUNT CORRECT ARCHOLD TAPE - ARCHIVE ABORTED

Reason: The FDR/UPSTREAM-MVS Archive utility, USTARCH, had an error reading the ARCHOLD tape volume. It is not possible for it to continue. This message can occur only if USTARCH is operating in MERGE mode.

Action: Be sure that the ARCHOLD DD points to the correct old archive tape. Contact Innovation Technical Support if required.

UST614E FEOV VOLUME SWITCH - ARCHOLD DATASET

Reason: The FDR/UPSTREAM-MVS Archive utility, USTARCH, is issuing the FEOV request to switch to the next volume in the ARCHOLD DD tape set. This message is informational only.

UST615W* WARNING: ARCHOLD DEVICE IS NOT TAPE

Reason: The FDR/UPSTREAM-MVS Archive utility, USTARCH, has determined that the ARCHOLD DD statement in it's execution JCL does not indicate a tape device. ARCHOLD must be either a tape or DUMMY. If it is not DUMMY, message UST616E will also be issued. This message can occur only if USTARCH is operating in MERGE mode.

Action: If ARCHOLD was specified as DUMMY, USTARCH will run without reading ARCHOLD. This is correct if this is the first time you have run USTARCH. Otherwise, correct the ARCHOLD DD and rerun USTARCH.

UST616E* ARCHOLD DEVICE IS NOT DUMMY - TERMINATING

Reason: The FDR/UPSTREAM-MVS Archive utility, USTARCH, has determined that the device specified in the ARCHOLD DD statement is not a tape device and is not specified as "DUMMY". USTARCH will not continue with the archival process. This message can occur only if USTARCH is operating in MERGE mode.

Action: Correct your JCL and rerun USTARCH.

UST618E* LOCATE FAILED FOR ARCHOLD DD - TERMINATING

Reason: The FDR/UPSTREAM-MVS Archive utility, USTARCH, was unable to issue an MVS catalog "LOCATE" request for the specified data set name in the ARCHOLD DD statement. This message can occur only if USTARCH is operating in MERGE mode.

Action: Review your execution JCL to be sure you have specified the correct data set name in the ARCHOLD DD statement. Correct your JCL and rerun USTARCH.

UST619E UNABLE TO LOCATE FILE DATA RECORDS:

Reason: This is the first in a series of error messages from the archive utility, USTARCH. It indicates that the archive utility was unable to find the file data records in the ARCHOLD file. This may be the result of a prior BSAM I/O error encountered reading or writing this ARCHOLD tape volume. The archive process continues, but the file data for this file is no longer accessible.

UST620E *profilename versiondate filename*

Reason: This message contains additional information for message UST619E.

UST621E ARCHNEW BSAM WRITE ERROR - ABEND U0609

Reason: The FDR/UPSTREAM-MVS Archive utility, USTARCH, detected an unrecoverable BSAM write error while attempting to write a block to the ARCHNEW DD. It is not possible for it to continue. USTARCH abends with a U0609 abend. There will be additional MVS BSAM error messages in the FDR/UPSTREAM-MVS job log.

Action: Contact Innovation Technical Support.

UST622E ARCHNEW BSAM WRITE ERROR - ABEND U0610

Reason: The FDR/UPSTREAM-MVS Archive utility, USTARCH, detected an unrecoverable BSAM write error while attempting to write a block to the ARCHNEW DD. It is not possible for it to continue. USTARCH abends with a U0610 abend. There will be additional MVS BSAM error messages in the FDR/UPSTREAM-MVS job log.

Action: Contact Innovation Technical Support

UST623E BSAM ERROR: *ddname* DATASET *dsname*

Reason: The utility detected a fatal BSAM error accessing the data set in the DD statement named. It is not possible for it to continue. There will be additional MVS BSAM error messages in the FDR/UPSTREAM-MVS job log.

Action: Contact Innovation Technical Support.

UST624E REPOSITION ARCHOLD TAPE VOL

Reason: An error occurring positioning the "old" Archive Dataset. The Archived file being processed is skipped, and the ARCHOLD data set is repositioned to the beginning.

Action: This is an internal error; contact Innovation Technical Support.

UST625E UNABLE TO FIND THE *cccccccc* CONFIGURATION ENTRY

Reason: The utility was being run as a subtask of the FDR/UPSTREAM-MVS online task, and the current configuration did not contain a profile with the appropriate name (USTARCH, USTMIGxx, USTMERxx or USTVLTxx).

Action: Update the configuration with an appropriate reserved profile (see Section 3.8) and reexecute the request.

UST626E UNIT NAME INVALID IN *cccccccc* CONFIGURATION ENTRY

Reason: No value was specified for TUNIT= in the reserved profile used for this utility operation.

Action: Update the reserved profile in the configuration (see Section 3.8) and reexecute the request.

UST627E DYNALLOC ERROR: R15=*rrrrrrrr* CODE=*cccc* INFO=*iiii*

Reason: The utility received an error indication trying to dynamically allocate the output tape when executing as a subtask of the FDR/UPSTREAM-MVS online task.

Action: Verify that the specifications for TAPEPREF and TUNIT in the associated reserved profile are correct (see Section 3.8). See message UST095E for information on interpreting these error codes.

UST628W INTERRUPTED BACKUP BYPASSED: *profile versiondate*

Reason: The indicated backup was interrupted, and will not be archived until it is restarted and successfully completed.

Action: None.

UST630 *program process* STARTED

Reason: This informational message indicates that the indicated program has started the indicated process, for example, "USTARCH ARCHIVE" or "USTMIGRT MIGRATE".

Action: None.

UST631 ARCHIVE PHASE-1 COMPLETE - STARTING CLEANUP PHASE

Reason: Phase 1 (Pass 1) of USTARCH processing is complete, Phase 2 (Pass 2) is beginning. See Section 7.5 for details on the 2 passes of USTARCH.

Action: None.

UST632 ARCHIVE PHASE-2 COMPLETE

Reason: Phase 2 (Pass 2) of USTARCH processing is complete. USTARCH will terminate.

Action: None.

UST633 BYPASSED: *nnnnnnnnnn* VERSION(S)

Reason: Indicates the number of version records that were bypassed because they were flagged as "DELETE VERSION".

Action: None.

UST634 ARCHIVED: *nnnnnnnnnn type*

Reason: Indicates the number of versions, files, and data records moved to the ARCHNEW data set during USTARCH processing.

Action: None.

UST635 ERASED: *nnnnnnnn* DATA RECORDS

Reason: Indicates the number of data records erased from the UPSTREAM online repository during USTARCH processing.

Action: None.

UST636 ARCHNEW DSN: *dsname*

Reason: Indicates the data set name of the ARCHNEW data set.

Action: None.

UST637 ARCHNEW VOL: *volser*

Reason: indicates the volume serial of the ARCHNEW data set.

Action: None.

UST638 ARCHOLD DSN: *dsname*

Reason: Indicates the data set name of the ARCHOLD data set.

Action: None.

UST639 ARCHOLD VOL: *volser*

Reason: indicates the volume serial of the ARCHOLD data set.

Action: None.

UST649E function REQUEST INVALID REASON=*reason* REQ: *request*

Reason: The request to start USTMIGRT, USTMERGE, USTVAULT or USTSCHED could not be processed for the reason indicated by "reason" which will consist of brief explanatory text, including:
GROUP ID NOT SPECIFIED indicates that the MODIFY command parameter did not contain a valid 2-character group ID, such as VAULTxx.
BYTE AFTER COMMAND NOT BLANK that the MODIFY command parameter (MIGRTxx, MERGExx or VAULTxx) was not followed by a blank.
KEYWORD IS INVALID indicates the MODIFY command parameter (MIGRTxx, MERGExx or VAULTxx) was followed by an unrecognized keyword (see Section 5.7).
KEYWORD EXCEEDS MAXIMUM LENGTH indicates the MODIFY command parameter (MIGRTxx, MERGExx or VAULTxx) was followed by a keyword longer than the maximum permitted (see Section 5.7).
KEYWORD VALUE IS BLANK indicates the MODIFY command parameter (MIGRTxx, MERGExx or VAULTxx) was followed by a keyword with no value after it (see Section 5.7).
KEYWORD AREA EXCEEDS MAX indicates the MODIFY command parameter (MIGRTxx, MERGExx or VAULTxx) was followed by a keyword with value longer than the maximum permitted (see Section 5.7).
COPY= VALUE CANNOT BE 1 indicates that COPY=1 was specified on a VAULTxx command. The copy 1 backup is the original backup, COPY= must have some other value (usually 2 through 9).

Action: Correct the syntax of the command and reissue it.

UST650E function BYPASSED REASON=*reason* DSN=*backupdsn*

Reason: USTMIGRT, USTMERGE or USTVAULT bypassed processing of the backup data set indicated by "backupdsn" for the reason indicated by "reason" which will consist of a reason number and brief explanatory text. Many of these reasons indicate an I/O error or inconsistancy in the FDR/UPSTREAM repository data sets and are usually accompanied by additional messages detailing the error. Reason codes are:
1 - C-RECORD DOES NOT EXIST indicates an internal error.

2 - C-RECORD NOT TYPE 81 indicates an internal error.
3 - BACKUP CATALOGED TO TAPE indicates that UPSTREAM's records indicated the backup was on disk but the MVS catalog shows it on tape. The backup may have been copied to tape with IEBGENER or some other copy utility outside of FDR/UPSTREAM.
4 - C-RECORD PUT VSAM ERROR see VSAM error message.
5 - BACKUP WAS INTERRUPTED indicates that USTMIGRT bypassed a restartable-interrupted backup.
6 - BACKUP IS NOT CATALOGED indicates a backup recorded by FDR/UPSTREAM is not in the MVS catalog. This might occur if the backup was expired and uncataloged recently but USTMAINT has not yet been run to delete it from UPSTREAM.
7 - LOCATE ERROR COMP=X'cccc' indicates that a catalog locate has failed.
8 - FILE CATALOGED TO MIGRAT indicates that the disk backup has been archived by FDR/ABR or HSM; the backup will not be recalled to disk.
9 - C-RECORD GET VSAM ERROR see VSAM error message.
A - C-REC GET-UPDATE VSAM ERR see VSAM error message.
B - S-REC GET-UPDATE VSAM ERR see VSAM error message.
C - S-RECORD PUT VSAM ERROR see VSAM error message.
D - F-REC GET-UPDATE VSAM ERR see VSAM error message.
E - F-RECORD PUT VSAM ERROR see VSAM error message.
F - I/O ERROR ON BACKUP FILE indicates an I/O error on the output. See the UST623E message.
G - MORE THAN 254 BACKUP VOLUMES indicates that a single tape file created required more than 254 tape volumes, which cannot be handled.
H - DEBLOCKING ERROR ON BACKUP indicates a corrupted backup data set.
I - INSUFFICIENT STORAGE indicates there is not sufficient free memory in the FDR/UPSTREAM online region to complete this operation. Increase the region if possible, restart UPSTREAM, and try again, or run the request at a time when fewer UPSTREAM operations are active.
J - MULTIPLE VERSION BACKUP indicates that the utility encountered a disk backup data set that contained backups from multiple versiondates; this should occur only if a full MERGE BACKUP was done to disk with COPYINCR. Change the profile to remove COPYINCR, since USTMIGRT will combine the backups into one file.
K - NAME MISSING COPY MASK (?) indicates that although the associated profile is enabled for vaulting, the backup data set name in the profile does not contain a question mark (?) for the copy number.
L - COPY VALUE NOT 1 AT OFFSET indicates that the copy number in the data set name of the input backup (at the position reserved by a ? in the profile) is not "1". Contact Innovation for assistance.
M - BACKUP IS A DEFERRED MERGE indicates that the backup will not be processed by USTMIGRT or USTVAULT because it is a full MERGE BACKUP taken with DEFER=MERGE and USTMERGE has not yet been run against it.
N - INSUFFICIENT STORAGE see reason I.
O - DEFER BACKUP OVER 20 VOLUMES indicates that when USTMERGE was trying to add deferred files to the end of a deferred MERGE BACKUP already on tape, that backup was cataloged to over 20 tape volumes.
P - DEFER BACKUP NOT 1ST FILE indicates that when USTMERGE was trying to add deferred files to the end of a deferred MERGE BACKUP already on tape, that backup was not cataloged as file 1 on the tape.
Q - OVER nn VERSIONS IN BACKUP indicates that the input backup file contains backups for more than nn unique versiondates. The utility cannot handle this backup.
R - INVALID RECORD LENGTH indicates that an invalid record was encountered.
T - FILE TRANSFER BACKUP indicates that a backup selected was actually a file transfer, not a backup.
U - ONLY VAULTED COPY EXISTS indicates that only a vault copy of the backup was found.

Action: If necessary, contact Innovation Technical Support for assistance.

UST651 BACKUP SELECTED FOR operation PROFILE=*profilename* DSN=*backupdsn*

Reason: The indicated disk backup under the indicated profile was selected for "migration", "merging" or "vaulting" to tape.

Action: None.

UST652E ALLOCATE/OPEN FOR BACKUP FAILED DSN=*backupdsn*

Reason: An error occured dynamically allocating or opening the indicated disk backup data set. There may be additional UPSTREAM or IBM messages indicating the specific cause.

Action: If the problem can be corrected, rerun the utility. If necessary, contact Innovation Technical Support for assistance.

UST653E *action* FOR *file* FAILED DSN=*backupdsn*

Reason: An error occured on the indicated tape backup data set. "action" may be ALLOCATE/OPEN, CLOSE, or ADD S-RECORD. "file" may be OUTPUT TAPE or CONTROL FILE (the latter for USTVAULT only). There may be additional UPSTREAM or IBM messages indicating the specific cause.

Action: If the problem can be corrected, rerun the utility. If necessary, contact Innovation Technical Support for assistance.

UST654 BACKUP WAS SCRATCHED FROM *source* PROFILE=*profile* DSN=*backupdsn*

Reason: If "source" is DASD, a disk backup was successfully copied to tape and the disk backup data set named was scratched from disk. If "source" is TAPE, a tape backup was copied onto a new tape by USTMIGRT and the input tape backup data set named was uncataloged.

Action: None.

UST655 BACKUP PROF=*profile* D=*versiondate operation* TO DSN=*tapebackupdsn*

Reason: The utility has successfully completed the indicated opertion on the backup described by "profile" and "versiondate". The input backup data set is indentified in the UST651 message. It was copied to the tape backup data set indicated. FDR/UPSTREAM records have been updated to point to the new backup data set.

Action: None.

UST656E *type* REQUEST FAILED COMP=X'*ffff00001111*' PROF=*profile* DSN=*backupdsn*

Reason: An operation against the indicated backup data set, under the indicated profile, failed. "type" may be SCRATCH (delete disk backup data set), CATALOG (catalog tape data set), or RECATLG (update tape data set catalog). COMP contains the contents of R15 (ffff), R0 (0000) and R1 (1111). There may also be an IBM message in the UPSTREAM job log with more information on the error. If you get this message for SCRATCH on a given data set, but not for CATALOG or RECATLG, the migration was successful but the backup is left on disk. If a CATALOG/RECATLG error occurs, the MVS catalog was not updated to point to the tape, and a USTMAINT execution might delete the records of this backup. These errors are NOT likely to occur.

Action: For a SCRATCH error, try to manually delete the data set from disk (IEHPROGM SCRATCH). For a CATALOG/RECATLG error, try to manually catalog the tape data set (IDCAMS DEFINE NONVSAM) using the information from the UST660 message (check the FDR/UPSTREAM joblog to see if the tape backup data set extended to additional tape volumes). If you need assistance, contact Innovation Technical Support.

UST657E *operation* TERMINATED DUE TO VSAM ERROR

Reason: An error has occured reading or updating the FDR/UPSTREAM online repository data sets. Message UST609 is also printed detailing the error. The repository may be damaged.

Action: Contact Innovation Technical Support.

UST658E *utility* CANNOT BE EXECUTED AS A BATCH PROGRAM - USE *command* UNDER USTMAIN

Reason: You attempted to execute PGM=USTMIGRT, USTMERGE or USTVAULT in a batch job or under TSO.

Action: Use the F UPSTREAM command to initiate the utility. See Section 5.7.

UST659E *type* NOT ENABLED IN *profile* CONFIGURATION ENTRY

Reason: The reserved configuration profile, USTMIGxx, USTMERxx or USTVLTxx, was not properly enabled for tape backups. The tape parameters in that profile will be used to allocate the tape drive and create a dummy (empty) file at the beginning of that tape, followed by the migrated or vaulted backups. For USTVAULT, "type" may also be DASD, since vaulting requires that the profile be enabled for both tape and disk backups.

Action: Update the profile entry in the configuration. See Section 3.8.

UST660 *operation* TO *type* BACKUP VOL=*volser* FILESEQ=*filsq* DSN=*tapebackupdsn*

Reason: The utility has successfully opened the tape backup data set named. "volser" is the first (or only) tape volume serial, and "filsq" is the file sequence number. If "type" is TAPE, then it has created a new tape data set; if it is PREV, it added data to the previously created tape data set.

Action: None.

UST661 NEW *type* TAPE MOUNTED VOL=*volser* FILESEQ=*filsq* DSN=*tapebackupdsn*

Reason: The utility filled the previous output tape. The indicated tape volume was mounted to continue the output of the indicated tape backup data set.

Action: None.

UST662E *operation* MISSED UPDATE FILE=*filespec*

Reason: The utility has copied a disk backup to tape, but while updating FDR/UPSTREAM's records for the backup, it discovered that the named file is recorded as being in that backup, yet the file was not encountered while copying the backup. In other words, UPSTREAM has a record of a file that is not in the backup. The utility continues updating the rest of the records.

Action: This error should not occur, but if it does, contact Innovation Technical Support for assistance.

UST663 *operation*: *vvvvvvv* VERSION(S) *ffffffff* FILES *ddddddd* DIRS *rrrrrrrrr* DATA BLOCKS
***kkkkkkkkkk* KBYTES *wwwwwww* FORWARD**

Reason: The utility copied this total number of versiondates, files, directories, blocks and kilobytes. FORWARD is the number of backups merged forward and appears only for USTMERGE.

Action: None.

UST664 *type* BACKUP TAPE NAME IS *backupdsn*

Reason: USTMIGRT, USTVAULT or USTMERGE has successfully written the dummy (empty) data set as file 1 on the output tape, using the tape name specification in the corresponding special profile entry in the FDR/UPSTREAM configuration. The actual name is "backupdsn". You may need to use this name in your tape management system for vaulting or retention purposes.

Action: None.

UST665 CONTROL FILE DATA SET NAME IS *dsn*

Reason: USTVAULT created the vaulting control file on disk with the indicated data set name. At the end of the vaulting operation, this control file is copied to the vault tape.

Action: None.

UST666E CONTROL FILE FAILED TO GET PUT ON TAPE REASON=*reason*

Reason: USTVAULT had an error copying the vault control file to the vault tape, for the reason indicated.

Action: Contact Innovation for assistance.

UST667 CONTROL FILE COPIED TO TAPE FILE=*ffff* VOL=*vvvvvv*

Reason: USTVAULT has successfully copied the vault control file to the vault tape, as file "ffff" on tape volser "vvvvvv".

Action: None.

UST668 CONTROL FILE LEFT ON DASD BY REQUEST

Reason: USTVAULT has left a copy of its control file on DASD, as requested by an option.

Action: None.

UST669 OPERATOR CANCELLED MOUNT FOR VAULT

Reason: The operator replied CANCEL to a request to mount a tape for USTVAULT. A UST652E message is also issued, and the vaulting operation is terminated.

Action: None.

UST670E I/O OR LOGICAL ERROR FOR BACKUP FILE - CHECK MVS LOG DSN=*backupdsn*

Reason: An error occured opening or reading the indicated backup data set. There may be additional UPSTREAM or IBM messages indicating the specific cause.

Action: If the problem can be corrected, rerun the utility. If necessary, contact Innovation Technical Support for assistance.

UST671 MERGED: *bbb* BACKUPS *fff* FILES *ddd* DIRS *bbb* DATA BLOCKS *eee* DEFER FILES

Reason: USTMERGE has completed processing. These are statistics about the total data processed.

Action: None.

UST672E MERGE PREVIOUS BACKUPS MISSING FOR DEFERRED PROFILE=*profile*

Reason: USTMERGE found records for the named profile, indicating that deferred files should be found in previous backups for that profile, but the indicated previous backups cannot be found in the FDR/UPSTREAM repository. They have expired or been deleted.

Action: None.

UST673 MIGRATE FORWARD ENDED FOR PROFILE DUE TO FULL BACKUP

Reason: USTMIGRT was copying incremental backups from a backup file but encountered a full backup at the end of that file. Since this is the end of the data required, processing for that profile was completed.

Action: None.

USTBATCH UTILITY MESSAGES (UST700 - UST799)

These messages are generated by the FDR/UPSTREAM-MVS batch program, USTBATCH. They are written to the UPSTREAM log (DD "USTLOG") which is usually a SYSOUT data set.For messages that indicate an error condition: if you are unable to resolve the problem, please save all output from USTBATCH and contact Innovation Technical Support for assistance.

UST700E OPEN FOR INPUT SOURCE FILE (USTPARM) FAILED

Reason: USTBATCH was unable to open the USTPARM data set. The job terminates with a non-zero return code.

Action: Verify that your batch JCL is correct and that the USTPARM data set is of the correct type and execute USTBATCH again.

UST701E VALUE FOR "APPLPREF" MUST BE 5 CHARACTERS

Reason: USTBATCH found an invalid value for the "APPLPREF" parameter in the input stream. The job terminates with a non-zero return code.

Action: Verify that the APPLPREF parameter value is 5 characters long and execute USTBATCH again.

UST702E VALUE FOR "USAPPL" EXCEEDS 8 CHARACTERS

Reason: USTBATCH found an invalid value specified for the USAPPL parameter in the input stream. The job terminates with a non-zero return code.

Action: Verify that the USAPPL parameter value is 8 characters long or less, and execute USTBATCH again.

UST703E VALUE FOR "USAPPL" INVALID

Reason: USTBATCH found an invalid value specified for the USAPPL parameter in the input stream. The job terminates with a non-zero return code.

Action: Correct the USAPPL parameter and execute USTBATCH again.

UST704E VALUE FOR "TARGLU" EXCEEDS 8 CHARACTERS

Reason: USTBATCH found an invalid value specified for the TARGLU parameter in the input stream. The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the TARGLU parameter and execute USTBATCH again.

UST705E VALUE FOR "TARGLU" INVALID

Reason: USTBATCH found an invalid value specified for the TARGLU parameter in the input stream. The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the TARGLU parameter and execute USTBATCH again.

UST706E PREVIOUS RETRY VALUE TOO LONG

Reason: USTBATCH found an invalid value specified for the MAXRETRY, APPLRETRY or TMAXRETRY parameter in the input stream. The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the retry parameter and execute USTBATCH again.

UST707E PREVIOUS RETRY VALUE INVALID

Reason: USTBATCH found an invalid value specified for the MAXRETRY, APPLRETRY or TMAXRETRY parameter in the input stream. The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the retry parameter and execute USTBATCH again.

UST708W WARNING: "APPLPREF" DEFAULTED TO "UPSTR"

Reason: USTBATCH was unable to locate a value for the "APPLPREF" parameter in the input stream. The parameter will take its default value of "UPSTR".

Action: If this is incorrect, specify the APPLPREF parameter and execute USTBATCH again.

UST709W WARNING: "USAPPL" DEFAULTED TO "UPSTREAM"

Reason: USTBATCH was unable to locate a value for the "USAPPL" parameter in the input stream. The parameter will take its default value of "UPSTREAM".

Action: If this is incorrect, specify the USAPPL parameter and execute USTBATCH again.

UST710E "TARGLU", "TARGNAME" OR "TCPTARG" PARAMETER NOT FOUND

Reason: USTBATCH was unable to locate any "TARGLU", "TCPTARG" or "TARGNAME" required parameter in the input stream and is terminating..

Action: Add the TARGLU, TCPTARG or TARGNAME parameter and execute USTBATCH again.

UST711W WARNING: "TPNAME" NOT VALID VOLLOWING A TCPIP TARGET - IGNORED

Reason: The TPNAME= parameter is only valid following a TARGLU= parameter for a VTAM APPC target workstation. It is ignored if it follows a TCPTARG= for a TCP/IP workstation.

Action: None.

UST712E "WSPARM" VALUE TOO LONG

Reason: USTBATCH has detected an invalid value specified for the "WSPARM" parameter in the input stream. The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the WSPARM parameter and execute USTBATCH again.

UST713E "WSPARM" VALUE INVALID

Reason: USTBATCH has detected an invalid value specified for the "WSPARM" parameter in the input stream. The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the WSPARM parameter and execute USTBATCH again.

UST714E UNABLE TO LOCATE AN AVAILABLE VTAM ACB NAME

Reason: The application name built by USTBATCH from APPLPREF plus "nnn" (e.g., UPSTR001) was either not defined to VTAM or already in use by another application.

Action: Verify that your "APPLPREF" parameter specifies a valid prefix in agreement with your definitions in the VTAM APPL definition member for FDR/UPSTREAM-MVS. If not, correct the value and resubmit the USTBATCH job. You may need to increase the number of VTAM application definitions available for use with USTBATCH (see Section 2.6).

UST715E VTAM SETLOGON REQUEST FAILED

Reason: USTBATCH has received an error indication after issuing the VTAM "SETLOGON" request to enable session setup. This message is followed by message UST719E containing the applicable VTAM error codes.

Action: Use these error codes to resolve the problem.

UST716W* USTBATCH COMPLETED WITH WARNINGS

Reason: The USTBATCH job has completed with warning-level errors.

Action: Review the USTBATCH log file to determine the warnings issued, and whether they were acceptable.

UST717E* USTBATCH COMPLETED WITH ERRORS

Reason: The USTBATCH job has completed with errors.

Action: Review with USTBATCH log file to determine the errors that have occurred.

UST718* USTBATCH COMPLETED SUCCESSFULLY

Reason: The USTBATCH job has complete successfully.

Action: None.

UST719E ***VTAM error codes and indicators***

Reason: This message follows a descriptive error message and contains the applicable VTAM error codes relating the error described.

Action: Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST720E **ALLOCATION FAILURE - BE SURE UPSTREAM TASK IS ACTIVE**

Reason: USTBATCH has received a VTAM allocation failure while attempting to connect to the FDR/UPSTREAM online task. For errors other than an allocation failure, the text of the message is "APPC CNOS ERROR".

Action: Be sure that the FDR/UPSTREAM online task is active

UST721E **APPC ALLOCATE TO APPL *aaaaaaaa* REQUEST FAILED**

Reason: USTBATCH has received a VTAM error indication after issuing the APPC ALLOCATE request to the online UPSTREAM started task.

Action: Communication **e**rror codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST722E **APPC SEND-DATA RUN-FUNCTION REQUEST FAILED**

Reason: USTBATCH has received a VTAM error indication after issuing the APPC SEND-DATA request to the online UPSTREAM started task.

Action: Communication **e**rror codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST723E **APPC SEND-DATA RUN-FUNCTION-PARAM REQUEST FAILED**

Reason: USTBATCH has received a VTAM error indication after issuing the APPC ALLOCATE request to the online UPSTREAM started task.

Action: Communication **e**rror codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST724E **APPC CONFIRM REQUEST FAILED**

Reason: USTBATCH has received a VTAM error indication after issuing the APPC CONFIRM request to the online UPSTREAM started task. **Action:** Communication **e**rror codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

Action: None.

UST725E **RECEIVE FOR EVENT TYPE-90 FAILED**

Reason: USTBATCH has received a VTAM error indication after issuing the APPC RECEIVE-DATA request to the online UPSTREAM started task.

Action: Communication **e**rror codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST726E **RECEIVE FOR EVENT TYPE-91 FAILED**

Reason: USTBATCH has received a VTAM error indication after issuing the APPC RECEIVE-DATA request to the online UPSTREAM started task.

Action: Communication **e**rror codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST727 ***message text from the target workstation***

Reason: This message contains message text sent by the target workstation LU. This message is actually issued by the workstation LU.

Action: If it indicates an error, review the UPSTREAM log on the workstation for additional information as to the cause of the error.

UST728 ACB *aaaaaaaa* OPENED TO VTAM

Reason: USTBATCH has successfully located and opened an ACB to VTAM, using application name "aaaaaaaa". This message is informational only.

Action: None.

UST729 APPC ALLOCATE TO *aaaaaaaa* SUCCESSFUL

Reason: USTBATCH has successfully allocated its LU 6.2 conversation to the online FDR/UPSTREAM-MVS started task using application name "aaaaaaaa". This message is informational only.

Action: None.

UST730E PREVIOUS RETRY VALUE INVALID

Reason: USTBATCH found the MAXRETRY, APPLRETRY or TMAXRETRY value specified in the input stream was not numeric. The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the retry parameter and execute USTBATCH again.

UST731E LOGMODE VALUE TOO LONG

Reason: USTBATCH found an invalid value specified for the LOGMODE parameter in the input stream. The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the LOGMODE parameter and execute USTBATCH again.

UST732E LOGMODE VALUE INVALID

Reason: USTBATCH found an invalid value specified for the LOGMODE parameter in the input stream. The job terminates with a non-zero return code.

Action: Correct the LOGMODE parameter and execute USTBATCH again.

UST733W WARNING: USING DEFAULT LOGMODE NAME "#INTER"

Reason: USTBATCH was unable to locate the LOGMODE parameter in the input stream, and is defaulting the value to "#INTER". This message is informational.

Action: If this is not correct, specify the LOGMODE= parameter and execute USTBATCH again.

UST734 REQUEST SENT TO ONLINE INITIATOR FOR *targetname*

Reason: The USTBATCH job has completed sending one request for the workstation address or name indicated to the FDR/UPSTREAM-MVS online initiator. It has requested confirmation. This message is informational only.

Action: None.

UST735 REQUEST CONFIRMED BY ONLINE INITIATOR

Reason: USTBATCH has received positive confirmation to the request last sent to the FDR/UPSTREAM-MVS online initiator. This message is informational only.

Action: None.

UST736E REQUEST NOT CONFIRMED (MESSAGE FOLLOWS):

Reason: USTBATCH has received a negative indication to its confirmation request. This message is followed by an indicative message from the FDR/UPSTREAM-MVS online initiator or from the workstation itself.

Action: None.

UST737E TPNAME FOUND, BUT NO TARGET LU SPECIFIED

Reason: USTBATCH found a value specified for the TPNAME parameter in the input stream; but no TARGLU parameter preceding it.The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the values and resubmit the USTBATCH job.

UST738E TPNAME VALUE TOO LONG

Reason: USTBATCH found an invalid value specified for the TPNAME parameter in the input stream. The associated TARGLU= parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the TPNAME parameter and execute USTBATCH again.

UST739E INVALID TPNAME VALUE FOUND

Reason: USTBATCH found an invalid value specified for the TPNAME parameter in the input stream. The associated TARGLU= parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the TPNAME parameter and execute USTBATCH again.

UST740E INVALID TCP ADDRESS AND/OR PORT SPECIFIED

Reason: USTBATCH found an invalid value specified for the TCPTARG parameter in the input stream. The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the TCPTARG parameter and execute USTBATCH again.

UST741E INVALID VALUE FOUND FOR "CONV=", NOWAIT,NOKEEP USED

Reason: USTBATCH found an invalid value specified for the CONV= parameter in the input stream. The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the CONV parameter and execute USTBATCH again.

UST743E INVALID "TARGNAME" PARAMETER FOUND

Reason: USTBATCH found an invalid value specified for the TARGNAME parameter in the input stream. The parameter is ignored and USTBATCH continues looking for valid parameters.

Action: Correct the TARGNAME parameter and execute USTBATCH again.

UST744W NO AVAILABLE VTAM ACBNAMES - ENTERING RETRIES

Reason: USTBATCH attempted to find a free VTAM application name starting with the prefix specified by APPLPREF (or the default of UPSTR), but all such application names defined to VTAM are in use and APPLRETRY=0 was not specified.

Action: USTBATCH will attempt to find an available VTAM application every 5 seconds until the retry limit specified by APPLRETRY is reached (default is 240).

UST745E UPSTREAM TASK AT "MAXTASKS" - INITIATING RETRIES

Reason: USTBATCH connected to the FDR/UPSTREAM online tasks but UPSTREAM reported that it is already at its maximum task limit and TMAXRETRY= was specified.

Action: USTBATCH will try to initiated its request every 5 minutes until it is accepted or until the retry limit specified by TMAXRETRY is reached.

UST746E RETRY COUNT EXHAUSTED

Reason: One of the USTBATCH retry parameters (indicated by a preceding message) was exceeded. The requested operation was not initiated.

Action: None.

UST746E NO RETRIES SPECIFIED

Reason: One of the USTBATCH retry parameters (indicated by a preceding message) was specified as or defaulted to zero (0). The requested operation was not initiated.

Action: None.

UST747/E* PROCESS COMPLETED - RETURN CODE=*nnn*,TARGET=*target*

Reason: The requested operation at the target workstation "target" completed with the indicated return code. If the return code is non-zero, the message number is

UST747E, otherwise it is UST747. This message is issued only if CONV=WAIT is specified in the USTBATCH parameters. If WTOCOMP is also in the USTBATCH parameters, will also be printed on the system console by a WTO.

Action: None.

UST748E INVALID RECORD BYPASSED:

Reason: A control statement was input to USTBATCH which was not recognized. The invalid record, printed after the message, is ignored.

Action: None.

UST749 *status display*

Reason: A "F jobname,STA" console command was issued to a USTBATCH job. This message indicates the requests currently queued or active in that job.

Action: None.

UST750E* USTBATCH COMMAND INVALID OR CANNOT BE ACCEPTED AT THIS TIME

Reason: A STOP(P) or MODIFY(F) console command was issued to a USTBATCH job, but either the parameter was invalid or USTBATCH is not accepting console commands. Commands can only be accepted if CONV=WAIT was specified in the USTBATCH parameters.

Action: None.

UST751* TERMINATING REQUEST ID = *nnnn*

Reason: A "F jobname,TERM ID=nnnn" console command was issued to a USTBATCH job. The request with ID number "nnnn" is being terminated.

Action: None.

UST752* STOP SCHEDULED - CONFIRM IN PROGRESS

Reason: A "P jobname" console command was issued to a USTBATCH job, but USTBATCH is currently waiting for FDR/UPSTREAM to confirm a request. USTBATCH will terminate as soon as the request is confirmed.

Action: None.

UST753* STOP REQUEST RECEIVED

Reason: A "P jobname" console command was issued to a USTBATCH job. USTBATCH will terminate.

Action: None.

UST754E* ID VALUE FOR TERM REQUEST INVALID OR NOT FOUND

Reason: A "F jobname,TERM ID=nnnn" console command was issued to a USTBATCH job, but either the parameter "nnnn" was not a valid 4-digit number, or no USTBATCH request was found with that ID number.

Action: None.

UST755 USTBATCH Vn.n.n STARTED

Reason: The USTBATCH job has started.

Action: None.

UST756 REQUEST COMPLETED, REQ=*request*

Reason: An "F jobname,request" console commmand was issued to a USTBATCH job. The request has been processed.

Action: None.

UST757W WARNING: NO KEYWORD VERIFICATION WILL BE PERFORMED

Reason: VERIFY=NO was specified; invalid workstation parameter names will not be detected.

Action: None.

UST758E PREVIOUS RECORD KEYWORD INVALID - REQUEST BYPASSED

Reason: An invalid workstation parameter name was encountered. The current workstation request will be bypassed. Other requests in the same jobstream will still be processed.

Action: None.

UST759E USERID NOT SPECIFIED ON JOB - REQUEST BYPASSED

Reason: A "USERID &JOB" statement was present in the USTBATCH input, but no security userid was associated with this job. The statement is bypassed. If a userid is required for FDR/UPSTREAM operation (a SECLVL= value greater than 0 in the UPSTREAM configuration), the requested function may fail when it is initiated by the workstation.

Action: None.

UST760 RESTART IS/NOT ENABLED - COUNT=*cccc* DELAY=*dddd*

Reason: This message documents that automatic restart of USTBATCH operations is or is not enabled. "cccc" is the retry limit, and "dddd" is the minutes between restart attempts. This is controlled by the RESTART operand of USTBATCH.

Action: None.

UST761* ATTEMPTING *type* RESTART FOR *target*, REMAINING RETRIES=*nnnn*

Reason: This message documents that an automatic restart of a USTBATCH operation is being attempted. "type" is BACKUP or RESTORE, "target" is the target workstation, and "nnnn" is the number of retries remaining.

UST762* *type* INTERRUPTED - WAITING *nnn* MINUTES FOR RESTART TO *target*

Reason: This message documents that a USTBATCH operation was interrupted, and will be restarted in "nnn" minutes. "type" is BACKUP or RESTORE, and "target" is the target workstation.

Action: None.

UST763E RESTART REQUIRES CONV=WAIT

Reason: The USTBATCH parameter RESTART= was specified without also specifying CONV=WAIT.

Action: Specify CONV=WAIT or remove the RESTART control card from your request. Then resubmit your request.

UST764E RECEIVE OF STARTED TASK MESSAGES FAILED

Reason: A VTAM error occurred while USTBATCH was reading messages from the MVS/UPSTREAM main task.

Action: Communication **e**rror codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST765E ALLOCATE FOR STARTED TASK MESSAGES FAILED

Reason: A VTAM allocation error occurred while USTBATCH was reading messages from the MVS/UPSTREAM main task.

Action: None.

UST766E SEND OF "xx" STRUCTURE FOR LOG MESSAGES FAILED

Reason: A VTAM error occurred while USTBATCH was requesting messages from the MVS/UPSTREAM main task. "xx" is the ID of the structure being transmitted.

Action: Communication **e**rror codes will be reported in a following message. Consult IBM VTAM manuals to interpret the error, or contact Innovation for assistance.

UST767E RECORD INVALID AFTER "ENDPARM" STATEMENT

Reason: An ENDPARM statement must be followed by a TARGLU=, TARGNAME=, or TCPTARG= statement, or another ENDPARM. The invalid statement is ignored.

Action: None.

UST768E INVALID COMMAND REQUEST

Reason: The command request was found to be invalid or to be of an invalid format. A common reason for this error is the inclusion of a comment on the command. This is not supported by USTBATCH issued command requests.

Action: Correct the command request and resubmit it.

UST769E UPSTREAM STARTED TASK TERMINATED

Reason: The UPSTREAM MVS Started Task was terminated prior to the completion of a USTBATCH request.

Action: When appropriate, restart the UPSTREAM MVS Started Task and reissue the USTBATCH request.

UST770E HPNS TCP/IP ERROR - OP=nn RC=nnnn ERRNO=nnnn text

Reason: While communicating with the UPSTREAM MVS Started Task, the USTBATCH program encountered the following error on the MVS TCP/IP API.

The OP field has the following meanings:

01 -

The RC field has the following meanings:

The ERRNO Field has the following meanings:

Action: x.

UST771E INVALID IP ADDRESS SPECIFIED

Reason: x.

Action: x.

UST772E INVALID TIMEOUT= VALUE SPECIFIED

Reason: x.

Action: x.

UST773E PROCESS TIMED OUT: text

Reason: x.

Action: x.

UST774E TIMER SET ERROR=nn - NO TIMEOUT IN EFFECT

Reason: x.

Action: x.

UST775E COMMAND VALUE EXCEEDS 44 CHARACTERS

Reason: x.

Action: x.

UST776W WARNING: "TCPPORT" PARAMETER ONLY VALID FOR TCP/IP REQUESTS - PARAMETER IGNORED

Reason: x.

Action: x.

UST777E UNABLE TO RESOLVE SPECIFIED DNS NAME OR NAME INVALID

Reason: x.

Action: x.

UST778W WARNING: TCP/IP PORT DEFAULTED TO 1972

Reason: x.

Action: x.

UST779W INVALID VOL=REF DATASET NAME

Reason: x.

Action: x.

USTSCHED UTILITY MESSAGES (UST800 - UST810)

UST800E* OPEN FOR USTSCHED DDNAME FAILED

Reason: Either the DD statement for USTSCHED was omitted from the startup proc for the FDR/UPSTREAM-MVS started task, or another error occurred trying to open it.

Action: Check the joblog of the UPSTREAM task for IBM messages.

UST801E* SCHEDULE RECORD DESCRIPTOR IS INVALID

Reason: Schedule data in the USTSCHED data set is not in the format expected by the USTSCHED utility. Either the data set was never properly initialized with a schedule by the FDR/UPSTREAM ISPF dialogs, or the data has been corrupted.

Action: Rebuild the schedule data set or correct the FDR/UPSTREAM-MVS started task JCL to point to the correct data set.

UST802E* SCHEDULE DATA SET IS EMPTY

Reason: The USTSCHED data set is empty. Either the data set was never properly initialized with a schedule by the FDR/UPSTREAM ISPF dialogs, or the data has been corrupted.

Action: Build the schedule data set or correct the FDR/UPSTREAM-MVS started task JCL to point to the correct data set.

UST803* SCHEDULE *type* DATE=*mm/dd/yyyy* DSN=*datasetname(membername)*

Reason: The schedule in the schedule data set name has either been STARTED or REFRESHED.

Action: None.

UST805 SCHEDULE TIME=*hh:ss* SELECTION ID: *selection event ID*

Reason: A scheduled event has been executed. One of the two additional form of the UST805 shown below is also issued.

Action: None.

UST805 SCHEDULE SENT TO THE INTERNAL READER: SUBMIT *datasetname(membername)*

Reason: A scheduled SUBMIT event has been executed. The jobstream in the data set named has been submitted for batch execution through the internal reader (INTRDR).

Action: None.

UST805 SCHEDULE ISSUED THE MVS COMMAND: *console command*

Reason: A scheduled event has been executed. The indicated MVS console command was issued.

Action: None.

UST806* NO ACTIVITY SCHEDULED FOR TODAY

Reason: There are no scheduled events which will execute today.

Action: Check the schedule if you think this is incorrect.

UST807E* SCHEDULE SUBMIT ERROR: *error description*

Reason: A SUB event was scheduled, but USTSCHED had an error either reading from the input data set named in the SUB event or writing to the INTRDR DD used to submit jobs. The error description will identify the error.

Action: Make sure that the data set named in the SUB event contains LRECL=80 jobstreams. If a member name was given on the SUB event, the data set must be a PDS or PDSE. If the member name is omitted, it must be sequential (DSORG=PS).

UST808W* IMMEDIATE SHUTDOWN REQUESTED - SCHEDULING TERMINATED

Reason: The operator has requested shutdown of FDR/UPSTREAM or has done a TERM of USTSCHED. USTSCHED will terminate immediately.

. Check the schedule if you think this is incorrect.

18

18 USS Process Message Reference

The FDR/UPSTREAM product makes use of an exhaustive list of predefined messages that are issued during the normal system processing of requests. By default, the system reads these messages for the file “upstream.msg” and writes them to the system logging file “upstream.log”.

The format of the message file is a standard text file which can be viewed, printed or edited with standard USS facilities (OBROWSE, OEDIT, etc.). The format for messages when they are displayed in the log is:

[MESSAGE NUMBER] [SEVERITY] [TEXT]

[ADDITIONAL TEXT]

Where:

- **MESSAGE NUMBER:** The message number is a 4 digit number that the programs will look for when they have a particular message to log.
- **SEVERITY:** The severity is a single letter indicating what to do with the message. If the severity is a lower case letter and the message is displayed, then the message will not time out regardless of the Message Time Limit setting. There are several severity’s which include:
    - **I - Informational message**. These messages are only written to the log. They are not displayed or sent to the remote system. An example is a message indicating that there was an error during the restore and the message was already displayed.
    - **N - Display but don’t log**. These messages are only displayed on the screen. They are not written to the log or sent to the remote system. Examples are configurator messages which do not need to be written to the log.
    - **D - Display and log**. These messages are displayed and written to the log but not sent to the remote system. Examples include statistics messages after transfers are complete.
    - **W - Warning**. These messages indicate that a significant, but not necessarily fatal event, has occurred. These messages are logged, displayed and sent to the remote system. An example would be during a restarted backup, when the backup must restart from the beginning. This is significant, but the operation can continue.
    - **E - Error**. These messages indicate that an error has occurred. These are usually (but not always) fatal. These messages are logged, displayed and sent to the remote system. Examples would be file errors during a backup.
- **TEXT:** This is text describing the message.

- **ADDITIONAL TEXT:** Any additional lines of text you wish logged or displayed (up to a total for the window of 10 lines). Each line of text must have a character in column 1.

PC1010E Error writing to the log file

Reason: There was an error writing to the log file.

Action: See additional messages.

PC1011E Error opening the log file

Reason: There was an error opening the log file.

Action: See additional messages.

PC1012E Error obtaining the message file name

Reason: .

Action: Make sure that you have an upstream.cfg file specified and that it contains a MESSAGEFILE statement pointing to upstream.msg

PC1013E Error opening upstream.msg

Reason: .

Action: Verify that the upstream.msg file is accessible.

PC1014E Insufficient memory

Reason: Error messages will not be buffered.

Action: Free memory or close applications.

PC1015E Error reading message file.

Reason: .

Action: Verify that upstream.msg is accessible.

PC1016E Message out of range

Reason: .

Action: Call Innovation Technical Support.

1024E Error clearing log.

Reason: .

Action: .See additional messages

PC1025D File cleared. %lu lines removed %lu lines retained.

Reason: .

Action: .

PC1026D Clearing: preserving %lu days in file %s

Reason: .

Action: .

PC1030D Cannot display messages while unattended

Reason: UPSTREAM could not display the following message title and message while running in an unattended mode.

Action: .

PC1101D Communications not loaded.

Reason: APPC or TCP/IP is not loaded. Unattended operations will not be performed.

Action: .

PC1102N Dial remote now.

Reason: Dial the remote system now. Press the OK button when you are polling

Action: .

PC1201E Error in configuration file

Reason: .

Action: See additional messages.

PC1202E Error in parameter file

Reason: .

Action: See additional messages.

PC1203E Required configuration parameter missing.

Reason: A required configuration parameter that was expected is missing.

Action: See additional messages.

PC1204E Required parameter missing.

Reason: .

Action: See additional messages.

PC1205E Bad ACTION value

Reason: UPSTREAM can only process in a host request only certain ACTION values including 1 (backup), 0 (restore), 4 (restart backup), 5 (run job), 6 (kill restart), 7 (report), 8 (restart restore), 9 (kill restart restore), 10 (host job), 11 (migrate), 12 (inquire versions), 13 (performance), 14 (SOS restore), 15 (SOS backup), 16 (delete backup), 17 (register target name), 18 (inquire files), 19 (local backup disk report).

Action: Respecify the ACTION value.

PC1206W Restart backup requested and nothing to restart

Reason: .

Action: .

PC1207E Run Job not supported in Windows

Reason: Since Microsoft Windows does not have the concept of a batch or command file, the job function has no meaning.

Action: .

PC1208D Restart backup action command specified

Reason: .

Action: .

PC1209E Kill last restart and there wasn't one pending

Reason: .

Action: .

PC1210E Error creating return code file

Reason: There was a file error creating the US.RET file.

Action: Look up the return code in the operating system messages section of the UPSTREAM manual.

PC1211E Error writing return code file

Reason: There was a file error writing the return code in the US.RET file.

Action: Look up the return code in the operating system messages section of the UPSTREAM manual.

PC1212E Error renaming backup file

Reason: Renaming of a restartable backup file with the current process ID failed.

Action: Check if you have write permissions for the current working directory and upstream.*.bkp files

PC1213E Error defining main thread

Reason:

Action: Call Innovation Technical Support.

PC1220W Error opening translation table

Reason: There was an error opening the translation table listed below.

Action: See additional messages

PC1221W Error reading translation table

Reason: There was an error reading an entry from the translation table listed below.

Action: Verify that you have one line per entry. You must have a total of 256 lines. See additional messages.

PC1225I Using translation table.

Reason: The following translation table is now in use:

Action: .

PC1229W Mismatch between RESTARTVERSIONDATE and PROFILE

Reason:

Action: .

PC1230W Restart restore requested and nothing to restart

Reason: The restart only action command was specified and there was not an outstanding restore to restart.

Action: Verify that you have one line per entry. You must have a total of 256 lines. See additional messages.

PC1231D Restart restore action command specified

Reason: .

Action: .

PC1232E Kill restart restore and there wasn't one pending

Reason: .

Action: .

PC1233W Restartable backup has been killed.

Reason: .

Action: .

PC1234W Restartable restore has been killed.

Reason: .

Action: .

PC1235D Running pre-process job:

Reason: .

Action: .

PC1236D Running post-process job:

Reason: .

Action: .

PC1237E Pre-process job failed

Reason: .

Action: .

PC1238E Post-process job failed

Reason: .

Action: .

PC1240E Error allocating version date structure.

Reason: The following version date will not be added to the return code file. In most cases this is not a problem.

Action: Free memory.

PC1241E Error writing version date to return code file

Reason: The following version date will not be added to the return code file. In most cases this is not a problem.

Action: See additional messages.

PC1242D Running failed process job:

Reason: .

Action: .

PC1243E Post-process job failed

Reason: .

Action: .

PC1250E Error creating internal message list

Reason: There was an error creating the internal message list. This may cause the flow of screens to operate incorrectly.

Action: Free memory and try again.

PC1251E Stack overflow

Reason: There is a shortage of stack space for temporary memory. Internal error.

Action: Call Innovation Technical Support.

PC1252I Windows message queue depth changed

Reason: The environment variable was specified to change the UPSTREAM message queue depth. The value specified may be reduced due to Windows memory considerations

Action: .

PC1264I UPSTREAM orphaned due to USTPServ termination

Reason: US.exe was started by USTPServ.exe or by USAttMgr.exe which was started by USTPServ.exe and USTPServ.exe was terminated without first sending a KILL request to US.exe via USCntl.exe.

Action: US.exe will continue to run as an orphaned process running in the context of a service.

PC1265E UPSTREAM terminating forcefully

Reason: US.exe attempted to terminate itself gracefully but failed to do so within a reasonable amount of time.

Action: US.exe will now forcefully terminate itself.

PC1266W UPSTREAM terminating due to USTPServ termination

Reason: US.exe was started by USTPServ.exe or by USAttMgr.exe which was started by USTPServ.exe and USTPServ.exe was terminated without first sending a KILL request to US.exe via USCntl.exe.

Action: US.exe will now terminate itself so as not to be left as an orphaned process running in the context of a service.

PC1267W UPSTREAM received a KILL request

Reason: US.exe received a KILL request and is starting its abnormal termination processing.

Action:

PC1271D User termination

Reason: User requested termination of UPSTREAM.

Action: .

PC1272E External kill

Reason: UPSTREAM will now terminate due to an external termination request.

Action: .

PC1273I Switching log files

Reason: The log file name is being switched to the log file name that follows. All further messages will be written to the new log file.

Action: .

PC1274E Multiple User mode has been disabled

Reason: Multiple user mode requires a user name and a computer name and this information could not be obtained from the operating system. Multiple user mode is therefore disabled.

Action: .

PC1275I Entering UPSTREAM v%s (%s) %s

Reason: .

Action: .

PC1276I Exiting UPSTREAM

Reason: .

Action: .

PC1277E Error setting termination timer

Reason: UPSTREAM can't set the termination timer. It will terminate anyway but may be unstable in Windows.

Action: .

PC1278E Error resetting termination timer

Reason: UPSTREAM can't reset the termination timer. It will terminate anyway but may be unstable in Windows.

Action: .

PC1279E Termination process took too long.

Reason: UPSTREAM waited 60 seconds for pending remote allocate requests to terminate. UPSTREAM will terminate anyway but may be unstable in Windows.

Action: .

PC1310I LU Log Exit

Reason: The following type and subtype describe some error reported by APPC/PC concerning the LU.

Action: Can usually be ignored. See UPSTREAM manual for the meaning of the type and subtype.

PC1311D PU Log Exit

Reason: The following type and subtype describe some error reported by APPC/PC concerning the PU.

Action: A TYPE of 17 with a SUBTYPE of 0 is normal Other TYPEs and SUBTYPEs should be looked up in the Log Exits codes in the UPSTREAM User's Guide.

PC1325E Error occurred at the session start point

Reason: .

Action: .

PC1326E Error occurred during ATTACH_PU verb

Reason: .

Action: .

PC1327E Error occurred during ATTACH_LU verb

Reason: .

Action: .

PC1328E Error occurred during ACTIVATE_DLC verb

Reason: .

Action: .

PC1329E Error occurred during "dial remote" prompt

Reason: .

Action: .

PC1330E Error occurred during session activation

Reason: .

Action: .

PC1331E Error occurred while waiting for session start

Reason: .

Action: .

PC1332E Error occurred at session active location

Reason: .

Action: .

PC1333E Error occurred during session deactivation

Reason: .

Action: .

PC1334E Error occurred during DETACH_LU verb

Reason: .

Action: .

PC1335E Error occurred during DETACH_PU verb

Reason: .

Action: .

PC1336E Error occurred after session was stopped

Reason: .

Action: .

PC1401E Unknown APPC function

Reason: A request was made for an APPC function that was unknown. This is an internal error.

Action: Call technical support.

PC1402E Remote system error

Reason: The preceding message was from the remote system. Subsequent messages describe where in the PC the error occurred and can usually be ignored.

Action: See the host log (available through Host Reporting) for more details.

PC1403I Allocation failure - retry...

Reason: There was a retryable allocation error. UPSTREAM will retry this verb up to 10 times before reporting this as a fatal error.

Action:

PC1404E Illegal force to send

Reason: The remote requested a force to send state illegally. Internal error.

Action: Call Innovation Technical Support.

PC1501N Starting session

Reason: You can press CANCEL to abort the session start function. This message will go away if there is an error or the session has started successfully.

Action: .

PC1502N Waiting for session to activate.

Reason: You can press CANCEL to abort waiting for the session to start automatically. This message will go away if there is an error or the session has started successfully.

Action: .

1520I (Unix) The directory above was not found

Reason: If this is a restore, UPSTREAM will create the directory with it's default owner/group. You may need to manually modify these settings.

Action:

PC1565E Fatal file system error

Reason: Access to the device has been lost. The remainder of your operation (backup/restore) will fail.

Action: Repair access to the device

PC1566E Error flushing written data to disk

Reason: .Internal Error.

Action: See additional messages.

PC1599E Error writing pending data

Reason: In a situation where data writes must be blocked into even multiples, there was an error writing pending data.

Action: See additional messages.

PC1600E (UNIX) Error in lseek call

Reason: While attempting to use lseek to seek, there was a system error.

Action: See additional messages.

PC1601E Error creating file structure

Reason: There was an error creating the internal file storage structure.

Action: Free memory and try again.

PC1602E Error setting drive for directory create

Reason: There was an error during a file open when the directory was attempting to be created, setting the default drive to the requested value.

Action: Be sure that the drive is ready then try again.

PC1603E Error getting directory for directory create

Reason: There was an error during a file open when the directory was attempting to be created, getting the current default directory for the specified drive.

Action: Be sure that the drive is ready then try again.

PC1604E Error creating directory

Reason: There was an error during a file open when the directory was attempting to be created.

Action: See additional messages.

PC1605E Error setting directory after directory create

Reason: There was an error during a file open when the directory was created setting the default directory to the directory successfully created.

Action: See additional messages.

PC1606E Error opening file

Reason:

Action: See additional messages.

PC1607E Error removing old EOF marker in a text file

Reason: There was an error removing an old end-of-file marker in a text file when a file was opened for append.

Action: See additional messages.

PC1608E Error reading old EOF marker in a text file

Reason: There was an error reading the last byte of a text file opened for append.

Action: See additional messages.

PC1609E Error seeking old EOF marker in a text file

Reason: There was an error seeking to the last byte of a text file opened for append.

Action: See additional messages.

PC1610E Error seeking for block read

Reason: There was an error seeking for a location in a file for a block read.

Action: See additional messages.

PC1611E Error reading a block

Reason: There was an error reading a block of a file randomly.

Action: See additional messages.

PC1612E Not enough data (unexpected EOF)

Reason: During a block read, a block of a specific size was expected and the file did not contain enough data.

Action: The file has been corrupted. Delete the file and retry (if possible).

PC1613E Error writing a string

Reason: There was an error writing a string sequentially.

Action: See additional messages.

PC1614E Error writing a string EOL

Reason: There was an error writing the CR/LF combination after writing a string successfully.

Action: See additional messages.

PC1615E Error seeking for block write

Reason: There was an error setting the location for a block write.

Action: See additional messages.

PC1616E Error writing a block of data

Reason:

Action: See additional messages.

PC1617E Error deleting a file

Reason:

Action: See additional messages.

PC1618E Error seeking to the end of a file

Reason:

Action: See additional messages.

PC1619E Access of a LAN file.

Reason: The file to be opened is a LAN file.

Action: Purchase the LAN version of UPSTREAM.

PC1625E Error removing a directory

Reason:

Action: See additional messages.

PC1637E Error allocating extra data buffer

Reason: There was an error allocating the buffer to hold multi-file extra data.

Action: Reduce the number of duplicate files or free memory.

PC1638E Extra data position too large

Reason: Internal error.

Action: .Call Innovation Technical Support.

PC1640E Non-file data for one or more file not restored

Reason: The non-file data for one or more files was not restored, probably because it was backed up from a different operating system than the one it is being restored for.

Action: Call technical support.

PC1641E Error allocating file find buffer

Reason: There was an error allocating a buffer needed to perform a file search operation.

Action: Free memory and try again.

PC1642E An attempt was made to read past the end of file

Reason: There was an attempt to read past the end of a file during a backup.

Action: Call technical support.

PC1643E Error remapping file view

Reason: There was an error remapping a view for a memory mapped file.

Action: Call technical support.

PC1644E Cannot determine pipe file size

Reason: A UNC pipe file spec was provided for a backup without a DASDOVERRIDE parameter. The only way for UPSTREAM to determine the amount of data that might be read from a pipe is for the user to inform UPSTREAM via a DASDOVERRIDE parameter. The DASDOVERRIDE parameter was either not provided or did not specify an absolute number. UPSTREAM cannot backup the data from the pipe.

Action: Supply a DASDOVERRIDE parameter with an absolute number of bytes as a value.

PC1645E (UNIX) Error in stat or lstat call

Reason: While searching for files in a directory, there was a system error.

Action: See additional messages.

PC1646E (UNIX) Error in getcwd call

Reason: While searching for files in a directory, there was a system error.

Action: See additional messages.

PC1647E (UNIX) Error in getcwd call

Reason: While searching for files in a directory, there was a system error.

Action: See additional messages.

PC1648E (UNIX) Error in getcwd call

Reason: While searching for files in a directory, there was a system error.

Action: See additional messages.

PC1649E (UNIX) Error in opendir call

Reason: While searching for files in a directory, there was a system error.

Action: See additional messages.

PC1650E (UNIX) Error in llseek call

Reason: While attempting to use llseek to seek, there was a system error.

Action: See additional messages.

PC1714E Error testing remote allocate

Reason: There was an error testing for remote allocates before beginning a local allocate.

Action: See additional messages

PC1715E Expected data

Reason: UPSTREAM received a state change when data was expected. Internal error.

Action: Contact Innovation Technical Support.

PC1716E Error allocating test conversation

Reason:

Action: See additional messages.

PC1717E Error deallocating test conversation

Reason:

Action: See additional messages.

PC1718I Remote allocate support disabled

Reason: UPSTREAM was started by the UPSTREAM Attach Manager to handle UPSTREAM user interface requests, you specified the environment variable USNORMT which intentionally disabled support for host initiates, or you are running UPSTREAM with multiple user support enabled.

Action: Check the host log.

PC1719E Remote allocate checks are taking too long

Reason: The internal UPSTREAM timer checks for remote requests of UPSTREAM functions every 5 seconds. The last check took more than 5 seconds so UPSTREAM is disabling this check.

Action: You should adjust your APPC software so that Remote Allocate checks return as quickly as possible (usually a value of 1).

PC1720E Remote allocate checks seem locked

Reason: UPSTREAM has has waited more than 1 minute for a remote allocate check to return. This indicates that your communications software has locked.

Action: A reboot would be suggested.

PC1721D Remote allocate support was disabled

Reason: UPSTREAM has disabled the support for host initiates due to a previous condition.

Action: Check the log to determine why host initiates were disabled.

PC1725E Bad send state

Reason: The conversation can not support the send request made. Internal error.

Action: Call technical support.

PC1726E Bad receive state

Reason: The conversation can not support the receive request made. Internal error.

Action: Contact Innovation Technical Support.

PC1727E Bad confirm state

Reason: The conversation can not support the confirm request made. Internal error.

Action: Contact Innovation Technical Support.

PC1728E Bad confirmed state

Reason: The conversation can not support the confirmed request made. Internal error.

Action: Contact Innovation Technical Support.

PC1729E Bad flush state

Reason: The conversation can not support the flush request made. Internal error.

Action: Contact Innovation Technical Support.

PC1730E Bad send error state

Reason: The conversation can not support the send error request made. Internal error.

Action: Contact Innovation Technical Support.

PC1731E Incomplete received

Reason: A receive and wait buffer was too small. Often this indicates a communications error either locally or on the host.

Action: Check the host log.

PC1732E Bad flush send state

Reason: The conversation can not support the flush request made. Internal error.

Action: Call technical support.

PC1733E NULL receive buffer

Reason: Internal error.

Action: Call technical support.

PC1740E Cannot start a conversation

Reason: A communications conversation cannot be started because neither APPC or TCP/IP is installed.

Action:

PC1753E Can't allocate record packing record

Reason:

Action: Disable record packing or free memory.

PC1754E Record packing error

Reason: A data record was larger than the entire buffer received. Internal error.

Action: Call Innovation Technical Support.

PC1755E Invalid packing type

Reason: The remote specified a packing type not allowed.

Action: Call Innovation Technical Support.

PC1756E Invalid packing type (standard)

Reason: The remote specified a packing type not allowed.

Action: Call Innovation Technical Support.

PC1757E Invalid packing type (fixed)

Reason: The remote specified a packing type not allowed.

Action: Call Innovation Technical Support.

PC1758E Invalid packing type (variable)

Reason: The remote specified a packing type not allowed.

Action: Call Innovation Technical Support.

PC1759E Length mismatch (rcvd %ld, data %ld)

Reason: The length received does not match the length in the first two bytes of data. Internal protocol error.

Action: Call Innovation Technical Support.

PC1760E Receive too small (%ld)

Reason: All receives must be 2 bytes or more. Internal protocol error.

Action: Call Innovation Technical Support.

PC1761E Packed receive too small

Reason: Internal error.

Action: Retry your restore disabling record packing.

PC1765E Too many conversations

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1766E Invalid conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1767E Invalid converation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1768E No conversation ID set

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1769E No conversation in progress

Reason: Internal error.

Action: Call Innovation Technical Support

PC1770E Invalid record packing conversation

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1771E Set bad conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1772E Bad conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1773E Bad conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1774E Bad conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1775E Bad conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1776E Bad conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1777E Bad conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1778E Bad conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1779E Bad conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1780E Bad conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1781E Bad conversation number

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1782E Not a packing conversation for receiving

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1783E Not a packing conversation for sending

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1801E Error writing description to the backup file

Reason: There was an error writing the backup description record (record #1) to the internal backup file.

Action: See additional messages.

PC1802E Error writing the specs to the backup file

Reason: There was an error writing a file specification to the internal backup file.

Action: See additional messages.

PC1803E Error writing file info to the backup file

Reason: There was an error writing a file information record to the internal backup file.

Action: See additional messages.

PC1804E Error writing description to the backup file

Reason: There was an error writing the backup description record (record #1) to the internal backup file when the file information was completely written.

Action: See additional messages.

PC1805E Error deleting backup file.

Reason: There was an error deleting the internal backup file.

Action: See additional messages.

PC1806E Error creating the backup file

Reason: There was an error creating the internal backup file.

Action: See additional messages.

PC1807E Error writing parameters to the backup file

Reason: There was an error writing the non-repeating parameters to the internal backup file during its creation.

Action: See additional messages.

PC1808D File spec specifies no files.

Reason: The following backup file spec specifies a drive or mount point where no files could be found to be backed up. This usually occurs when a drive or mount point has been lost or is unavailable.

Action: Validate the drive or mount point connection.

PC1809E No valid files to back up.

Reason: There are no valid files in any of your file specs to backup. The backup will not be performed. Usually this occurs when one or more connections to drives or mount points have been lost.

Action: Validate the drive or mount point connection.

PC1810W Backup specification not found.

Reason: The backup specification directory was not found on the specified drive.

Action: Check your file set specification.

PC1812W File name too long

Reason: The file name above has more characters than the UPSTREAM software can support.

Action: The FDR/UPSTREAM host version 3.1.4 can support up to 255 characters; earlier versions up to 230 characters. The client size can be set using the MAXFILENAMESIZE environment variable.

PC1813E Error creating backup parameter file

Reason: There was an error creating the parameter file which is associated with a backup file.

Action: See additional messages

PC1814E Error reading backup file to delete

Reason: There was an error reading the backup file for the purpose of deleting the parameter file attached to it. There will be a file left on disk.

Action: See additional messages

PC1815E Error deleting param file attached to backup

Reason: There was an error deleting the parameter file attached to the backup file. There will be a file left on disk.

Action: See additional messages

PC1819I Directory too long

Reason: The directory below is too long for reliable DOS access. The files in it will be skipped.

Action: Reduce the directory path length.

PC1820E Error saving backup parameters

Reason: There was an error saving the original backup parameters temporarily so that modified parameters can be used.

Action: See additional messages.

PC1821E Error recovering backup parameters

Reason: There was an error retrieving the parameters that you originally specified. The parameters (as displayed) are now incorrect.

Action: See additional messages.

PC1822E Error adding a file spec

Reason: There was an error setting the current file spec after adding an existing one.

Action: See additional messages.

PC1823E Error copying to new file spec

Reason: When creating a new file spec, there was an error copying parameters from an existing file spec.

Action: See additional messages.

PC1825W Old backup file

Reason: The backup file detected on disk is not usable because it hold a version which does not match the version of the software. The backup will begin from the beginning.

Action:

PC1826W Backup file not completed

Reason: The backup file detected on disk is not usable because it did not complete. The backup file will be regenerated and the backup will start from the beginning.

Action:

PC1828E File specification has invalid network name

Reason: The file specification has a Universal Naming Convention (UNC) prefix which contains an invalid network name.

Action: Correct the file specification and try again.

PC1829E Invalid UNC name

Reason: The file specification contains an invalid UNC name.

Action: Respecify.

PC1831E Error opening a file to calculate DASD size

Reason: There was an error opening a file to calculate the size of the sequential disk file to be created for this back up on MVS.

Action: See additional messages.

PC1832E Error accessing non-file data for DASD calc

Reason: There was an error accessing non-file data so as to be able to calculate the total number of bytes that will be used to create the Sequential Disk file on MVS for this backup. In most cases this won't be a problem but if you have alot of these errors the file may be too small or go into secondary extents.

Action: See additional messages.

PC1833E Error accessing non-file data for DASD calc

Reason: There was an error accessing non-file data so as to be able to calculate the total number of bytes that will be used to create the Sequential Disk file on MVS for this backup. In most cases this won't be a problem but if you have alot of these errors the file may be too small or go into secondary extents.

Action: See additional messages.

PC1834E Error creating new file spec.

Reason: There was an error allocating memory for a file specification during the backup file build.

Action: Free memory and retry or specify fewer file specifications.

PC1835E Error creating a directory level

Reason: There was an error allocating memory for a directory level during the backup file build.

Action: Free memory and retry or specify the subdirectories explicitly.

PC1836E Insufficient memory.

Reason: There was an error allocating memory for a subdirectory during the backup file build.

Action: Free memory and retry or specify the subdirectories explicitly.

PC1840E Volume doesn't support last access date

Reason: You requested a restricted backup based on last access date. The volume you are backing up does not support this field. You must use an HPFS volume, Novell

volume or Banyan volume formatted and accessed with OS/2 to use this facility.

Action: Respecify.

PC1841E Only valid for full merge backups

Reason: You can only specify a migration or retention of deleted files when performing a full merge backup.

Action: Respecify.

PC1842W Can't migrate changed file.

Reason: The following file has changed, yet it was specified for migration. This file will not be deleted.

Action: See additional messages.

PC1843E Error opening incremental file

Reason: There was an error opening to read the required last backup file used for incrementals.

Action: See additional messages.

PC1844E Error opening incremental file

Reason: There was an error opening to write the required last backup file used for incrementals.

Action: See additional messages.

PC1845E Error reading incremental file.

Reason: There was an error reading the required incremental file.

Action: See additional messages.

PC1846E Error writing incremental file.

Reason: There was an error writing the required incremental file.

Action: See additional messages.

PC1847E Parameter inconsistancy

Reason: You specified DATELIMIT but did not specify both a LATESTDATE and a LATESTTIME.

Action: Respecify.

PC1848E Latest date incorrect

Reason: The format must be YY:MM:DD.

Action: Respecify.

PC1849E Latest time incorrect

Reason: The format must be HH:MM:SS.

Action: Respecify.

PC1851D Skipping non journaled file system

Reason: The following directory was included in the file specification, but is not a journaled file system and thus will not be included in the backup.

Action:

PC1852W Skipping files not owned by the effective User

Reason: You must be running with root user authority to backup files you do not own.

Action:

PC1853D Error opening incremental file

Reason: There was an error opening to read the required last backup file used for incrementals. It will be assumed that a full backup has not been done before. All files will thus be marked has having NOT been changed and the host will request all files not matching previous backups or in USTDUPFL.

Action:

PC1854E Error allocating memory

Reason: There was an error allocating memory for the backup restore file.

Action: Free memory or disk and retry.

PC1855E Unexpected EOF

Reason: Unexpected end of file reading the backup/restore file.

Action: Internal error. Call Innovation Technical Support.

PC1856I Backup not completely started.

Reason: This backup can not be restarted.

Action:

PC1857I Restore not completely started.

Reason: This backup can not be restarted.

Action:

PC1858W Path name too long.

Reason: The following path name is too long and its subdirectories will not be traversed.

Action: The MAXFILENAMESIZE environment variable can be increased up to 230 bytes.

PC1859E ioctl failed for raw device.

Reason: The ioctl used to get raw device information failed.

Action:

PC1860E Open failed for raw device.

Reason: Could not get raw device information.

Action:

PC1865E read_vtoc failed for raw partition

Reason: Could not get partition info for raw device.

Action:

PC1866D File exceeds maximum size

Reason: The following file exceeds the MaxKFileSize specified.

Action:

PC1867E Not local HFS or VxFS file system

Reason: The file specification (below) is not part of a local HPUX HFS or VxFS file system. Only files in a local file system may be backed up with UPSTREAM.

Action: Respecify.

PC1868D Skipping non HFS or VxFS file system

Reason: The following directory was included in the file specification, but is not a HPUX HFS or VxFS file system and thus will not be included in the backup.

Action:

PC1869E Unexpected EOF

Reason: Unexpected end of file reading the backup/restore incremental date file.

Action: Internal error. Call Innovation Technical Support.

PC1870W Backup file corrupt

Reason: The existing backup file is not usable. It will be deleted and any prior restarts will not be serviced.

Action:

PC1871E Bad UNC file specification

Reason: A UNC file specification must consist of three components: \\MACHINE\SHARE\FILE_SPEC. One or more of these components are missing.

Action: Respecify

PC1872E Not HFS file system

Reason: The file specification (below) is not part of the normal HFS file system. Only HFS files may be backed up with UPSTREAM.

Action: Respecify.

PC1873D Skipping non HFS file system

Reason: The following directory was included in the file specification, but is not a HFS file system and thus will not be included in the backup.

Action:

PC1874E Unable to obtain file system type

Reason: An error occurred obtaining the file system type for the file specification (below).

Action: Probable internal error. Call Innovation Technical Support.

PC1875D Skipping directory from unknown file system type

Reason: An error occurred obtaining the file system type for the following directory and thus will not be included in the backup.

Action:

PC1876E Not local UFS or AdvFS file system

Reason: The file specification (below) is not part of a local Tru64 UNIX UFS or AdvFS file system. Only files in a local file system may be backed up with UPSTREAM.

Action: Respecify.

PC1877D Skipping non UFS or AdvFS file system

Reason: The following directory was included in the file specification, but is not a Tru64 UNIX UFS or AdvFS file system and thus will not be included in the backup.

Action:

PC1878D Skipping zero length Tru64 UNIX partition

Reason: The following raw device was included in the file specification which refers to a zero length or unallocated disk partition.

Action:

PC1879D Skipping partition on unlabeled disk

Reason: The following raw device was included in the file specification which refers to a partition other than c on an unlabeled disk. Only the c partition can be backed up on an unlabeled disk.

Action:

PC1880E Exceeded maximum backup size

Reason: Your backup exceeded the maximum size that your administrator has allowed for you.

Action: Contact your UPSTREAM administrator.

PC1881E (Novell Migration) Need Long Name Space

Reason: You specified a Novell Migration with the add extension option enabled. This requires that the LONG name space be loaded on the NetWare partition.

Action: Add the LONG name space to the partition.

PC1882E Error flushing backup file to disk.

Reason:

Action: See additional messages.

PC1883E Error adding entry to sort list.

Reason: This is usually a memory error.

Action: Free memory or close programs.

PC1884E Error creating sort file

Reason:

Action: See additional messages.

PC1885E Error starting sort

Reason: This is generally a memory shortage.

Action: Close applications or free memory.

PC1886E Error deleting sort file

Reason:

Action: See additional messages.

PC1887E Empty sort tree

Reason: Internal error.

Action: Call Innovation Technical Support.

PC1888E Error writing sort file

Reason: Internal error.

Action: See additional messages.

PC1889E Error reading sort file

Reason: Internal error.

Action: See additional messages.

PC1890E Unable to allocate exclude file spec storage

Reason:

Action: Close some other applications and try the UPSTREAM function again.

PC1891E Invalid exclude file spec

Reason: An exclude file spec must be a UNC file spec (\\server\share or !:\server\share) or a fully qualified non-UNC file spec that contains a drive letter followed by ":\".

Action: Fix the exclude file spec and try the UPSTREAM function again.

1892W Unable to open exclude file

Reason: Exclude file (the file name as specified follows) can not be opened and will not be processed.

Action: Check if the file exists and you have read access to it.

PC1900E Build structure overflow

Reason: When building a record for transmission, the data overflowed the structure passed in.

Action: Specify a larger record size.

PC1901E Unexpected received data type

Reason: A data record was received which contained data which was unexpected. Internal error.

Action: Call Innovation Technical Support.

PC1902E Parse structure overflow

Reason: When extracting received data, the data overflowed the buffer available.

Action: Specify a larger record size.

PC1903E Field size overflow

Reason: When extracting received data, the data overflowed the field available. Internal error.

Action: Call Innovation Technical Support.

PC1904E Field not exact size

Reason: When parsing received data, a data record was not the size expected. Internal error.

Action: Call Innovation Technical Support.

PC1905E Received length too large

Reason: When parsing received data, a data field was larger than the buffer to hold it.

Action: Specify a larger record size.

PC1906E Received data area not created

Reason: The received data buffer was not created before a request to parse data was received. Internal error.

Action: Call Innovation Technical Support.

PC1907E Build structure overflow during fold

Reason: When building a record for transmission, when attempting to fold lower case to upper case, the data overflowed the structure passed in.

Action: Specify a larger record size.

PC1908E Invalid date format

Reason: When converting a date from normal to Julian format, the date was not in the correct format (MM-DD-YY).

Action: Internal error. Call Innovation Technical Support.

PC1909E (UNIX) Received invalid flag length field

Reason: Internal error

Action: Call Innovation Technical Support.

PC1910E (UNIX) Received invalid flag length field

Reason: Internal error

Action: Call Innovation Technical Support.

PC1911E (UNIX) Received invalid flag length field

Reason: Internal error

Action: Call Innovation Technical Support.

PC1912E (UNIX) Internal invalid flag length field

Reason: Internal error

Action: Call Innovation Technical Support.

PC1913E (Status) Received bad opcode

Reason: Internal error

Action: Call Innovation Technical Support.

PC1914E (Backup Build) Position out of range

Reason: Internal error

Action: Call Innovation Technical Support.

1915D Registered name too long (%s)

Reason: Registered names are restricted to 16 bytes. This name will be truncated.

Action: Wait for the name to age out or call technical support.

PC2000E Error occurred during a backup build file

Reason: .

Action: .

PC2001E Error occurred during a backup start conv

Reason: .

Action: .

PC2002E Error occurred during a backup send description

Reason: .

Action: .

PC2003E Error occurred during a backup received started

Reason: .

Action: .

PC2004E Error occurred during a backup send file info

Reason: .

Action: .

PC2005E Error occurred during a backup send file data

Reason: .

Action: .

PC2006E Error occurred during a backup confirm

Reason: .

Action: .

PC2007E Error occurred during a backup end conversation

Reason: .

Action: .

PC2008E Error occurred at the end of a backup

Reason: .

Action: .

PC2010E Error occurred during a restart read file

Reason: .

Action: .

PC2011E Error occurred during a restart start conv

Reason: .

Action: .

PC2012E Error occurred during a restart send restart

Reason: .

Action: .

PC2013E Error occurred during a restart receive desc.

Reason: .

Action: .

PC2014E Error occurred while deleting files.

Reason: .

Action: .

PC2015E Error occurred during the host merge.

Reason: .

Action: .

PC2020E Unwritten record unexpected.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC2021E Error reading backup file

Reason: While attempting to reset the archive bits for duplicate files at the end of the backup there was an error reading the backup file.

Action: See I/O messages.

PC2025E Unknown backup state

Reason: Internal error.

Action: Call technical support.

PC2026E Error allocating record data

Reason: Memory was not available to allocate the record for the backup.

Action: Either specify a smaller record size or turn off compression.

PC2027E Compression error

Reason: Internal error.

Action: Call technical support.

PC2028E Error reading file attributes

Reason: This error may affect resetting the archive bit but the file will be included in backup/restore.

Action: See additional messages.

PC2029W Error setting file attributes

Reason:

Action: See additional messages.

PC2030E Backup file unusable for restarted backup

Reason: The backup never started. It must be rerun.

Action:

PC2032E Restarted backup mismatch

Reason: The remote version date does not match the version date in the version file. The backup is not restartable.

Action:

PC2033E Error recovering parameters during restart

Reason: There was an error recovering the original parameters specified at backup time.

Action: See additional messages

PC2034E Error using backup file specifications

Reason: There was an error using the file specifications stored in the backup file. The backup is not restartable.

Action:

PC2035E Error saving parameters during restart

Reason: There was an error saving the current parameters to restore the parameters at the backup time.

Action: See additional messages

PC2036E Error creating the specification hold area

Reason: Memory ran short while attempting to create a structure to hold file specifications.

Action: Free memory, specify a smaller record size or turn off compression.

PC2037D Error retrieving original transfer specs

Reason: There was an error retrieving the transfer specifications that were in place before the restarted backup was attempted. This should not affect the success or failure of the transfer.

Action:

PC2038E Error retrieving original transfer parms

Reason: There was an error retrieving the transfer parameters that were in place before the restarted backup was attempted. This should not affect the success or failure of the transfer.

Action:

PC2039E Remote saw transfer as completed

Reason: The remote did not recognize that the backup had failed even though the PC thinks that it did. The backup is thus not restartable.

Action:

PC2041E File open error aborted the backup

Reason: The backup aborted because a file to be backed up was not available for open.

Action:

PC2043E File read error aborted the backup

Reason: The backup aborted because a file to be backed up was not available for read.

Action:

PC2044W Error creating backup timer

Reason: There was an error creating the backup timer. The backup should continue normally, however you will not be able to suspend the backup.

Action:

PC2050I Backup started

Reason: .

Action: .

PC2051D Backup successful

Reason: .

Action: .

PC2052D Backup complete with some ignored failures

Reason: .

Action: .

PC2053D Backup failed

Reason: .

Action: .

PC2054I Restarted backup started

Reason: .

Action: .

PC2055W Backup suspended

Reason: .

Action: .

PC2056I File transfer send started

Reason: .

Action: .

PC2057D File transfer successful

Reason: .

Action: .

PC2058D File transfer complete with some ignored failures

Reason: .

Action: .

PC2059D File transfer failed

Reason: .

Action: .

PC2060W File transfer suspended

Reason: .

Action: .

PC2061E Suspend for specified percent complete (%ld)

Reason: .

Action: .

PC2062E Suspend because time limit exceeded (%ld)

Reason: .

Action: .

PC2063D Failed due to bad file specification

Reason: .

Action: .

PC2070E Backup/Restore comm terminated fatal server error

Reason: The communications with the host was terminated due to a fatal LAN error with the server that was being backed up from or restored to. The name of the server follows.

Action: Restore the LAN connection to the server and restart the failed backup or restore.

PC2071E Backup/Restore comm terminated fatal ULTra error

Reason: The communications with the host was terminated due to a fatal ULTra workstation error with the server that was being backed up from or restored to. The name of the server follows.

Action: Restore the LAN connection to the ULTra workstation and restart the failed backup or restore.

PC2072E Backup/Restore comm terminated reason unknown

Reason: The communications with the host was terminated for some unknown reason. The backup or restore failed. name of the server follows.

Action: Other messages contain the exact reason for the failure. Correct the problem and restart the failed backup or restore.

PC2075E Original backup not completely started

Reason: None of the files from the original backup ever reached the host.

Action: Restart the backup.

PC2076D PC and/or Server time adjusted to MVS time

Reason: .

Action: .

PC2077E Error creating the delta file.

Reason: There was an error creating the file containing the time change. This will affect the USSTART program if it is currently running.

Action: See additional messages. If USSTART is running, stop and restart.

PC2078E Restart not specified.

Reason: There was a backup file, but the original backup was not specified as restartable.

Action: .

PC2079E Past restart point

Reason: The backup has passed the point that a restart can be attempted.

Action: The backup has been committed "as is". Future backups will pick up any data that was not included in this one.

PC2080D Automatic delete to begin

Reason: .

Action: .

PC2081D Automatic file deletion complete

Reason: .

Action: .

PC2082E Error starting backup open file thread

Reason: There was an error starting the backup open file thread.

Action: Contact Innovation Technical Support.

PC2083E Timeout waiting for file open thread

Reason: There was a timeout waiting for the file open thread to open the file.

Action: Contact Innovation Technical Support.

PC2085D A previous backup dataset was unavailable

Reason: When performing the merge, the host attempted to dynamically allocate a dataset from a previous backup and it failed. Files which were on this backup will be requested from the PC.

Action: See the host log.

PC2086E One of your file specs is empty.

Reason: .

Action: Enter a file specification in every file spec.

PC2087E Backup profile name invalid

Reason: The backup profile name you specified can not be used to create a file name on the host and is thus invalid.

Action: Make sure the length is less than or equal to 8 and that the first character is an alphabetic character or a '$', '#' or '@'.

PC2089D Dummy profile specified

Reason: FDR/UPSTREAM will back up the file information only; no file data will be backed up and restores are prohibited. These profiles are only for testing.

Action: .

PC2090E Unknown duplicate flags

Reason: FDR/UPSTREAM MVS sent duplicate flags to your machine which were unrecognized.

Action: Upgrade FDR/UPSTREAM on your machine.

PC2091W Skipped %ld files

Reason: .

Action: .

PC2092E Error saving parameters to add migration specs.

Reason: .

Action: See additional messages.

PC2093E Received bad position number.

Reason: . Internal error.

Action: Call Innovation Technical Support.

PC2094E Error creating backup open file event

Reason: There was an error creating one of the synchronization events for the backup open file thread.

Action: Contact Innovation Technical Support.

PC2095E A migration only backup was specified

Reason: You specified a migration only backup and there were no migrated files.

Action: Respecify.

PC2096E Storage type not allowed

Reason: You may not specify a keyed or archived type backup for a migration backup.

Action: Specify a sequential disk or tape storage type.

PC2097E Error reading backup description file

Reason: This is not a restartable backup. The backup will be removed.

Action: .

PC2098D Directories will not be deleted.

Reason: The USNODIRDELETE environment variable was specified which suppresses directory deletes.

Action: .

PC2099E Insufficient memory

Reason: There was insufficient memory allocating space for backup verification.

Action: Close applications.

PC2100E Error occurred during a restore start conv.

Reason: .

Action: .

PC2101E Error occurred during a restore send description

Reason: .

Action: .

PC2102E Error occurred during a restore receive descript.

Reason: .

Action: .

PC2103E Error occurred during a restore receive file

Reason: .

Action: .

PC2105E Error occurred during a restore confirmed data

Reason: .

Action: .

PC2106E Error occurred during a restore end conversation

Reason: .

Action: .

PC2107E Error occurred during the completion of the rest.

Reason: .

Action: .

PC2108E Error occurred during a restore restart.

Reason: .

Action: .

PC2120E Dest specification is not valid for LAN WS

Reason: The destination file specification has a Universal Naming Convention (UNC) prefix which is not allowed when a ULTra LAN Workstation is also specified.

Action: Correct the destination file specification and try again.

PC2121E Dest specification has invalid network name

Reason: The destination file specification has a Universal Naming Convention (UNC) prefix which contains an invalid network name. For the NLM version this happens when you don't specify a Novell Profile.

Action: Correct the destination file specification and try again or (NLM) use a Novell Profile.

PC2122E Packing Size smaller than record size

Reason: A file received has a larger record size than the packing size specified (PACKRECSIZE).

Action: Either increase the packing size or disable packing all together.

PC2123E Unknown PlugIn file information

Reason: The PlugIn which backed up the receive file is not the same PlugIn that is referenced by the user file specification.

Action: Call technical support.

PC2124E PC text files disallowed with ULTra

Reason:

Action: Do not specify an ULTra restore with PC text files.

PC2125E Unknown state during restore

Reason: Internal error.

Action: Call technical support.

PC2126W Error creating restore timer

Reason: There was an error creating the restore timer. The restore should continue normally, however you will not be able to cancel the restore.

Action: Call technical support.

PC2127E Error allocating data space

Reason: There was insufficient memory to allocate the received data area.

Action: Free memory, or specify a smaller record size.

PC2128E Error matching file info with specification

Reason: Internal error matching the received file information with the user file specification.

Action: Call technical support.

PC2129W Error opening existing file

Reason: There was an error opening the existing file before the restore could be tried.

Action: Retry later.

PC2130E Received data without information

Reason: Restore data was received without an open file to write to. Internal error.

Action: Call technical support.

PC2131E Unexpected received data type

Reason: During a restore a record type other than data or information was received. Internal error.

Action: Call technical support.

PC2132E Error creating directory

Reason:

Action: See additional messages.

PC2136W File restore errors logged on PC.

Reason: Earlier file restore errors were logged by the PC. This message is to inform the mainframe that the restore was not completely successful.

Action: See PC log entries above.

PC2137E Communications failed.

Reason: The communications failed during the restore of the following file. This file may be corrupt.

Action: See PC log entries above.

PC2138E Error saving parameters

Reason: There was an error saving the original, user-specified parameters.

Action: See additional messages.

PC2141E Error reallocating data for merge

Reason: A file was received which uses a larger record size than the previous file and the data space can't be allocated.

Action: Free memory and retry.

PC2142E Error in fast de-compression

Reason: There was a internal error in decompressing data that was compressed using fast compression.

Action: Contact Innovation Technical Support

PC2143E Dummy profile disallowed

Reason: Dummy profiles are for testing backups only; data generated can not be used for a restore.

Action: ..

PC2145E Exceeded maximum duplicate files.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC2146E Duplicate file transferred and integrity failure

Reason: The file information for a duplicate file received had internal errors (it really should never have been a duplicate).

Action: Exclude this file from the restore.

PC2147E Error saving restart parameters

Reason: There was a file error saving the restart parameters.

Action: See additional messages.

PC2148E Error saving restart description

Reason: There was a file error saving the restart parameters.

Action: See additional messages.

PC2149E Error recovering restore parameters

Reason: During a restarted restore, there was an error recovering the original UPSTREAM parameters.

Action: See additional messages.

PC2150I Restore started

Reason: .

Action: .

PC2151D Restore successful

Reason: .

Action: .

PC2152D Restore completed with some failures

Reason: .

Action: .

PC2153D Restore failed

Reason: .

Action: .

PC2154E Restore suspended by user

Reason: .

Action: .

PC2155I Restore restarted

Reason: .

Action: .

PC2156D Restore failed but restartable

Reason: .

Action: .

PC2157I File transfer receive started

Reason: .

Action: .

PC2158D File transfer receive successful

Reason: .

Action: .

PC2159D File transfer completed with failures

Reason: .

Action: .

PC2160D File transfer failed

Reason: .

Action: .

PC2161E File transfer canceled by user

Reason: .

Action: .

PC2162E Suspend because time limit exceeded (%ld)

Reason: .

Action: .

PC2175E Restore wildcard mismatch.

Reason: You specified a source and destination with incompatible wildcards.

Action: Respecify; if there's a wildcard in the source, then there must be a wildcard in the destination.

PC2181E Destination is not a raw disk or partition.

Reason: A character special device other than a raw disk or partition was specified for the destination.

Action:

PC2182E ioctl failed for raw device.

Reason: Could not get IOCINFO for raw device.

Action:

PC2183E Open failed for raw device.

Reason: Could not get IOCINFO for raw device.

Action:

PC2184E Backup is not a raw disk or partition.

Reason: Can not restore a regular file to a raw disk or partition.

Action:

PC2185E Destination and backup are not the same type.

Reason: The destination for the restore is a raw disk and the backup is from a raw partition, or the destination is a raw partition and the backup is from a raw disk.

Action:

PC2186E Destination not same size as backup.

Reason: Can not restore a backup of a raw device to a raw device of a different size.

Action:

PC2187E Destination and backup blocksizes different.

Reason: Can not restore a backup of a raw device to a raw device with a different blocksize.

Action:

PC2188E Not root user.

Reason: You must be the root user to restore to a raw disk or partition.

Action:

PC2189E Raw device does not exist.

Reason: A raw device must exist prior to restore.

Action:

PC2190E Restore can't restart.

Reason: You attempted to restart a non-restartable restore.

Action: Restart the restore manually.

PC2191E Version not found

Reason: During personalization destination checking the requested version date was not found.

Action: Specify a valid version date.

PC2192E Drive not found

Reason: During personalization destination checking the requested drive was not found or had been remapped.

Action: Specify a valid, non-remapped drive.

PC2193E read_vtoc failed for raw device.

Reason: Could not get partition info for raw device.

Action:

PC2196D File skipped - larger than MAXKFILESIZE.

Reason:

Action:

PC2198E Error dynamically adding a file spec

Reason: To add the "directories above" restore specifications, there was an internal error.

Action: See additional messages.

PC2199E Error copying a file spec

Reason: To add the "directories above" restore specifications, there was an error copying from the existing entry.

Action: See additional messages.

PC2200E Error opening version information temporary file

Reason: .

Action: See additional messages

PC2201E Error allocating inquire version memory

Reason: There was not enough memory to allocate space to inquire versions.

Action: Free memory

PC2202E Error building start conversation record

Reason: There was an error building the start conversation record to send to the remote.

Action: See additional messages.

PC2203E Error sending start conversation for inq ver

Reason: There was an error sending the start conversation record for an inquire versions request.

Action: See additional messages.

PC2204E Error sending inquire versions record

Reason: .

Action: See additional messages.

PC2205E Error receiving inquire versions information

Reason: There was an error receiving the non-repeating backup description from the remote.

Action: See additional messages.

PC2206E Error sending inquire versions confirmed

Reason: There was an error acknowledging receipt of all the version information.

Action: See additional messages.

PC2207E Error ending the inquire versions conversation

Reason: .

Action: See additional messages.

PC2208E Error deleting inquire versions temp file

Reason: .

Action: See additional messages.

PC2209E Error ending the inquire versions conversation

Reason: .

Action: See additional messages.

PC2210E Error writing to inquire versions temp file

Reason: There was an error writing to the inquire versions temporary file.

Action: See additional messages.

PC2211E Error receiving inquire versions repeated info

Reason: There was an error receiving the repeated backup description information.

Action: See additional messages.

PC2212E Error writing inquire version repeated info

Reason: There was an error writing the repeated backup description information to the temporary file.

Action: See additional messages.

PC2213E Error reading temporary inquire versions file

Reason: There was an error reading the inquire versions temporary file for non-repeated backup description information.

Action: See additional messages.

PC2214E Error reading temporary inquire versions file

Reason: There was an error reading the inquire versions temporary file non-repeated information when searching for repeated information.

Action: See additional messages.

PC2215E Error reading temporary inquire versions file

Reason: There was an error reading the inquire versions temporary file repeated information.

Action: See additional messages.

PC2216D Expected more file descriptions.

Reason: There was an unexpected end of data or non-repeated structure when receiving version information.

Action: Call technical support.

PC2217E Can't delete inquire versions file.

Reason: There was an error deleting the inquire versions information file (USVER.BKP).

Action: See additional messages.

PC2218E Error receiving inquire versions profile name

Reason: There was an error receiving the profile name for the profile management information request.

Action: See additional messages.

PC2219D No versions stored for this profile

Reason: Specify a different backup profile.

Action:

PC2220E Unexpected EOF reading version file

Reason: Internal error reading non-repeated section.

Action: Contact Innovation Technical Support.

PC2221E Unexpected EOF reading version file

Reason: Internal error reading repeated section.

Action: Contact Innovation Technical Support.

PC2222E Unexpected EOF reading version file

Reason: Internal error reading non-repeated section to read repeated section.

Action: Contact Innovation Technical Support.

PC2223E Bad translation tables

Reason: The files to be processed require UTF-8 capable, one-to-one translation tables and your translation tables are not one-to-one.

Action: Specify ANS2ATOE.TAB and ANS2ETOA.TAB translation tables.

PC2224I UTF-8 enabled

Reason: UTF-8 unicode translation was enabled in a prior backup so it has been enabled now.

Action: .

PC2225I UTF-8 disabled

Reason: UTF-8 unicode translation was disabled in a prior backup so it has been disabled now.

Action: .

PC2226E UTF-8 not supported

Reason: A UTF-8 backup was received and it is not supported by this version of UPSTREAM.

Action: .

PC2250E (UNIX) Error restoring APF extended attribute

Reason:

Action: If the errno is 139 (Operation not permitted), the user does not have read access to the BPX.FILEATTR.APF FACILITY class. If errno is not 139, contact Innovation Technical Support.

PC2251E (UNIX) Error restoring PROGCTL extended attribute

Reason:

Action: If the errno is 139 (Operation not permitted), the user does not have read access to the BPX.FILEATTR.PROGCTL FACILITY class. If errno is not 139, contact Innovation Technical Support.

PC2252D (UNIX) USS external link

Reason: UNIX Systems Services external links are skipped on non-UNIX Systems Services operating systems.

Action:

PC2253W SMS Novell Profile and non-SMS file

Reason: This occurs when the file is backed up without using Novell's SMS.

Action: Restore this file without using SMS

PC2254W Non-SMS restore and an SMS file

Reason: This occurs when the file is backed up using Novell's SMS and the restore is performed using a SMS Novell Profile.

Action: Restore this file using SMS.

PC2255E Zero length Tru64 UNIX partition

Reason: The destination raw device for restore refers to a zero length or unallocated disk partition.

Action: Specify or define a valid partition.

PC2256E Invalid partition on unlabeled disk

Reason: The destination raw device for restore refers to a partition other than c on an unlabeled disk.

Action: Specify the c partition or label the disk.

PC2257I Error deleting old auto-recall stub

Reason: There was a file system error deleting the old Novell auto-recall stub file.

Action: See additional messages.

PC2258E Volume mount point directory not restored

Reason: The directory on the backup is a volume mount point directory and you have specified with the RESTOREMOUNTPOINTS parameter that all volume mount point directory restores should be failed.

Action:

PC2259E Target directory has different volume mounted

Reason: The target directory is a volume mount point directory for a volume that is different than the volume that was mounted on the volume mount point directory on the backup.

Action: .

PC2260E Volume mount point not reestablished

Reason: The directory on the backup is a volume mount point directory, the target directory exists and is not a volume mount point directory and you have specified with the RESTOREMOUNTPOINTS parameter that volume mount point directory restores should be failed if the target directory is not a volume mount point directory.

Action: .

PC2261E Error creating a volume mount point directory

Reason: The directory on the backup is a volume mount point directory, an error occurred while creating the target directory and you have specified with the RESTOREMOUNTPOINTS parameter that volume mount point directory restores should be failed if the target directory cannot be created.

Action: .

PC2262E Volume mount point directory not created

Reason: The directory on the backup is a volume mount point directory, the target directory does not exist and you have specified with the RESTOREMOUNTPOINTS parameter that mount point directory restores should be failed if the target directory is not already a volume mount point.

Action: .

PC2263E Directory not restored to volume mount point

Reason: The directory on the backup is not a volume mount point directory, the target directory is a volume mount point directory and you have specified with the RESTOREMOUNTPOINTS parameter that the mount point directory restores should be failed outright or be failed if the volume mount point does not exist or cannot be created.

Action: .

PC2264E Error creating a volume mount point

Reason: The directory on the backup is a volume mount point directory, an error occurred while creating the volume mount point for the target directory, failed and you have specified with the RESTOREMOUNTPOINTS parameter that volume mount point directory restores should be failed only if the volume mount point cannot be created.

Action: .

PC2265E Can't restore volume mount point to ULTra

Reason: The directory on the backup is a volume mount point directory, the creation of the volume mount point for the target directory cannot be performed because the restore is targeted to ULTra and you have specified with the RESTOREMOUNTPOINTS parameter that mount point directory restores should be failed if the volume point cannot be created.

Action: .

PC2266E Can't restore volume mount point on non-Win2K system

Reason: The directory on the backup is a volume mount point directory, the creation of the volume mount point for the target directory cannot be performed because this is a non-Windows 2000 system and you have specified with the RESTOREMOUNTPOINTS parameter that mount point directory restores should be failed if the volume point cannot be created.

Action: .

PC2267I Skipping files for failed mount point directory

Reason: The restore of a directory has failed due to a condition involving volume mount points. The restore of all of the files and subdirectories in that directory and its subdirectories will be skipped.

Action: .

PC2268I Volume replaced on mount point directory

Reason: The directory on the backup is a volume mount point directory for the volume shown below. During the restore the target directory was found to be a mount point directory for a different volume. This is not an error since you specified with the RESTOREMOUNTPOINTS parameter that mount point directory restores should continue even if the target directory has a different volume mounted on it.

Action: .

PC2269I Volume removed from mount point directory

Reason: The directory on the backup is a volume mount point directory for the volume shown below. During the restore the target directory was found to not have a volume mounted on it. This is not an error since you specified with the RESTOREMOUNTPOINTS parameter that mount point directory restores should continue even if the target directory no longer has a volume mounted on it.

Action: .

PC2270I Volume mounted on mount point directory

Reason: The directory on the backup is a not volume mount point directory. During the restore the target directory was found to be a mount point for a volume. This is not an error since you specified with the RESTOREMOUNTPOINTS parameter that non-mount point directory restores should continue even if the target directory has a volume mounted on it.

Action: .

PC2271E A UID for the user name is not defined.

Reason: One or more files restored with the UID of the current user.

Action: Add a definition for the user name using the appropriate utility for your system.

PC2272E A GID for the group name is not defined.

Reason: One or more files restored with the current GID.

Action: Add a definition for the group name using the appropriate utility for your system.

PC2273E A UID for the user name is not defined.

Reason: One or more files restored with the UID of the file at the time of backup.

Action: Add a definition for the user name using the appropriate utility for your system.

PC2274E A GID for the group name is not defined.

Reason: One or more files restored with the GID of the file at the time of backup.

Action: Add a definition for the group name using the appropriate utility for your system.

2275E Broken connection

Reason: .During the restore the connection was lost to the host.

Action: . See host log.

2276E Unexpected conversation state: %d

Reason: .

Action: . Contact FDR/UPSTREAM Tech Support.

2277I Device file skipped

Reason: . Device files are only restored when performing a disaster recovery restore.

Action: .

2278E (Restore) Invalid intermixing of file specs

Reason: . You have one or more full system file specs specified with one or more non-full system or exclude file specs or one of your full system file specs specifies a destination. Such a combination is not supported.

Action: .Your include file specs should be of the full system file spec variety only and not specify a destination if you want to restore the full system state of one or more computers.

2282E (Restore) An error occurred on a version inquiry

```
An error occurred while performing a
version inquiry operation to validate
the specified backup version from
which to restore.
FIX:  Contact FDR/UPSTREAM Tech
Support.
```

2283E (Restore) An error occurred reading specified version

Reason: . An internal UPSTREAM error occurred while reading the version information for the specified backup version.

Action: .Contact FDR/UPSTREAM Tech Support.

2284E (Restore) The specified version cannot be found

Reason: . The backup version specified by either the VERSIONDATE or LATESTVERSION parameters does not exist.

Action: .Specify a different backup version from which to perform the restore.

2285E (Restore) Can't save original parameters

Reason: . An internal UPSTREAM error occurred which prevents the saving of your original parameters before the creation of one or more dynamic full system file specs.

Action: .Contact FDR/UPSTREAM Tech Support.

2286E (Restore) Insufficient memory for computer names

Reason: . While attempting to allocate memory for an array of computer names, there was insufficient memory.

Action: .Close applications or free memory.

2287E (Restore) An error occurred reading a file spec

Reason: . An internal UPSTREAM error occurred while reading the file spec information for the specified backup version.

Action: .Contact FDR/UPSTREAM Tech Support.

2288E (Restore) Can't restore original parameters

Reason: . An internal UPSTREAM error occurred which prevents the restoration of your original parameters after the creation of one or more dynamic full system file specs.

Action: .Contact FDR/UPSTREAM Tech Support.

2289E (Restore) Can't create a full system file spec

Reason: . An internal UPSTREAM error occurred which prevents the addition of one or more dynamic file specs needed to restore a complete computer system.

Reason: .

Action: .Contact FDR/UPSTREAM Tech Support.

2290E (Restore) Can't modify a full system file spec

Reason: . An internal UPSTREAM error occurred which prevents the modification of one or more dynamic file specs needed to restore a complete computer system.

Action: .Contact FDR/UPSTREAM Tech Support.

2291E (Restore) A required PlugIn is not loaded

Reason: . You are attempting to restore a complete computer system which requires the use of a PlugIn which was not loaded. The name of the required PlugIn follows:

Action: .Determine why the PlugIn could not be loaded.

PC2300E Error starting inquire files conversation

Reason:

Action: See additional messages.

PC2301E Error sending start conversation for inquire file

Reason:

Action: See additional messages.

PC2302E Error sending inquire files request.

Reason:

Action: See additional messages.

PC2303E Error receiving inquire files information.

Reason:

Action: See additional messages.

PC2304N Receiving backed-up file information

Reason: A remote inquire files process is in progress. You can press CANCEL to abort process. This message will go away if there is an error or the information has been completely received.

Action: .

PC2305E Can't create inquire files temp file

Reason: There was an error creating the inquire files temporary file. Inquire files will not function until this is fixed.

Action: See additional messages.

PC2306E Can't write to inquire files temp file

Reason: There was an error writing to the inquire files temporary file. Inquire files will not function until this is fixed.

Action: See additional messages.

PC2307E Can't reopen inquire files temp file

Reason: There was an error reopening the inquire files temporary file to fill the list box. Inquire files will not function until this is fixed.

Action: See additional messages.

PC2308E Can't read inquire files temp file

Reason: There was an error reading the file information from the inquire files temporary file. Inquire files will not function until this is fixed.

Action: See additional messages.

PC2309E Unexpected end of file - inquire files temp

Reason: End of file was reached on the inquire files temporary file. This is a system error and inquire files will not function until this is fixed.

Action: Call UPSTREAM technical support.

PC2313E User requested cancel of inquire files.

Reason: .

Action: .

PC2314E Error sending delete file request.

Reason: .

Action: See communications return codes.

PC2315E Error confirming delete file request.

Reason: .

Action: Additional messages.

PC2316E Internal date format error.

Reason: Internal Error.

Action: Call Innovation Technical Support.

PC2800E VSAM I/O test error

Reason: There was an error starting or receiving the results of a VSAM I/O test.

Action: See additional messages.

PC2801W Performance Tests Results:

Reason: .

Action: .

PC2802E File I/O test error

Reason: There was a file I/O test error and the results shown in the statistics will be wrong.

Action: See additional messages.

PC2803E Communications volume test error

Reason: There was an error in the communications test and the results shown in the statistics will be wrong.

Action: See additional messages.

PC2804E Error saving performance tests values.

Reason: .

Action: See additional messages.

PC2900W Nothing to restore.

Reason: You requested an "As of...Restore" and there were not versions matching your specified criteria.

Action: Respecify.

PC2901E Duplicate backup profile names

Reason: You specified the same profile name in the full and incremental profile fields.

Action: Specify different names or leave the incremental profile field blank (required for merge backups).

PC3000E High compression reinitialization error

Reason: There was an error initializing for high compression. This is an unexpected error.

Action: Call UPSTREAM technical support.

PC3001E High compression error

Reason: There was an error attempting to compress a record using high compression.

Action: See additional message.

PC3002E High compression initialization error

Reason: There was an error initializing for high compression. You probably do not have enough memory.

Action: See additional message.

PC3003E Error during high decompression

Reason: There was an error decompressing a record which was compressed using high compression.

Action: Call UPSTREAM technical support.

PC3004E Error reinitializing high decompression

Reason: There was an error reinitializing during a restore for high compression. This is an unexpected error.

Action: Call UPSTREAM technical support.

PC3005E Error initializing for high decompression

Reason: There was an error initializing a restore for high compression. You probably do not have enough memory.

Action: See additional message.

PC3006E High compression, non-file overage

Reason: After compressing a block of non-file data, the data was too large to fit into a single record.

Action: Call UPSTREAM technical support.

PC3007E High decompression, non-file overage

Reason: After decompressing a block of non-file data, the data was too large to fit into a single record. This is an unexpected error.

Action: Call UPSTREAM technical support.

PC3008E High decompression, non-file input exhausted

Reason: While decompressing a block of non-file data, the data was exhausted without being completed. This is an unexpected error.

Action: Call UPSTREAM technical support.

PC3100N Waiting for remote initiate

Reason: UPSTREAM is waiting for the remote system to start a function on the PC. You can press the CANCEL button to exit UPSTREAM.

Action: .

PC3101I Remote initiate received

Reason: A remote initiated function will now be processed.

Action: .

PC3102D Remote initiate queued.

Reason: A remote initiated function was received. It will be queued for processing when the current process is complete.

Action: .

PC3103E Error allocating data for remote initiate

Reason: There was insufficient data space for processing the remote initiate request. Further remote initiates will be rejected.

Action: Exit UPSTREAM and free memory.

PC3104E Remote initiated request rejected

Reason: The remote initiate request is rejected due to a problem reported earlier.

Action: .

PC3105E Remote requested non-queued and PC busy

Reason: The remote system requested immediate execution of a function and this machine is currently busy processing another function that can not be interrupted at this point.

Action: The remote will retry.

PC3106E Error saving current parameters during remote

Reason: There was an error saving the current parameters so that remotely initiated parameters could be processed.

Action: See additional messages.

PC3107E Invalid parameter received (%s)

Reason: A parameter received from a remotely initiated request was in error.

Action: .

PC3108E Error recalling parameters for execution

Reason: There was an error retrieving saved remotely specified parameters for execution now.

Action: See additional messages.

PC3109E Error saving parameters for remote execution

Reason: There was an error saving the received parameters.

Action: See additional messages.

PC3110E Error restoring original parameters

Reason: After saving parameters for remote execution, there was an error restoring the original parameters.

Action: See additional messages.

PC3111E Missing parameter (%s %s)

Reason: The parameters that were remotely received are incomplete.

Action: See additional messages.

PC3112E Error saving current parameters

Reason: There was an error saving the current parameters so that a remote execution request can be processed.

Action: See additional messages.

PC3113E Error restoring current parameters

Reason: There was an error restoring the current parameters after a remote execution request was processed.

Action: See additional messages.

PC3114E User requested reject of remote functions

Reason: To reactivate remote functions, select the "Unattended Remote Functions" option from the Action menu.

Action: .

PC3115E Error saving remote parameter file name

Reason: There was an error saving the remotely specified parameter file name.

Action: See additional messages.

PC3116E Error reading remotely specified param file

Reason: There was an error reading the parameter file specified by the remote system.

Action: Verify that the name is correct.

PC3117E User requested reject of PC requests

Reason: The user requested that PC initiation requests be rejected.

Action: .

PC3118E PC is busy

Reason: The PC is busy processing another request and is not available to process a request where the calling facility (USTBATCH or another PC) will wait for completion.

Action: .

PC3119D Remote initiate queued.

Reason: A remote initiated function was received. It will be queued for processing when the current process is complete rejected when the following timelimit has been exceeded (based on USQUEUETIMELIMIT).

Action: .

PC3120E Wrong PC

Reason: This request was sent to a PC whose logical name does not match the logical name of this PC. The logical name received is:

Action: .

PC3121I Starting another instance of UPSTREAM (US.EXE)

Reason: In order to be able to handle multiple simultaneous remote initiations from the host, another instance of US.EXE is being started to receive another remote initiation. The UPSTREAM command line follows:

Action: .

PC3122D Waiting for remote initiate, but not listening.

Reason: You specified ACTION 3 (wait for remote request) in the parameter file, but you have LISTENFORREMOTE N. Activate "Listen for Remote Function" in "Remote" menu (set LISTENFORREMOTE Y), or specify a different ACTION.

Action: .

PC3123E Attach manager only facility - this is UPSTREAM

Reason: UPSTREAM received a request which can only be handled by the UPSTREAM attach manager and it is thus denied.

Action: .

PC3124E Error occurred sending status port info

Reason: While sending the status port information to a cooperating UPSTREAM application, this error occurred.

Action: See additional messages.

PC3125E Error occurred during receipt of remote request

Reason: .

Action: .

PC3126E Error occurred during receipt of parameters

Reason: .

Action: .

PC3127E Error occurred during a CONFIRMED of remote

Reason: .

Action: .

PC3128E Error occurred during the end of a conversation

Reason: .

Action: .

PC3129E Error occurred while test for remote initiate

Reason: .

Action: .

PC3130N Waiting for remote initiate

Reason: UPSTREAM is waiting for the remote system to start a function. For PC operating systems (GUI), press the CANCEL button to terminate. For UNIX operating systems use CTRL-C or the kill command if running in the background to terminate. For all others, press the [ESC] key.

Action: .

PC3131N Waiting for remote initiate

Reason: UPSTREAM is waiting for the remote system to start a function. Use CTRL-C or the kill command if running in the background to terminate.

Action: .

PC3132N Waiting for remote initiate

Reason: UPSTREAM is waiting for the remote system to start a function. Press [ESC] to terminate.

Action: .

PC3135I UPSTREAM user interface request received

Reason: .

Action: .

PC3140E Insufficient memory.

Reason: There was insufficient memory when allocating the queue area to save the remote request. This job will not be processed.

Action: Free memory or close applications.

PC3141E Rejected because UPSTREAM is busy.

Reason: The user specified a USQUEUETIMELIMIT of 0 which causes UPSTREAM to reject any CONV=WAIT or CONV=KEEP jobs if it is busy processing another event.

Action: .

PC3142E Error deleting queued request

Reason: A queued request which subsequently failed could not be deleted and may end up being serviced.

Action: See additional messages.

PC3143W Remote job timed out.

Reason: One of your remote jobs timed out and will not be processed.

Action: .

PC3144E Error removing timed out job.

Reason: A queued request which subsequently timed out could not be deleted and may end up being serviced.

Action: See additional messages.

PC3145E Error accessing saved job.

Reason:

Action: See additional messages.

PC3146E Invalid system for remote request

Reason: .

Action: Add this systems to your list of valid remote systems in the UPSTREAM Configurator (Personalization).

PC3147E Remote system didn't specify a local user

Reason: .

Action: Upgrade the remote copy of UPSTREAM or update remote user personalization settings in the UPSTREAM configurator.

PC3148E Remote system's user denied

Reason: The user who's logged onto the requesting system has been denied access to UPSTREAM functions.

Action: Add this user to the remote system definition in user personalization settings in the UPSTREAM configurator.

3149E Local user name not specified

Reason: .UPSTREAM personalization requires that you enter a local user name before accessing UPSTREAM functions on this system.

Action: .Specify LOCALUSER and LOCALPASSWORD parameters.

3150E Error switching to logged on security

Reason: .

Action: . See additional messages.

3151I Closing UPSTREAM

Reason: .UPSTREAM processed the single function that the attach manager started it for.

Action: .

3152I Closing UPSTREAM

Reason: .UPSTREAM processed the single function over the Java status port that the attach manager started it for.

3153I Closing UPSTREAM

Reason: .UPSTREAM closed by user request.

Action: .

3154I Closing UPSTREAM

Reason: .UPSTREAM closing due to a fatal listen error.

Action: .

3155I Closing UPSTREAM

Reason: .UPSTREAM closing - REMOTETIMEOUT exceeded.

Action: .

3156I Closing UPSTREAM

Reason: .UPSTREAM closed by external request.

Action: .

3157I Closing UPSTREAM

Reason: .UPSTREAM closed by remote Java program.

Action: .

3158E Occurred poping the remote timed queue

Reason: .

Action: .

3159E Occurred checking for remote initiate

Reason: .

Action: .

3160E Occurred between remote initiates (1)

Reason: .

Action: .

3161E Occurred between remote initiates (1)

Reason: .

Action: .

3162I StartProgam request failed.

Reason: . There was an error processing StartProgram request to start a new copy of UPSTREAM:

Action: .

3163E Remotely initiated request failed

Reason: . There was an error starting a new instance of UPSTREAM to process a remote initiate request:

Action: .

3164E Failed to obtain status ports

Reason: . When preparing to start a new copy of UPSTREAM, we were not able to find a free pair of status ports.

Action: .Remote request will not be processed.

3165E Failed to check on the request.

Reason: . Unable to check on the incoming remote request.

Action: . Request will be processed by this instance of UPSTREAM instead of starting another copy.

3167W Inheritance on sockets is set to be off.

Reason: .UPSTREAM determined that the inheritance flag on status sockets was turned off. UPSTREAM will try to fix the problem.

Action: .

3168W Error occurred setting requested timeout

Reason: .

Action: .

3169W Error terminating process:

Reason: .

Action: .

3170I UPSTREAM instance terminated:

Reason: .

Action: .

PC3200E Error allocating memory for parameter queuing

Reason: There was an error allocating enough memory to enqueue a new parameter structure. The process requested will fail.

Action: Free a small amount of additional memory.

PC3201E Error setting specs for parm save

Reason: There was an error setting the current parameter information during a parameter save. The process requested will fail.

Action: See additional messages.

PC3202E Error setting writing parameters for parm save

Reason: There was an error writing the parameters during a parameter save. The process requested will fail.

Action: See additional messages.

PC3300E Remote request start conversation error

Reason: There was an error starting the conversation with the remote system.

Action: See the return codes.

PC3301E Remote request send request error

Reason: There was an error sending the remote request record.

Action: See the return codes.

PC3302E Remote request send parameter error

Reason: There was an error sending a remote request parameter.

Action: See the return codes.

PC3303E Remote request confirm error

Reason: The remote system did not accept the remote request.

Action: See additional messages

PC3304E Remote request end conversation error

Reason: There was an error terminating the remote request conversation.

Action: See additional messages

PC3350E Error saving parameters

Reason: There was an error saving your current parameters so that they could be sent to the remote system.

Action: See additional messages.

PC3351E Error opening parameter file

Reason: There was an error opening the file that is used to hold the parameters that are sent for remote execution.

Action: See additional messages.

PC3352E Error reading parameter file

Reason: There was an error reading the parameter file that is used to hold the parameters for remote execution.

Action: See additional messages.

PC3353E Error removing saved parameters

Reason: There was an error removing the saved parameters that were sent to the remote.

Action: See additional messages.

PC3354E Required parameter missing

Reason: When attempting a remote request either the partner LU, mode name or remote TPN was missing.

Action: Enter all the required parameters

PC3355E TCP/IP requested but not activated

Reason: If you wish to connect using TCP/IP to a remote PC directly, you must use TCP/IP to connect to the host.

Action: Respecify.

PC3356W Remote requests via MVS require SNA.

Reason: Remote requests to workstation/servers require that you be connected to the host via SNA. This function will only work if you uncheck the Through MVS option and specify the workstation's IP address directly.

Action: Respecify.

PC3400E Error allocating deletion buffer

Reason: There was an error getting memory for the communications buffer for deleting profile info.

Action: Free memory

PC3401E Error starting conversation

Reason: There was an error starting the conversation to delete a version.

Action: See return codes

PC3402E Error sending start conversation

Reason: There was an error sending the request to begin a conversation to delete a version.

Action: See return codes

PC3403E Error sending remove backup

Reason: There was an error sending the remove backup command.

Action: See return codes

PC3404E Error confirming remove backup

Reason: There was an error validating the remove backup

Action: See return codes or remote message

PC3405E Error ending the conversation

Reason: There was an error ending the conversation when removing a backup.

Action: See return codes

PC3410I Deleting the following backup

Reason: .

Action: .

PC3411I Deleting all backups in the following profile

Reason: .

Action: .

PC3450E Error allocating memory

Reason: There was an error allocating memory for host configuration management.

Action: Free memory or restart program.

PC3451E Error during start conversation error

Reason: There was an error during host config access.

Action: See additional messages.

PC3452E Error sending start conversation

Reason:

Action: See additional messages.

PC3453E Error receiving profile.

Reason:

Action: See additional messages.

PC3454E Error sending profile

Reason:

Action: See additional messages.

PC3455E Error confirming send of profile

Reason:

Action: See additional messages.

PC3456E Error ending conversation

Reason: There was an error during host config access.

Action: See additional messages.

PC3457E Error opening host config file

Reason: There was an error opening the temporary file used to hold the host configuration entries requested.

Action: See additional messages.

PC3458E Error writing host config file

Reason: There was an error writing to the temporary file used to hold the host configuration entries requested.

Action: See additional messages.

PC3459E NULL Structure

Reason:

Action: Internal error. Call Innovation Technical Support.

PC3460E Error reading host config file

Reason: There was an error reading an entry from the temporary file used to hold the host configuration entries requested.

Action: See additional messages.

PC3461E Unexpected end of file.

Reason: There was an unexpected end of file reading entries from the temporary file used to hold the host configuration entries requested.

Action: Call Innovation Technical Support.

PC3462E Error deleting file.

Reason: There was an error deleting the temporary file used to hold the host configuration entries requested.

Action: See additional messages.

PC3463E Error finding entry in file

Reason: There was an error finding a profile entry in the internal profile file to reflect the update requested.

Action: Call Innovation Technical Support.

PC3464E Expected confirm or data

Reason: While receiving profiles, neither a confirm or data was received.

Action: Call Innovation Technical Support.

PC3701I Running a remotely requested job.

Reason: The following is the specification for a remotely requested job to be run immediately.

PC3702E Remotely requested job file not found.

Reason: The file for the job to be run was not found.

Action: Respecify

PC3703I Remotely requested job execution status.

Reason: A step in the execution of a remotely requested job finished. The job specification, step and return code follow.

Action:

PC3705E Error parsing a remote job request.

Reason: Invalid data was parsed to ULTra. Internal error.

Action: Check if the versions of UPSTREAM and ULTra are compatable. Call Innovation Technical Support.

PC3706N Running a remotely requested job on ULTra WS.

Reason: The following ULTra workstation name was obtained from the LAN WS Profile specified. You can abort the execution of the job by pressing the OK button now.

Action:

PC3707E Could not acknowledge ULTra WS job request.

Reason: An error occurred while attempting to receive an acknowledgement message from an ULTra workstation that was to run a remotely requested job.

Action: Make sure the ULTra workstation is up and running, and make sure you can access LAN.

PC3708E Could not send a job request to an ULTra WS.

Reason: An error occurred while attempting to send a remote job request to an ULTra workstation.

Action: Make sure the ULTra workstation is up and running, and make sure you can access LAN.

PC3709E ULTra WS remote job request processing error.

Reason: An unknown error occurred in an ULTra workstation while attempting to process a remotely requested job.

Action: Check the following messages.

PC3710I Running a remotely requested job on ULTra WS.

Reason: The following is the specification for a remotely requested job to be run on an ULTra workstation.

Action: Call Innovation Technical Support.

PC3712D Job Status: %s

Reason: The status for a remotely requested job.

Action: Call Innovation Technical Support.

PC3713E Could not connect to ULTra WS to run a job.

Reason: An error occurred while attempting to connect to an ULTra workstation in order to run a remotely requested job.

Action: Call Innovation Technical Support.

PC3714E Could not get a buffer to run ULTra WS job.

Reason: An error occurred while attempting to allocate a communications buffer in order to run a remotely requested job on an ULTra workstation.

Action: Call Innovation Technical Support.

PC3715E User aborted ULTra WS remotely requested job.

Reason: A remotely requested job to be run on an ULTra workstation was aborted by the user before it was started.

Action:

PC3716D The JOBRETURNCODEMAP parameter is invalid.

Reason: The format of the JOBRETURNCODEMAP parameter is invalid. The return code returned to the host may not be what was expected.

Action: See the following JOBRETURNCODEMAP parameter and the program and host return codes, and then respecify the JOBRETURNCODEMAP parameter.

PC3724E A Remotely requested job did not execute.

Reason: A remotely requested job did not execute because of an error in one of the preexecution steps. The job specification, preexecution step and step error code follow.

Action:

PC3725E Job format error. Too many parameters.

Reason: There can be no more than 20 command line parameters in a job.

Action: Respecify.

3727E File spec not found (FILES missing)

Reason: When requesting a job to be run, you must specify a single file spec with the name of the fully qualified program, script or batch file specified in the FILES parameter.

Action: Respecify.

3728E Error switching to user

Reason: While attempting to run a job, there was an error switching to the requested user.

Action: See additional messages.

3729E Error switching back from user

Reason: After running the job, there was an error switching back from the requested user.

Action: FIX: See additional messages.

3730I Terminating parent process (daemon)

Reason: Remotely requested termination of the parent UPSTREAM (daemon) in progress.

Action:

3731E Error allocating memory for Env. Block

Reason: Error allocation memory for environment block while starting a requested job.

Action:

3733I Job still running

Reason: UPSTREAM stopped waiting for the job to terminate either because UPSTREAM itself is terminating or the job ran longer than the wait time limit. The job is still running.

Action:

3734I Job killed

Reason: The job was killed either because UPSTREAM itself is terminating or the job ran longer than the wait time limit and you requested that it be killed.

Action:

PC4500E Error opening report file.

Reason:

Action: See additional messages.

PC4501E Error writing time to report file.

Reason:

Action: See additional messages.

PC4502E Error writing beginning message to report.

Reason:

Action: See additional messages.

PC4503E Error getting text from message file

Reason:

Action: See additional messages.

PC4504E Error writing a message to the report

Reason:

Action: See additional messages.

PC4505E Error saving parameters for the report

Reason: .

Action: See additional messages.

PC4506E Error listing parameters for the report

Reason: .

Action: See additional messages.

PC4507E Error reading parameters for the report

Reason: .

Action: .See additional messages.

PC4508E Not in session for status reporting

Reason: You requested status reporting and you are not connected to a system to perform this type of reporting.

Action: Respecify.

PC4509E Report file busy.

Reason: The report file specified is in use by another process.

Action: The current report was saved inthe following file:

PC4510E Error reading temp report.

Reason: There was an error reading a temp report file while appending it to the specified report file name.

Action:

PC4511E Error writing report.

Reason: There was an error writing to the specified report file while appending a temp report to it.

Action:

PC4512E Report not appended.

Reason: There was an error appending temp report to the report file specified.

Action: The current report was saved in the following file:

4513W Temp report file not deleted.

Reason: The temporary report file was not deleted.

Action: You can delete all files ustmp.*.rpt if there are no UPSTREAM instances running.

PC4750E TCP/IP communications error

Reason: The following messages describes the error and the location within UPSTREAM where it happened.

Action: .

PC4751E (TCP/IP) sock_init failed.

Reason: The sock_init call (which is used to init- ialize structures and detect the existance of TCP/IP) failed.

Action: Verify that TCP/IP is installed and operational.

PC4752E (TCP/IP) socket failed.

Reason: The socket call (which is used to begin communications) failed.

Action:

PC4753E (TCP/IP) connect failed

Reason: The connect call which is used to connect to the mainframe failed.

Action:

PC4754E (TCP/IP) Error allocating internal memory

Reason: There was an error allocating memory which is used for TCP/IP traffic.

Action: Free memory.

PC4755E (TCP/IP) Receive buffer too small

Reason: Internal error.

Action: Call Innovation Technical Support

PC4757E (TCP/IP) Data size mismatch

Reason: Expected to receive a block of a given size (based on the length prefix) and the data received was a different size.

Action: Call Innovation Technical Support.

PC4758E (TCP/IP) Error during confirm

Reason: Error having the host verify that the data was received correctly.

Action: See additional messages.

PC4759E (TCP/IP) Error during confirmed

Reason: Error notifying the host that the data has been correctly received.

Action: See additional messages.

PC4760E (TCP/IP) Send sizes wrong

Reason: There was an internal error matching the requested transmit size to the size encoded in the data. Internal error.

Action: Call Innovation Technical Support.

PC4761E (TCP/IP) soclose failed

Reason: The soclose call which is used to disconnect from the remote failed.

Action:

PC4762E (TCP/IP) Exceeded max sockets

Reason: FDR/UPSTREAM has no more room for the more sockets. Internal error.

Action: Call Innovation Technical Support.

PC4763E (TCP/IP) Sending receive request

Reason: Error occurred when sending a request to the host to receive.

Action:

PC4764E (TCP/IP) socket failed.

Reason: The socket call (which is used to begin communications for remote initiates) failed.

Action:

PC4765E (TCP/IP) bind failed.

Reason: The bind call (which is used to begin communications for remote initiates) failed. This usually occurs when another copy of UPSTREAM has already bound to the inbound TCP port. This message can be ignored unless you need to service remote requests.

Action:

PC4766E (TCP/IP) ioctl failed.

Reason: The ioctl call (which is used to begin communications for remote initiates) failed.

Action:

PC4767E (TCP/IP) accept failed.

Reason: The accept call (which is used to begin communications for remote initiates) failed.

Action:

PC4768E (TCP/IP) Insufficient memory

Reason: There was not sufficient memory to allocate the CreateTP structure which is necessary to properly process the received request.

Action: Free memory.

PC4769E (TCP/IP) recv failed.

Reason: The recv call (which is used to receive data from the remote) failed.

Action:

PC4770E (TCP/IP) send failed.

Reason: The send call (which is used to send data to the remote) failed.

Action:

PC4771E (TCP/IP) Received no data.

Reason: The data length received is too small to contain any data. Internal error.

Action: Call Innovation Technical Support.

PC4772E (TCP/IP) Unknown APPC request

Reason: The APPC request was unrecognized. Internal error.

Action: Call Innovation Technical Support.

PC4773E (TCP/IP) listen failed.

Reason: The listen call (which is used to listen for a remote request) failed.

Action:

PC4774E (TCP/IP) Deallocate failed.

Reason: The request to the remote to deallocate failed.

Action:

PC4775E (TCP/IP) Receive of CONFIRMED failed

Reason: The CONFIRM response was not properly received.

Action:

PC4776E (TCP/IP) Expected a CONFIRMED

Reason: While waiting for a CONFIRM response, an unexpected data type was received. Internal error.

Action:

PC4777E (TCP/IP) linger failed.

Reason: The linger call to request unsent data flushed failed.

Action:

PC4778W (TCP/IP) Error occurred while flushing data.

Reason: The error occurred while flushing data prior to closing the connnection.

Action:

PC4779E (TCP/IP) Error occurred while setting blocking

Reason: The error occurred when attempting to set the remotely received conversation as blocking.

Action:

PC4780E (TCP/IP) Incomplete receive

Reason: The data record received is larger than the data buffer. Internal error.

Action: Call Innovation Technical Support.

PC4781E (TCP/IP) Socket in use

Reason: A socket call returned a socket number in use. There is a bug in your TCP/IP implementation.

Action: Call Innovation Technical Support.

PC4782E (TCP/IP) Error in specified TCP/IP Option

Reason: You specified in the UPSTREAM configuration to use a TCP/IP option and your TCP/IP reported the following error.

Action:

PC4783E (TCP/IP) Invalid IP address or host name.

Reason: The mainframe IP address is not valid or the name specified for the mainframe was not resolved.

Action: Return to UPSTREAM configurator and check the value of TCP/IP Address field. It should be either dotted IP address or the name of your mainframe computer running UPSTREAM.

PC4784E (TCP/IP) Name server is not found and there

Reason: is no such entry in the local HOST table.

Action:

PC4785E (TCP/IP) The host specified is not found.

Reason:

Action:

PC4786E (TCP/IP) The local server does not receive

Reason: a response from an authorized server. Try again.

Action:

PC4787E (TCP/IP) Unrecoverable error.

Reason:

Action:

PC4788E (TCP/IP) The requested host name is valid, but

Reason: does not have an internet address at the name server.

Action:

PC4789D (TCP/IP) Shutdown error.

Reason: TCP/IP reported an error during the shutdown. In most cases this will not affect the data transmission.

Action:

PC4790D (TCP/IP) Error disabling Nagle algorithm

Reason: There was a TCP/IP error disabling the Nagle algorithm used to improve performance.

Action:

PC4791D (TCP/IP) Error enabling Nagle algorithm

Reason: There was a TCP/IP error enabling the Nagle algorithm used to improve performance.

Action:

PC4792E (TCP/IP) Error in setting send buffer

Reason: You specified in the UPSTREAM configuration to set the send buffer size and your TCP/IP reported the following error.

Action:

PC4793I (TCP/IP) Dynamically adjusted listening port

Reason:

Action:

PC4794I (TCP/IP) CONFIRM connection closed.

Reason: Generally can be ignored.

Action:

PC4795E (TCP/IP) Error resolving local adapter address

Reason:

Action: Reconfigure your local outbound adapter address in the UPSTREAM advanced configuration.

PC4796E (TCP/IP) Error binding adapter

Reason: When connecting to a remote system, UPSTREAM had an error using the local adapter (not the host address) for the connect.

Action: Verify that you have specified the correct IP address for the local adapter in the advanced configuration options.

PC4797E (TCP/IP) Error resolving local adapter address

Reason:

Action: Reconfigure your local inbound adapter address in the UPSTREAM advanced configuration.

4798E (TCP/IP) Error checking receives before close

Reason: .An error occurred while checking for any pending data before closing the connnection.

Action: .

4799E (TCP/IP) Error in setting receive buffer

Reason: .You specified in the UPSTREAM configuration to set the receive buffer size and your TCP/IP reported the following error.

Action: .

PC4800E Unknown return code.

Reason: The following return code could not be interpreted.

Action: Call Innovation Technical Support.

PC4801E (TCP/IP) Not owner

Reason: .

Action: .

PC4802E (TCP/IP) No such process

Reason: .

Action: .

PC4803E (TCP/IP) Interrupted system call

Reason: .

Action: .

PC4804E (TCP/IP) No such device or address

Reason: .

Action: .

PC4805E (TCP/IP) Bad file number

Reason: .

Action: .

PC4806E (TCP/IP) Permission denied

Reason: .

Action: .

PC4807E (TCP/IP) Bad address

Reason: .

Action: .

PC4808E (TCP/IP) Invalid argument

Reason: .

Action: .

PC4809E (TCP/IP) Too many open files

Reason: .

Action: .

PC4810E (TCP/IP) Broken pipe

Reason: Can be caused by some intemediate device (router, cable, etc.) going down. Can also be cause by the remote system going down completely (crashing).

Action:

PC4812E (TCP/IP) Operation would block

Reason: .

Action: .

PC4813E (TCP/IP) Operation now in progress

Reason: .

Action: .

PC4814E (TCP/IP) Operation already in progress

Reason: .

Action: .

PC4815E (TCP/IP) Socket operation on non-socket

Reason: .

Action: .

PC4816E (TCP/IP) Destination address required

Reason: .

Action: .

PC4817E (TCP/IP) Message too long

Reason: .

Action: .

PC4818E (TCP/IP) Protocol wrong type for socket

Reason: .

Action: .

PC4819E (TCP/IP) Protocol not available

Reason: .

Action: .

PC4820E (TCP/IP) Protocol not supported

Reason: .

Action: .

PC4821E (TCP/IP) Socket type not supported

Reason: .

Action: .

PC4822E (TCP/IP) Operation not supported on socket

Reason: .

Action: .

PC4823E (TCP/IP) Protocol family not supported

Reason: .

Action: .

PC4824E (TCP/IP) Address family not supported by protocol family

PC4825I (TCP/IP) Address already in use

Reason: Usually caused by another copy of UPSTREAM actively listening on the inbound TCP/IP port.

Action:

PC4826E (TCP/IP) Can't assign requested address

Reason: .

Action: .

PC4827E (TCP/IP) Network is down

Reason: .

Action: .

PC4828E (TCP/IP) Network is unreachable

Reason: .

Action: .

PC4829E (TCP/IP) Network dropped connection on reset

Reason: .

Action: .

PC4830E (TCP/IP) Software caused connection abort

Reason: .

Action: .

PC4831E (TCP/IP) Connection reset by peer

Reason: Can be caused by a number of different problems. Check the UPSTREAM log on both sides. For Windows 95 or NT may be caused by Windows TCP/IP not properly handing delays (can be fixed by increasing the TcpMaxDataRetransmissions in the registry).

Action:

PC4832E (TCP/IP) No buffer space available

Reason: Memory or disk shortage.

Action:

PC4833E (TCP/IP) Socket is already connected

Reason: .

Action: .

PC4834E (TCP/IP) Socket is not connected

Reason: .

Action: .

PC4835E (TCP/IP) Can't send after socket shutdown

Reason: .

Action: .

PC4836E (TCP/IP) Too many references: can't splice

Reason: .

Action: .

PC4837E (TCP/IP) Connection timed out

Reason: .

Action: .

PC4838E (TCP/IP) Connection refused

Reason: Most often caused by the remote application not running. Can also be caused by TCP/IP on MVS being recycled and UPSTREAM not being recycled.

Action: .

PC4839E (TCP/IP) Too many levels of symbolic links

Reason: .

Action: .

PC4840E (TCP/IP) File name too long

Reason: .

Action: .

PC4841E (TCP/IP) Host is down

Reason: .

Action: .

PC4842E (TCP/IP) No route to host

Reason: .

Action: .

PC4843E (TCP/IP) Directory not empty

Reason: .

Action: .

PC4846E (TCP/IP) Error examining inbound data

Reason: .

Action: . Retry your connection

4847E (TCP/IP) Incomplete inbound data

Reason: .

Action: . Retry your connection

4848E (TCP/IP) Bad socket index (index %d, state %d)

Reason: .Detected during set for non-blocking. Internal error.

Action: . Call tech support.

4849E (TCP/IP) Error setting non-blocking

Reason: .There was a TCP/IP error setting the given socket non-blocking (so as to force a timeout).

Action: . See additional messages.

4850E (TCP/IP) Send timed out.

Reason: .

Action: .

4851E (TCP/IP) Receive timed out.

Reason: .

Action: .

4852E (TCP/IP) Error occurred in a TCP select

Reason: .

Action: .

PC5100E (Status) Error during start conversation

Reason:

Action: See additional messages

PC5101E (Status) Error sending start conversation

Reason:

Action: See additional messages

PC5102E (Status) Error sending status request

Reason:

Action: See additional messages

PC5103E (Status) Error receiving response

Reason:

Action: See additional messages

PC5104E (Status) Unexpected conversation state

Reason: Internal error.

Action: Call Innovation Technical Support.

PC5105E (Status) Error during Confirm

Reason:

Action: See additional messages.

PC5106E (Status) Error during Confirmed

Reason:

Action: See additional messages.

PC5107E (Status) Error during end of conversation

Reason:

Action: See additional messages.

PC5200E (UNIX) Error occurred reading symbolic link

Reason:

Action: Internal error. Call Innovation Technical Support.

PC5201E (UNIX) Error occurred creating symbolic link

Reason:

Action: Internal error. Call Innovation Technical Support.

PC5202E (UNIX) Error occurred removing symbolic link

Reason:

Action: Internal error. Call Innovation Technical Support.

PC5203E (UNIX) Statx error occurred while restoring

Reason: a symbolic link

Action: Internal error. Call Innovation Technical Support.

PC5204E (UNIX) Can not restore symbolic link

Reason: An existing entry in the file system is not a symbolic link.

Action: Remove the existing file or directory IF AND ONLY IF you want the symbolic link to replace the existing file or directory and rerun the restore.

PC5205E (UNIX) Error reseting last access date.

Reason:

Action: Internal error. Call Innovation Technical Support.

PC5206E (UNIX) Unable to get memory for w_getmntent.

Reason:

Action: Internal error. Call Innovation Technical Support.

PC5207E (UNIX) Filesystem mount entry not found.

Reason:

Action: Internal error. Call Innovation Technical Support.

PC5208E (UNIX) Error occurred getting mount table.

Reason:

Action: Internal error. Call Innovation Technical Support.

PC5300E (Host Rpt) Error allocating memory

Reason:

Action: Free memory.

PC5301E (Host Rpt) Error opening file

Reason: There was an error opening the specified host reporting parameter file.

Action: See additional messages.

PC5302E (Host Rpt) Error reading parameter

Reason:

Action: See additional messages.

PC5303E (Host Rpt) Error opening file

Reason: There was an error opening the specified host reporting parameter file for write.

Action: See additional messages.

PC5304E (Host Rpt) Error writing parameter

Reason: .

Action: See additional messages.

PC5305E (Host Rpt) User canceled host report

Reason: .

Action: .

PC5306E (Host Rpt) Error occurred during a start conv.

Reason: .

Action: See additional messages.

PC5307E (Host Rpt) Error occurred during send of start

Reason: .

Action: .

PC5308E (Host Rpt) Error occurred during send of req.

Reason: .

Action: .

PC5309E (Host Rpt) Error getting result count.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC5310E (Host Rpt) Error getting result string.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC5311E (Host Rpt) Error occurred during send of selection.

Reason:

Action:

PC5312E (Host Rpt) Error occurred during receive.

Reason:

Action:

PC5313E (Host Rpt) Unexpected conversation state.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC5314E (Host Rpt) Error occurred during a confirmed

Reason:

Action:

PC5315E (Host Rpt) Error opening report file

Reason:

Action: See additional messages.

PC5316E (Host Rpt) Error writing to report file.

Reason:

Action: See additional messages.

PC5317E (Host Rpt) Error occurred during end conversation

Reason:

Action:

PC5318W (Host Rpt) No information matched criteria

Reason:

Action: Respecify.

PC5319E (Host Rpt) Error allocating memory

Reason:

Action: Free memory.

PC5320E (Host Rpt) Error allocating memory

Reason:

Action: Free memory.

PC5400E (Per.) Personaliziation file not found.

Reason: For UPSTREAM, the personalization file is US.SER and must be found either in the Work Path or in the UPSTREAM directory; in USCFG, the specified file was not found.

Action: You may be able to copy USSER to US.SER.

PC5401E (Per.) Error reading the personalization file.

Reason:

Action: See additional messages.

PC5402E (Per.) Personalization illegally modified

Reason:

Action: Reload UPSTREAM from the original media.

PC5403E (Per.) Error in access

Reason:

Action: Reload UPSTREAM from the original media.

PC5404E (Per.) Error in access

Reason:

Action: Reload UPSTREAM from the original media.

PC5405E (Per.) Error in access

Reason:

Action: Reload UPSTREAM from the original media.

PC5406E (Per.) Error in access

Reason:

Action: Reload UPSTREAM from the original media.

PC5407E (Per.) Error writing to the personalization file.

Reason:

Action: See additional messages.

PC5408E (Per.) Error opening ZAP file.

Reason:

Action: See additional messages.

PC5409E (Per.) Error reading ZAP file.

Reason:

Action: See additional messages.

PC5410E (Per.) Error opening personalization file.

Reason: The personalization file could not be opened. For UPSTREAM this is fatal - for USCFG, specify a different file.

Action: See additional messages.

PC5411E (Per.) Error reading personalization file

Reason:

Action: Reload UPSTREAM from original media.

PC5412E (Per.) Error reading personalization file

Reason:

Action: Reload UPSTREAM from original media.

PC5413E (Per.) Corrupted personalization file.

Reason:

Action: Reload UPSTREAM from original media.

PC5414E (Per.) Corrupted personalization file.

Reason:

Action: Reload UPSTREAM from original media.

PC5415E (Per.) Corrupted personalization file.

Reason:

Action: Reload UPSTREAM from original media.

PC5416E (Per.) Corrupted personalization file.

Reason:

Action: Reload UPSTREAM from original media.

PC5417E (Per.) Corrupted personalization file.

Reason:

Action: Reload UPSTREAM from original media.

PC5418E (Per.) Corrupted personalization file.

Reason:

Action: Reload UPSTREAM from original media.

PC5419E (Per.) Insufficient memory

Reason:

Action: Close applications or free memory.

PC5420E (Per.) Insufficient memory

Reason:

Action: Close applications or free memory.

PC5421E (Per.) Error writing to the personalization file.

Reason:

Action: See additional messages.

PC5422E (Per.) Error writing to the personalization file.

Reason:

Action: See additional messages.

PC5423E (Per.) Missing systems record.

Reason:

Action: Call Innovation Technical Support.

PC5424E (Per.) Missing user record.

Reason:

Action: Call Innovation Technical Support.

PC5425E (Per.) Error writing to the personalization file.

Reason:

Action: See additional messages.

PC5426E (Per.) Error reading personalization file.

Reason:

Action: Call Innovation Technical Support.

PC5427E (Per.) Error reading personalization file.

Reason:

Action: Call Innovation Technical Support.

PC5450E (Per.) Invalid personalization

Reason:

Action: Call Innovation Technical Support.

PC5451E (Per.) Backups disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5452E (Per.) Restores disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5453E (Per.) As of...Restores disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5454E (Per.) Performance tests disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5455E (Per.) Remote requests disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5456E (Per.) Profile management disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5457E (Per.) Profile configuration disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5458E (Per.) Host status disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5459E (Per.) Host reporting disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5460E (Per.) ULTra disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5461E (Per.) Novell Profiles disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5464E (Per.) Migration Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5465E (Per.) Deletion Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5466E (Per.) Non-merge backups Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5467E (Per.) Merge backups Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5468E (Per.) TCP/IP Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5469E (Per.) SNA Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5470E (Per.) Sequential disk backups Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5471E (Per.) Sequential tape backups Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5472E (Per.) Sequential disk restores Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5473E (Per.) Sequential tape restores Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5474E (Per.) Backups Disallowed at this time

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5475E (Per.) Restores Disallowed at this time

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5476E (Per.) Password failed.

Reason: The user entered an incorrect password and/or chose not to run UPSTREAM at this time.

Action:

PC5477E (Per.) The specification is not allowed

Reason: The file specification (which follows) is not allowed for your copy of UPSTREAM.

Action: Call your administrator.

PC5478E (Per.) Attended operations Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5479E (Per.) Unattended operations Disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5480E (Per.) Sequential backups disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5481E (Per.) Non-sequential backups disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5482E (Per.) File transfers disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5483E (Per.) Host jobs disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5484E (Per.) FDRSOS functions disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5485E (Per.) Destinations disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5486E (Per.) Physical disk access disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5487E (Per.) User name override disallowed

Reason: Your copy of UPSTREAM has specifically disallowed this function.

Action: Call your administrator.

PC5488E (Per.) Restore file fail rename disallowed

Reason: You must enable this function using personalization to use it.

Action: Call your administrator.

PC5501E Error starting conversation

Reason: There was an error starting a conversation to inform the host of your target name.

Action: See communications return codes.

PC5502E Error allocating memory.

Reason: There was an error allocating memory to inform the host of your target name.

Action: Free memory or disk.

PC5503E Error sending target name info.

Reason: There was an error sending the target name information to the host.

Action: See communications return codes.

PC5504E Error in confirm of target name.

Reason: There was an error confirming the transmission of the target name information to the host.

Action: See communications return codes.

PC5505E Error ending conversion of target name.

Reason: There was an error ending the conversation of the transmission of the target name to the host.

Action: See communications return codes.

PC5506I Registered the following name to the host:

Reason:

Action:

PC5507E Error sending target name start conversation

Reason: There was a communications error sending the start conversation record to the host.

Action: See communications return codes.

PC5508E Error receiving workstation information

Reason: There was a communications error receiving the requested workstation information from the host.

Action: See communications return codes.

PC5509D Automatic update.

Reason: The local machine received an automatic update indication from the host. When terminating or idle, the automatic update will proceed.

Action:

PC5510D Running Automatic Update.

Reason: The following UPSTREAM control file (.dat) is being executed (usually a restore) as part of the automatic update process. If you press the CANCEL button, the auto-update will be skipped.

Action:

PC5511D Running Automatic Update.

Reason: The following UPSTREAM job (batch file or script) is being executed (usually a restore) as part of the automatic update process. If you press the CANCEL button, the auto-update process will be skipped.

Action:

PC5512D ULTra automatic update.

Reason: The ULTra version is not at the level of the master version. The automatic update will begin.

Action:

PC5513D Running ULTra Automatic Update.

Reason: The following UPSTREAM control file (.dat) is being executed (usually a restore) as part of the automatic update process. If you press the CANCEL button, the auto-update process will be skipped.

Action:

PC5514D Running ULTra Automatic Update.

Reason: The following UPSTREAM job (batch file or script) is being executed (usually a restore) as part of the automatic update process.

Action:

PC5515E Auto-update parameter file error

Reason:

Action: See additional messages.

PC5516E Error saving parameters

Reason: When attempting to automatically update an ULTra workstation, there was an error saving the existing parameters.

Action: See additional messages.

PC5517E ULTra auto-update parameter file error

Reason:

Action: See additional messages.

PC5518E Error restoring parameters

Reason: When attempting to restore parameters after an ULTra automatic update there was an error.

Action: See additional messages.

PC5519E Error saving parameters

Reason: When attempting to automatically update, there was an error saving the existing parameters.

Action: See additional messages.

PC5520E Error restoring parameters

Reason: When attempting to restore parameters after an automatic update.

Action: See additional messages.

5521D User requested skip of auto-update

Reason:

Action:

5522E Occurred during registration

Reason:

Action:

5523E Occurred during registration

Reason:

Action:

PC5600W Error deleting file inquiry file.

Reason: There was a file system error deleting the file used to store inquired files information.

Action: See additional messages.

PC5601E Error opening inquiry file

Reason:

Action: See additional messages.

PC5602E Error reading inquiry file

Reason:

Action: See additional messages.

PC5603E Unexpected EOF in inquiry file

Reason:

Action: Internal error - contact Innovation Technical Support

PC5604E Error deleting inquiry file.

Reason:

Action: See additional messages.

PC5605E Error writing inquiry file.

Reason:

Action: See additional messages.

PC5606E UNIX file system.

Reason: You can not perform an inquiry of a UNIX backup from a PC.

Action: Inquire from a UNIX system.

PC5607E PC file system.

Reason: You can not perform an inquiry of a PC backup from a UNIX system.

Action: Inquire from a PC.

PC5650E Error allocating required memory.

Reason: When performing security validation, there was a memory shortage.

Action: Free memory or disk and retry.

PC5651E Error starting conversation

Reason: When performing security validation, there was an error starting the conversation with the host.

Action: See the comm. return codes.

PC5652E Error sending request

Reason: When performing security validation, there was an error sending the security information.

Action: See the comm. return codes.

PC5653E Security information confirm error

Reason: If there is not a comm error, most likely there was an error with your security information.

Action: Reenter your security information.

PC5654E Error ending conversation.

Reason: There was an error ending the security validation conversation.

Action: See the comm. return codes.

PC5660E Remote password invalid

Reason: The password entered on the remote system is not the password personalized on the PC.

Action: Resubmit with the correct password.

5696E (UNIX) You must be root to specify HOLDUSERDIRS

Reason: Only the root user is able to open and hold user directories.

Action: Logon as root or do not specify this option.

5697I (UNIX) Holding user directory %s

Reason:

Action:

5698E (UNIX) Insufficient memory

Reason: There was insufficient memory to allocate an internal structure to hold user directory entries.

Action: Close applications or increase swap space.

5699W (UNIX) Error opening directory

Reason: During the hold user directory process, there was an error opening a specific user directory. The process will continue.

Action: See additional messages for the operating system error number and user directory.

PC6001E (File Xfer) Wildcards not allowed.

Reason: You can not specify more than one file in a file transfer request.

Action: Respecify.

PC6002E (File Xfer) Record packing required.

Reason: You must enable record packing to use file transfer.

Action: Set the parameter PACKRECSIZE to a non- zero value.

PC6100E Error allocating memory

Reason: There was an error allocating memory for host job submission.

Action: Free memory or restart program.

PC6101E Error during start conversation error

Reason: There was an error during host job submission

Action: See additional messages.

PC6102E Error sending start conversation

Reason:

Action: See additional messages.

PC6103E Error sending non-repeated description

Reason:

Action: See additional messages.

PC6104E Error sending repeated description

Reason:

Action: See additional messages.

PC6105E Error receiving job submission info.

Reason:

Action: See additional messages.

PC6106E Error in confirmed of host job.

Reason:

Action: See additional messages.

PC6107E Error ending conversation.

Reason:

Action: See additional messages.

PC6108I Submitting existing host job

Reason:

Action:

PC6109D Host job submitted

Reason:

Action:

PC6110I Host job submission failed

Reason:

Action:

PC7401E (File) Async I/O disallowed.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7402E (File) Async I/O disallowed for ULTra

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7403E (File) Async read timeout

Reason: An async I/O took too long.

Action: Verify your hardware for the action specified.

PC7404E (File) Async write timeout

Reason: An async I/O took too long.

Action: Verify your hardware for the action specified.

PC7405E (File) Async read error

Reason: There was a file error asynchronously reading the file.

Action: See additional messages.

PC7406E (File) Async write error

Reason: There was a file error asynchronously writing the file.

Action: See additional messages.

PC7407E (File) Insufficient bytes read.

Reason: Too few bytes were read. Internal error.

Action: Call Innovation Technical Support.

PC7408D (File) Async I/O num retries:

Reason: You specified the "USLOGASYNCRETRIES" environment variable to log the number of async retries which may be slowing down your system.

Action: Call Innovation Technical Support.

PC7411E (File) Expected a complete record.

Reason: During a read, it was expected that we would be able to read a complete record and insufficient bytes were actually read.

Action: Corrupted data. Call Innovation Technical Support.

PC7430E (Control) Error opening pipe for read.

Reason: There was an error opening named pipe for read from external process.

Action: Call Innovation Technical Support.

PC7431E (Control) Error opening pipe for write.

Reason: There was an error opening named pipe for write to external process.

Action: Call Innovation Technical Support.

PC7432E (Control) Error sending negotiation record.

Reason: There was a write error when UPSTREAM attempted to negotiate with external process.

Action: Call Innovation Technical Support.

PC7433E (Control) Error receiving negotiation record.

Reason: There was a read error when UPSTREAM attempted to negotiate with external process.

Action: Call Innovation Technical Support.

PC7434E (Control) Error in responce to negotiation.

Reason: While in negotiation UPSTREAM received unexpected data.

Action: Call Innovation Technical Support.

PC7435E (Control) Error sending final record.

Reason: There was a write error when UPSTREAM attempted to send final record to external process.

Action: Call Innovation Technical Support.

PC7436E (Control) Error receiving final ACK.

Reason: There was a read error when UPSTREAM attempted to receive ACK for final record from external process.

Action: Call Innovation Technical Support.

PC7438E (Control) Error sending synchronization record.

Reason: There was a write error when UPSTREAM attempted to send synchronization record to external process.

Action: Call Innovation Technical Support.

PC7439E (Control) Error receiving synchronization ACK.

Reason: There was a read error when UPSTREAM attempted to receive ACK for synchronization record from external process.

Action: Call Innovation Technical Support.

PC7440E (Control) Error flushing backup data.

Reason: There was an error when external process requested flushing of backup data.

Action: Call Innovation Technical Support.

PC7441E (Control) External request to fail.

Reason: External process requested UPSTREAM to fail the backup.

Action: Call Innovation Technical Support.

PC7442E (Control) Error sending status record.

Reason: There was a write error when UPSTREAM attempted to send status record to external process.

Action: Call Innovation Technical Support.

PC7443E (Control) Error receiving status ACK.

Reason: There was a read error when UPSTREAM attempted to receive ACK for status record from external process.

Action: Call Innovation Technical Support.

PC7444E (Control) Error in responce.

Reason: While waiting for the ACK record UPSTREAM received unexpected data.

Action: Call Innovation Technical Support.

PC7445E (Control) Backup failed.

Reason: Error in communications with external process caused UPSTREAM to fail the backup.

Action: Call Innovation Technical Support.

PC7446E (Control) Error receiving DirInfo.

Reason: There was a read error when UPSTREAM attempted to receive DirInfo record from external process.

Action: Call Innovation Technical Support.

PC7447E (Control) Error in response.

Reason: While waiting for the DirInfo record UPSTREAM received unexpected data.

Action: Call Innovation Technical Support.

7547I (Java client) PlugIn request

Reason:

Action:

7548I (Java client) PlugIn request completed %s

Reason:

Action:

7549W (Java client) Processing PlugIn request

Reason:

Action:

7550E (Java client) Error while listing physical disks

Reason:

Action:

7551E (Java client) Error getting physical disk info

Reason:

Action:

7552E (Java client) Not negotiation record

Reason:

Action: Contact FDR/UPSTREAM Tech Support.

7553E (Java client) Error checking security

Reason:

Action:

7554I (Java client) Checking security: %s

Reason:

Action:

7555I (Java client) Negotiating with remote

Reason:

Action:

7556I (Java client) Negotiation complete %s

Reason:

Action:

7557I (Java client) Remote request received

Reason:

Action:

7558I (Java client) Remote request completed %s

Reason:

Action:

7559I (Java client) Monitor started

Reason:

Action:

7560I (Java client) Monitor stopped %s

Reason:

Action:

7561I (Java client) Connection lost %s

Reason:

Action:

7562I (Java client) Control request

Reason:

Action:

7563I (Java client) Control request (%s) completed %s

Reason:

Action:

7564I (Java client) Log file request

Reason:

Action:

7565I (Java client) Log file request completed %s

Reason:

Action:

7566I (Java client) List disks

Reason:

Action:

7567I (Java client) List disks completed %s

Reason:

Action:

7568I (Java client) Disk info request

Reason:

Action:

7569I (Java client) Disk info completed %s

Reason:

Action:

7570I (Java client) Check security

Reason:

Action:

7571I (Java client) Security check completed %s

Reason:

Action:

7572E (Java client) No connection

Reason:

Action: Contact FDR/UPSTREAM Tech Support.

7573E (Java client) Receive on bad connection

Reason:

Action: Contact FDR/UPSTREAM Tech Support.

7574D (Java client) UPSTREAM termination received

Reason:

Action: The Java client requested that UPSTREAM terminate.

7575E (Java client) UPSTREAM can't login

Reason:

Action: A system condition restricts UPSTREAM logins and UPSTREAM logins are required for this remote connection.

7576I (Java client) Remote connection lost

Reason:

Action:

7577I (Java client) Missing service for svc. data

Reason:

Action: During run function. Contact FDR/UPSTREAM Tech Support.

7578I (Java client) Missing service for svc. data

Reason: During monitor.

Action: Contact FDR/UPSTREAM Tech Support.

7579W (Java client) Error getting local backup info

Reason:

Action: Contact FDR/UPSTREAM Tech Support.

7580I (Java client) Examine disk

Reason:

Action:

7581I (Java client) Examine disk completed %s

Reason:

Action:

7582I (Java client) List disk profiles

Reason:

Action:

PC7583I (Java client) List disk profiles completed %s

Reason:

Action:

PC7584W (Java client) Getting local backup profiles

Reason:

Action: Contact FDR/UPSTREAM Tech Support.

PC7585I (Java client) Update local profile

Reason:

Action:

PC7586I (Java client) Update local profile completed %s

Reason:

Action:

PC7587W (Java client) Updating local backup profile

Reason:

Action: Contact FDR/UPSTREAM Tech Support.

PC7588E (Java client) Local Backup not supported.

Reason:

Action: Use a different UPSTREAM function.

PC7589I (Java client) List local backups

Reason:

Action:

PC7590I (Java client) List local backups completed %s

Reason:

Action:

PC7591W (Java client) Getting local backups

Reason:

Action:

PC7592I (Java client) List PlugIns

Reason:

Action:

PC7593I (Java client) List PlugIns completed %s

Reason:

Action:

PC7594W (Java client) Getting loaded PlugIn list

Reason:

Action: Contact FDR/UPSTREAM Tech Support.

PC7595E (Rmt status) Bad IP address

Reason: You specified an IP address which can't be resolved.

Action: Respecify.

PC7596E (Rmt status) Error getting inbound IP addr (dy2)

Reason: There was a TCP/IP error determining the inbound IP address specified in UPSTREAM configuration.

Action: Verify your IP address for the configuration parameter TCPINADAPTER.

PC7597E (Rmt status) Error getting inbound IP addr (dyn)

Reason: There was a TCP/IP error determining the inbound IP address specified in UPSTREAM configuration.

Action: Verify your IP address for the configuration parameter TCPINADAPTER.

PC7598E (Rmt status) Error getting inbound IP addr (2)

Reason:

Reason: There was a TCP/IP error determining the inbound IP address specified in UPSTREAM configuration.

Action: Verify your IP address for the configuration parameter TCPINADAPTER.

7599E (Rmt status) Error getting inbound IP addr.

Reason: There was a TCP/IP error determining the inbound IP address specified in UPSTREAM configuration.

Action: Verify your IP address for the configuration parameter TCPINADAPTER.

PC7600E (Rmt status) TCP/IP is not installed

Reason:

Action:

PC7601E (Rmt status) socket call failed

Reason:

Action: See additional messages.

PC7602D (Rmt status) REUSEADDR call failed

Reason: This is merely a warning message.

Action: See additional messages.

PC7603W (Rmt status) bind call failed

Reason: There was a TCP/IP error opening the specified status port (or status port + 1). These ports are only used for the Java user interface and for remote tracing and are generally not required. This error is usually caused by another copy of UPSTREAM which already has these ports in use.

Action: Specify a different status port (in the UPSTREAM configurator - they must be separated by 3 numbers) or take down the other copy of UPSTREAM.

PC7604E (Rmt status) listen call failed

Reason:

Action: See additional messages.

PC7605E (Rmt status) iocntl for non-blocking failed

Reason:

Action: See additional messages.

PC7606E (Rmt status) Insufficient memory

Reason:

Action: Close other applications.

PC7607E (Rmt status) Service not found

Reason: While removing the service the service type specified was not found.

Action: Call Innovation Technical Support.

PC7608E (Rmt status) Insufficient memory

Reason: Occurred allocating service data memory.

Action: Close other applications.

PC7609E (Rmt status) accept call failed

Reason: Remote status will now be disabled.

Action: See additional messages.

PC7610E (Rmt status) Service not registered

Reason: This is probably a version incompatibility.

Action: Upgrade your version of UPSTREAM.

PC7611E (Rmt status) Exceeded data size.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7612E (Rmt status) Error occurred extracting type

Reason: Insufficient received data. Internal error.

Action: Call Innovation Technical Support.

PC7613E (Rmt status) Exceeded data buffer

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7614E (Rmt status) Exceeded data buffer

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7615E (Rmt status) Receive exceeded buffer

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7616W (Rmt status) Remote error

Reason: This error was reported from the remote system.

Action: See additional messages.

PC7617E (Rmt status) Occurred during remote error

Reason:

Action: See additional messages.

PC7618E (Rmt status) During check for remote request

Reason:

Action: See additional messages.

PC7619E (Rmt status) During receive of remote request

Reason:

Action: See additional messages.

PC7620E (Rmt status) socket call failed

Reason:

Action: See additional messages.

PC7621D (Rmt status) REUSEADDR call failed

Reason: This is merely a warning message.

Action: See additional messages.

PC7622E (Rmt status) bind call failed

Reason: There was an error accessing the specified port.

Action: See additional messages.

PC7623E (Rmt status) listen call failed

Reason:

Action: See additional messages.

PC7624E (Rmt status) iocntl for non-blocking failed

Reason:

Action: See additional messages.

PC7625I (Rmt status) Remote disconnected

Reason:

Action:

PC7626E (Rmt status) socket call failed

Reason: You will not be able to passthrough messages from cooperating PC applications.

Action: See additional messages.

PC7627W (Rmt status) Unable to reuse port.

Reason: This is a warning message that can usually be ignored.

Action:

PC7628W (Rmt status) bind call failed.

Reason: You will not be able to passthrough messages from cooperating PC applications. There was a TCP/IP error opening the specified status port + 2. This port is used to passthrough communications from cooperating PC applications and is generally not required. This error is usually caused by another copy of UPSTREAM which already has this port in use.

Action: Specify a different status port (in the UPSTREAM configurator - they must be separated by 3 numbers) or take down the other copy of UPSTREAM.

PC7629E (Rmt status) listen call failed.

Reason: You will not be able to pass through messages from cooperating PC applications.

Action: See additional messages.

PC7630E (Rmt status) Set non-blocking failed

Reason: You will not be able to passthrough messages from cooperating PC applications.

Action: See additional messages.

PC7631E (Rmt status) Error checking for pending data

Reason: You will not be able to passthrough messages from cooperating PC applications.

Action: See additional messages.

PC7632E (Rmt status) Error receiving remote func.

Reason: There was a communications error receiving the remote function type.

Action: See additional messages.

PC7633I (Rmt status) Remote service request

Reason: A remote service request was received and is now being processed.

Action:

PC7634D (Rmt status) Remote passthrough request

Reason: A request to pass data through to the host was received and is now being processed.

Action: Press the CANCEL button if you wish to abort this process.

PC7635I (Rmt status) Remote service request processed

Reason:

Action:

PC7636I (Rmt status) Remote service request failed

Reason:

Action:

PC7637E (Rmt status) Receive failed

Reason: The receive of data from the remote system failed.

Action: See additional messages.

PC7638E (Rmt status) Unsupported function

Reason: Internal error.

Action: Call UPSTREAM Innovation Technical Support.

PC7639E (Rmt status) Error starting conversation

Reason: There was an error starting the conversation with the host while passing data through from another application.

Action: See additional messages.

PC7640E (Rmt status) Error sending data

Reason: There was an error sending data to the host while passing data through from another application.

Action: See additional messages.

PC7641E (Rmt status) Send failed

Reason: The send of data from the remote system failed.

Action: See additional messages.

PC7642E (Rmt status) Send error failed

Reason: The send of an error message through to the host failed.

Action: See additional messages.

PC7643E (Rmt status) Confirm failed.

Reason: The send of a CONFIRM through to the host failed.

Action: See additional messages.

PC7644E (Rmt status) Confirmed failed.

Reason: The send of a CONFIRMED through to the host failed.

Action: See additional messages.

PC7645E (Rmt status) Deallocate failed.

Reason: Conversation end through to the host failed.

Action: See additional messages.

PC7646E (Rmt status) Receive failed.

Reason: A receive of data from the host to the application failed.

Action: See additional messages.

PC7647E (Rmt status) Error during confirm

Reason:

Action: See additional messages.

PC7648E (Rmt status) Unexpected data on confirm

Reason: Internal error.

Action: Call Innovation Technical Support

PC7649E (Rmt status) Error during deallocate

Reason: Internal error.

Action: See additional messages.

PC7650E (Rmt status) Error during host error

Reason: There was an error sending a host error to the remote PC.

Action: See additional messages.

PC7651E (Rmt status) Unexpected host type.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7652E (Rmt status) Error going into receive state

Reason:

Action: See additional messages.

PC7653D (Rmt status) User aborted passthrough

Reason:

Action: See additional messages.

PC7654I (Rmt status) Remote passthrough request

Reason: A request to pass data through to the host was received and is now being processed.

Action: See additional messages.

PC7655E (Rmt status) Unexpected service

Reason: UPSTREAM received an unexpected service type. It will be rejected.

Action: Check for client version incompatibility.

PC7656I Dynamically adjusted status port

Reason:

Action:

PC7657E (Rmt status) Missing environment variable

Reason: A required environment variable was missing.

Action: If you started UPSTREAM manually, you will need to unset the USSTATUSSOCKET1 environment variable. Otherwise, this is an internal FDR/UPSTREAM error and you should call FDR/UPSTREAM Tech Support.

7658I Closing status connection

Reason:

Action: None

PC7660E (Java Client) Unexpected initial type

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7661E (Java Client) Error extracting negotiation

Reason: There was an internal error extracting a field from the negotiation record.

Action: Call Innovation Technical Support.

PC7662E (Java Client) Error creating negotiation

Reason: There was an internal error inserting a field into the negotiation record or sending it.

Action: See additional messages.

PC7663E (Java Client) Negotiation unexpected

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7664E (Java Client) Unexpected type

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7665E (Java Client) Unexpected state

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7666E (Java Client) Bad Run Function state

Reason: A request to have UPSTREAM perform a function was received in an invalid internal state. Internal error.

Action: Call Innovation Technical Support.

PC7667E (Java Client) Error in Run Function

Reason: There was an error in the receive of the Run Function request from the client.

Action: See additional messages.

PC7668E (Java Client) Error receiving parameter

Reason: There was an error receiving a parameter line from the client workstation.

Action: See additional messages.

PC7669E (Java Client) Error previously reported

Reason:

Action:

PC7670I (Java Client) Closing client connection

Reason:

Action:

PC7671E (Java Client) Bad parameter type

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7672E (Java Client) Error during acknowledgement

Reason: While notifying the client that the parameters are acceptable, there was a comm error.

Action: See additional messages.

PC7673E (Java Client) Error during monitor function

Reason: This error occurred while the client was requesting status information of UPSTREAM

Action: See additional messages.

PC7674E (Java Client) Error during function response

Reason: This error occurred while the client was requesting status information of UPSTREAM

Action: See additional messages.

PC7675E (Java Client) Error adding status information

Reason: This error occurred while building or sending status information to the client.

Action: See additional messages.

PC7676E (Java Client) Unexpected data type.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7677E (Java Client) Error during flow control

Reason: An error was detected during the parse of flow control information.

Action: See additional messages.

PC7678E (Java Client) Error during status

Reason: An error was detected during the build or send of the status record to the client.

Action: See additional messages.

PC7679E (Java Client) Error during response

Reason: An error occurred while UPSTREAM was notifying the client of the result of the function requested.

Action: See additional messages.

PC7680E (Java Client) Error during control request

Reason: An error occurred while UPSTREAM was processing a control request from the client.

Action: See additional messages.

PC7681E (Java Client) UPSTREAM Busy

Reason: The request received can not be procesed at this time as UPSTREAM is busy with another process.

Action: Retry later.

PC7682E (Java Client) All status ports unavailable

Reason:

Action: Contact Innovation Technical Support.

PC7683E (Java Client) UPSTREAM Busy

Reason: The requested UPSTREAM service is currently unavailable as it is busy processing request from another application.

Action: Try later.

PC7684E (Java Client) Insufficient memory

Reason:

Action: Free memory or close applications.

PC7685E (Java Client) No allocated conversation

Reason: This is an internal FDR/UPSTREAM error.

Action: Contact FDR/UPSTREAM Tech Support.

PC7686E (Java Client) No allocated conversation

Reason: This is an internal FDR/UPSTREAM error.

Action: Contact FDR/UPSTREAM Tech Support.

PC7687E (Java Client) Bad internal structure

Reason: This is an internal FDR/UPSTREAM error.

Action: Contact FDR/UPSTREAM Tech Support.

PC7688E (Java Client) Bad internal structure

Reason: This is an internal FDR/UPSTREAM error.

Action: Contact FDR/UPSTREAM Tech Support.

PC7689E (Java Client) Bad internal structure

Reason: This is an internal FDR/UPSTREAM error.

Action: Contact FDR/UPSTREAM Tech Support.

PC7690E (Java Client) Bad internal structure

Reason: This is an internal FDR/UPSTREAM error.

Action: Contact FDR/UPSTREAM Tech Support.

PC7691E (Java Client) Control disallowed

Reason: You requested a control function from a machine which requires a login and the current UPSTREAM function is running under the UPSTREAM authority or has completed.

Action: Do the control function from a system which supports running as UPSTREAM.

PC7692E (Java Client) Invalid user/password

Reason: The user name and password specified are either invalid or do not match the user of the current UPSTREAM function

Action: Specify the user which owns the UPSTREAM function.

PC7693W (Java Client) Status reporting error

Reason:

Action: See additional messages.

7694W (Java Client) Error in log file request

Reason:

Action: See additional messages.

PC7695W (Java Client) Bad log file request type

Reason: This version of UPSTREAM does not support this function.

Action: Use a different function.

PC7696W (Java Client) Error opening log file

Reason: While sending the log file to the client, there was an error opening the log.

Action: See additional messages.

PC7697W (Java Client) Error reading log file

Reason: While sending the log file to the client, there was an error reading the log.

Action: See additional messages.

PC7698E (Java Client) Error seeking log file

Reason: While sending the log file to the client, there was an error seeing through the log.

Action: See additional messages.

PC7699E (Java Client) Insufficient memory

Reason:

Action: Free memory or close applications.

PC7800W (Lang.) Error opening language file

Reason:

Action: See additional messages.

PC7801W (Lang.) Error reading language file

Reason:

Action: See additional messages.

PC7802D (Lang.) Duplicate English entry

Reason: The entry you specified in English matches an existing entry.

Action: Modify your entry.

PC7803W (Lang.) Insufficient memory.

Reason:

Action: Close applications.

PC7804W (Lang.) Insufficient memory.

Reason:

Action: Close applications.

PC7805W (Lang.) Insufficient memory.

Reason:

Action: Close applications.

PC7806W (Lang.) English entry too short

Reason: You must specify at least 2 characters for the english language entry.

Action: Modify your language file.

PC7807W (Lang.) Language entry too short.

Reason: You must specify at least 1 character for the english replacement text.

Action: Modify your language file.

PC7808W (Lang.) Last quote missing in file

Reason: The closing quote is missing from the replacement text field.

Action: Modify your language file.

PC7809W (Lang.) Replacement missing in file

Reason: The English text exists, but the replacement language text is missing.

Action: Modify your language file.

PC7900E (Hard links) Error creating tree

Reason: There was a memory shortage creating the tree required for processing hard links.

Action: Free memory or close applications.

PC7901E (Hard links) Error adding to tree

Reason: There was a memory shortage adding to the tree required for processing hard links.

Action: Free memory or close applications.

PC7902I (Hard links) Unable to open file

Reason: The file open failed while checking hard link information.

Action: See messages above. Note that this error can generally be ignored.

PC7903I (Hard links) Error getting hard link info

Reason: When attempting to read the hard link information, there was a file system error.

Action: See messages below. Note that this error can generally be ignored.

PC7904W (Hard links) Error deleting hard links file

Reason:

Action: See additional messages.

PC7905E (Hard links) Error creating restore file

Reason:

Action: See additional messages.

PC7906E (Hard links) Error flushing restore file

Reason:

Action: See additional messages.

PC7907E (Hard links) Unexpected hard link

Reason: After the first pass, a link was received. Internal error.

Action: Call Innovation Technical Support.

PC7908E (Hard links) Invalid hard link non-file data

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7909E (Hard links) Bad non-file data subtype

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7910E (Hard links) Data size error

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7911E (Hard links) Error writing hard link file

Reason: There was an I/O error writing the hard link temporary file.

Action: See file I/O errors.

PC7912E (Hard links) Error reading hard links file

Reason: There was an I/O error reading the hard links temporary file. No additional hard links will be restored.

Action: See file I/O errors.

PC7913E (Hard links) Error rewriting description

Reason:

Action: See additional messages.

PC7914E (Hard links) Insufficient memory

Reason: While attempting to create a sub-tree in the tree of hard links, there was insufficient memory.

Action: Close applications or free memory.

PC7915E (Hard links) Insufficient memory

Reason: While attempting to add a hard link to the tree of hard links, there was insufficient memory.

Action: Close applications or free memory.

PC7916E (Hard links) Insufficient memory

Reason: While attempting to add a hard link file name to the hard links tree, there was insufficient memory.

Action: Close applications or free memory.

PC7917E (Hard links) Unrestartable restore

Reason: A fatal hard link error occurred earlier in the restore and thus it is non-restartable.

Action: Restart the restore from the beginning.

PC7918E (Hard links) Empty link tree

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7919E (Hard links) Unexpected end of link tree

Reason: Internal error

Action: Call Innovation Technical Support.

PC7920D (Hard links) Restore complete

Reason:

Action:

PC7921E (Hard links) Error saving original specs

Reason:

Action: See additional messages.

PC7922E (Hard links) No tree items

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7923E (Hard links) Error recovering original params

Reason:

Action: See additional messages.

PC7924E (Hard links) No subtree in restore

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7925E (Hard links) File name doesn't match internal

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7926W (Hard links) Error deleting old link

Reason: There was a file I/O error deleting a file we wish to hard link to.

Action: See file I/O error.

PC7927W (Hard links) Link failed

Reason: There was a file I/O error when attempting to perform the hard link on your UNIX system.

Action: See file I/O error.

PC7928W (Hard links) Error opening link file

Reason: There was a file I/O error when attempting to open a file to link it to another file.

Action: See file I/O error.

PC7929E (Hard links) Insufficient memory

Reason: When creating the tree to hold the hard links received, there was insufficient memory.

Action: Close applications or free memory.

PC7930D (Hard links) Restoring hard links

Reason: Now that regular data has been restored, UPSTREAM will restore hard links. This may be performed multiple times depending upon how many hard links were requested.

Action:

PC7931E (Hard links) Expected file not found.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7932E (Hard links) Original file name not found

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7933E (Hard links) Expected links and none found

Reason: Internal error.

Action: Call Innovation Technical Support.

PC7934E (Hard links) Error saving original parameters

Reason:

Action: See additional messages.

PC7935E (Hard links) Error recovering original parameters

Reason:

Action: See additional messages.

PC8000E A user name for the UID is not defined.

Reason:

Action: Add a definition for the UID using the appropriate utility for your system.

PC8001E A group name for the GID is not defined.

Reason:

Action: Add a definition for the GID using the appropriate utility for your system.

PC8002E Bad translation tables for UTF-8

Reason:

Action: Specify UPSTREAM unicode or one-to-one translation tables (such as ANS2ATOE.TAB and ANS2ETOA.TAB).

PC9200E Error in initial socket call

Reason: To begin listening for requests, there was a TCP/IP error in the initial socket call.

Action: See additional messages.

PC9201E Insufficient memory

Reason: While allocating memory for a small internal buffer (TCP listen buffer) there was a memory shortage.

Action: Close applications or Free disk space.

PC9202D Error in reusing address

Reason: A non-fatal TCP/IP error occurred in the SO_REUSEADDR called to allow the socket to be quickly reused.

Action: See additional messages.

PC9203E Error in binding to socket

Reason: A fatal error occurred binding to a listening socket.

Action: Most likely this occurs when the listening socket is bound to another application.

PC9204E Error in listening on socket

Reason: A fatal error occurred listening on a socket.

Action: See additional messages.

PC9205E Error in setting socket (non)blocking

Reason: A fatal error occurred setting the blocking status of a socket.

Action: See additional messages.

PC9206E Error accepting remote connect

Reason:

Action: See additional messages.

PC9207E Insufficient memory

Reason: While allocating memory for a small internal buffer (TCP accept buffer) there was a memory shortage.

Action: Close applications or Free disk space.

PC9208E Error checking for pending receive data

Reason:

Action: See additional messages.

PC9209E Error receiving data

Reason:

Action: See additional messages.

PC9210E Error sending data

Reason:

Action: See additional messages.

PC9211E Error disabling the Nagle algorithm.

Reason:

Action: See additional messages.

PC9212E Error setting keep alives.

Reason:

Action: See additional messages.

PC9213E Received length incorrect.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC9214E Error in initial socket call

Reason: While attempting to connect via TCP/IP there was an error in the initial socket call.

Action: See additional messages.

PC9215E Error in connect

Reason: While attempting to connect via TCP/IP there was an error in the connect call.

Action: See additional messages.

PC9216E Broken connection

Reason: While attempting to send, the remote process disconnected.

Action: Restart the remote process and retry.

PC9225E State error

Reason: Internal error.

Action: Call Innovation Technical Support.

PC9226E Remote system error

Reason: The above message came from the remote system.

Action:

PC9227E Expected data

Reason: While expecting data, received a "receive" indicator. Internal error.

Action: Call Innovation Technical Support.

PC9228E Expected data

Reason: While expecting data, received a "deallocate" indicator. Internal error.

Action: Call Innovation Technical Support.

PC9229E Expected data

Reason: While expecting data, received a "confirm" indicator. Internal error.

Action: Call Innovation Technical Support.

PC9230E Unexpected confirmed

Reason: While expecting data, received a "confirmed" indicator. Internal error.

Action: Call Innovation Technical Support.

PC9231E Unexpected data type on confirmed

Reason:

Action:

PC9232E Insufficient memory

Reason: While allocating memory for record packing

Action: Close applications or free memory.

PC9233E Invalid packing type received.

Reason:

Action: Call Innovation Technical Support.

PC9234E Length in packing block too large

Reason:

Action: Call Innovation Technical Support.

PC9235E Pack record length too small

Reason:

Action: Call Innovation Technical Support.

PC9236E Standard packing invalid

Reason:

Action: Call Innovation Technical Support.

PC9237E Fixed packing invalid

Reason:

Action: Call Innovation Technical Support.

PC9238E Variable packing invalid

Reason:

Action: Call Innovation Technical Support.

PC9250E Error starting program

Reason:

Action: See additional messages.

PC9251E Insufficient memory.

Reason: There was a memory shortage allocating memory to track started task instances.

Action: Close applications.

PC9252E Error checking for program

Reason: While checking the execution status of a USTASK program, the following error was encountered.

Action: See additional messages.

PC9253E Error terminating USTASK

Reason:

Action: See additional messages.

PC9254I Normal USTASK start.

Reason: .

Action: .

PC9255I Normal USTASK termination.

Reason: .

Action: .

PC9256W USTASK failed

Reason: .

Action: .See earlier in this log.

PC9257E Error attaching to console facility

Reason: .

Action: See additional messages.

PC9258W Task to kill not found.

Reason: The console user requested a kill of a specific task which is not found. Most likely the task already terminated.

PC9275E Error connecting to console

Reason:

Action: See additional messages.

PC9276E Error occurred during wait for console response.

Reason:

Action: See additional messages.

PC9400E Insufficient data

Reason: There must be at least 3 bytes passed to the parsing routines, and there was less.

Action: Call Innovation Technical Support.

PC9401E Unexpected structure received.

Reason:

Action: Call Innovation Technical Support.

PC9402E A required field is missing

Reason: Occurred during string parsing.

Action: Call Innovation Technical Support.

PC9403E Field exceeds data

Reason: During a parse, the field position plus the field length is greater than the structure length.

Action: Call Innovation Technical Support.

PC9404E Field length exceeds field

Reason: The length of a field is larger than the size given to hold the data.

Action: Call Innovation Technical Support.

PC9410E Buffer exceeded

Reason: While constructing an intercomputer structure, the internal buffer length was exceeded.

Action: Call Innovation Technical Support.

PC9700E Insufficient memory

Reason: While allocating memory for a FileInfo handle, there was insufficient memory.

Action: Free memory and/or disk, or close applications.

PC9701E Error creating database

Reason:

Action: See file I/O messages.

PC9702E Error writing database header block

Reason:

Action: See file I/O messages.

PC9703E Error deleting file info file

Reason:

Action: See file I/O messages.

PC9704E Error writing backup description

Reason:

Action: See file I/O messages.

PC9705E Error writing backup description

Reason:

Action: See file I/O messages.

PC9706E No repeated list

Reason: Internal error.

Action: Call Innovation Technical Support.

PC9707E Error creating database index.

Reason:

Action: See file I/O messages.

PC9708E Error allocating memory

Reason:

Action: Close applications or free memory.

PC9709E Error writing file information

Reason:

Action: See file I/O messages.

PC9710E Unqualified file name

Reason: During an index operation an unqualified file name was detected.

Action: Call Innovation Technical Support.

PC9711E Insufficient memory

Reason: There was insufficient memory adding an index entry to the directory list.

Action: Close applications or free memory

PC9712E Insufficient memory

Reason: There was insufficient memory adding an index entry to the directory list.

Action: Close applications or free memory

PC9713E Insufficient memory

Reason: There was insufficient memory adding an index entry to the files list.

Action: Close applications or free memory

PC9714E Error writing index header.

Reason:

Action: See file I/O messages.

PC9715E Error writing index directory entry.

Reason:

Action: See file I/O messages.

PC9716E Error writing index file entry.

Reason:

Action: See file I/O messages.

PC9717E Error opening file info file.

Reason:

Action: See file I/O messages.

PC9718E End of file in read of partial length

Reason:

Action: Call Innovation Technical Support.

PC9719E Read data greater than the maximum

Reason:

Action: Call Innovation Technical Support.

PC9720E End of file when expecting data

Reason:

Action: Call Innovation Technical Support.

PC9721E Error reading file info header.

Reason:

Action: See additional messages.

PC9722E Invalid structure type.

Reason:

Action: Call Innovation Technical Support.

PC9723W Invalid header

Reason: The header fields do not match the file. The file will be used anyway.

Action:

PC9724E Invalid file version

Reason: The file info file has a greater version than supported by this version of the program.

Action: Upgrade this program.

PC9725E Error reading index header.

Reason:

Action: See additional messages.

PC9726E Index does not match the file info file

Reason: The file will be reindexed now.

Action:

PC9727W Index not completed.

Reason: The file will be reindexed now.

Action:

PC9728E Error reading non-repeating description

Reason:

Action: See additional messages.

PC9729E Error reading repeating description

Reason:

Action: See additional messages.

PC9730E Error reading file info for reindex

Reason:

Action: See additional messages.

PC9731E Error parsing file info during reindex

Reason:

Action: See additional messages.

PC9732E Error searching for backups (first).

Reason:

Action: See additional messages.

PC9733E Error searching for backups (next).

Reason:

Action: See additional messages.

PC9734E Error adding file to index

Reason:

Action: Free memory or close applications.

PC9735E Bad file info file name.

Reason: Internal error.

Action: Call Innovation Technical Support.

PC9736E Error deleting file info file.

Action: See subsequent I/O messages.

PC9737E Error deleting index file.

Reason:

Action: See subsequent I/O messages.

PC9738E Error opening index of files

Reason:

Action: Verify that you have both the directory and file index files for a given file info file.

PC9739E Error reading files index file

Reason:

Action: See subsequent I/O errors.

PC9740W Files index file bad.

Reason: An automatic reindex will be performed.

Action:

PC9741W File info data size too large

Reason: This file will be skipped (assumed to be bad).

Action:

PC9900W (PlugIn) Can't load PlugIn

Reason: The specified PlugIn file cannot be loaded.

Action: Make sure the PlugIn is appropriate for the operating system you are using. If it is not, remove it from the PlugIn subdirectory.

PC9901W (PlugIn) Can't Load PlugIn Negotiate function

Reason: The specified PlugIn file does not have a fpbPlugInNegotiate function. The PlugIn is being unloaded.

Action: FIX: Make sure the DLL file is indeed a UPSTREAM PlugIn module. If it is not, remove it from the PlugIn subdirectory.

PC9902W (PlugIn) PlugIn negotiation process failed

Reason: The negotiation process for the specified PlugIn file failed. The PlugIn is being unloaded.

Action: Make sure the PlugIn is appropriate for the operating system you are using. If it is not, remove it from the PlugIn subdirectory. See additional messages for more information.

PC9903W (PlugIn) PlugIn version mismatch

Reason: The specified PlugIn file has a different version than US.EXE. The PlugIn is being unloaded.

Action: Obtain the version of the PlugIn module that matches the version of US.exe being used and copy it to the PlugIn subdirectory.

PC9904E (PlugIn) Can't allocate memory for a PlugIn

Reason: There is insufficient memory to allocate a PlugIn control block.

Action: See additional messages.

PC9905E (PlugIn) PlugIn for file spec not found

Reason: A file specification has referenced a PlugIn which is not loaded.

Action: See additional messages.

PC9906E (PlugIn) Invalid ACTION parameter for PlugIn

Reason: .The ACTION parameter specified is invalid when used with a PlugIn.

Action: . See additional messages.

PC9907E (PlugIn) Restore file specs use two or more PlugIns

Reason: .The set of restore parameters has file specs that use two or more different PlugIns. A PlugIn restore may have any number of file specs, but all of the file specs must use the same PlugIn.

Action: .Respecify.

PC9908E (PlugIn) Invalid BACKUPVERIFY

Reason: .The ACTION parameter specified is invalid when used with a PlugIn.

Action: .FIX: See additional messages.

PC9909E (PlugIn) Invalid CALCDASDSIZE

Reason: .The CALCDASDSIZE parameter specified is invalid when used with a PlugIn.

Action: .See additional messages.

PC9910E (PlugIn) Invalid FILETRANSFER

Reason: .The FILETRANSFER parameter specified is invalid when used with a PlugIn.

Action: .See additional messages.

PC9911E (PlugIn) Invalid LANWSNAME

Reason: .The LANWSNAME parameter specified is invalid when used with a PlugIn.

Reason: .See additional messages.

PC9914E (PlugIn) Invalid NDS

Reason: .The NDS file spec parameter specified is invalid when used with a PlugIn.

Action: .Respecify.

PC9915E (PlugIn) Function not exported

Reason: .A file handle is being used for a function which is not exported. This is an internal FDR/UPSTREAM error.

Action: .Contact FDR/UPSTREAM Tech Support.

PC9916E (PlugIn) PlugIn mismatch

Reason: .A file handle is for a PlugIn which is not the active one. This is an internal FDR/UPSTREAM error.

Action: .Contact FDR/UPSTREAM Tech Support.

PC9917E (PlugIn) Active PlugIn required

Reason: .This function is using a PlugIn file handle but there is no active PlugIn. This is an internal FDR/UPSTREAM error.

Action: .Contact FDR/UPSTREAM Tech Support.

PC10101E (NotesR5) Notes not loaded

Reason: .

Action: . See additional messages

PC10102E (NotesR5) Function load error

Reason: .

Action: .See additional messages

PC10103E (NotesR5) Initialization error

Reason: .

Action: .See additional messages

PC10104E (NotesR5) File open bad mode

Reason: .This is an internal FDR/UPSTREAM error.

Action: . Contact FDR/UPSTREAM Tech Support.

PC10105E (NotesR5) Insufficient memory

Reason: .During Notes plug-in processing.

Action: . Free memory and/or disk, or close applications.

PC10106E (NotesR5) Not a NotesR5 file

Reason: .This is an internal FDR/UPSTREAM error.

Action: .Contact FDR/UPSTREAM Tech Support.

PC10107E (NotesR5) Error getting Notes data directory

Reason: .This is required for all UPSTREAM functions so, the plug in is disabled.

Action: .See additional messages.

PC10108E (NotesR5) Error translating file name

Reason: .

Action: .See additional messages.

PC10109E (NotesR5) Error creating database

Reason: .

Action: .See additional messages.

PC10110E (NotesR5) Error opening database

Reason: .

Action: .See additional messages.

PC10111E (NotesR5) Error in NSFBackupStart

Reason: .

Action: .See additional messages.

PC10112E (NotesR5) Error in getting logging status

Reason: .

Action: .See additional messages.

PC10113I (NotesR5) Database is not logged

Reason: .Resulting backup file will not be recoverable.

Action: .Use the notes administrator to make this a logged database or accept the inability to recover from transaction logs.

PC10114W (NotesR5) Circular logging

Reason: .You have requested a notes backup with circular transaction logging. This will work, but UPSTREAM will not back up the transaction logs as they can not be recovered.

Action: Use the notes administrator to set standard logging or set LOGFILES=N in the plug-in parameters.

PC10115E (NotesR5) Error getting transaction log style

Reason: .

Action: . See additional messages.

PC10116E (NotesR5) Error beginning archive log list

Reason: .

Action: .See additional messages.

PC10117E (NotesR5) Invalid LOGFILES parameter

Reason: .The form for LOGFILES is: LOGFILES=Y|N|O

Action: .Respecify.

PC10118E (NotesR5) Error getting first log file

Reason: .

Action: .See additional messages.

PC10119E (NotesR5) Error getting next log file

Reason: .

Action: .See additional messages.

PC10120E (NotesR5) Error creating log file spec

Reason: .

Action: .Contact FDR/UPSTREAM Tech Support.

PC10121E (NotesR5) Error copying to new spec

FIX: Contact FDR/UPSTREAM Tech Support.

PC10122E (NotesR5) Invalid LOG parameter

Reason: .This parameter should not be entered manually

Action: .Respecify.

PC10123E (NotesR5) Can't restart Notes backup

Reason: .

Action: .Start from the beginning

PC10124W (NotesR5) Restart not supported

Reason: .

Action: .UPSTREAM will disable restart for this backup.

PC10125E (NotesR5) LOGFILES ONLY defined with logs

Reason: .You specified a LOGFILES ONLY specification and you already have logfiles specified.

Action: .Respecify.

PC10126E (NotesR5) Log file invalid on direct restore

Reason: .You can not select log files to be restored directly; you must use the log files plug in parameters option. The file will be skipped.

Action: .Respecify.

PC10127E (NotesR5) Error translating log file name

Reason: .

Action: .See additional messages.

PC10128E (NotesR5) Notes specified a log file not found

Reason: .

Action: .Contact FDR/UPSTREAM Tech Support.

PC10129E (NotesR5) Wildcard in search

Reason: .This is an internal FDR/UPSTREAM error.

Action: .Contact FDR/UPSTREAM Tech Support.

PC10130E (NotesR5) Error getting change info size

Reason: .

Action: .See additional messages.

PC10131E (NotesR5) Error taking database offline

Reason: .

Action: .See additional messages.

PC10132E (NotesR5) Error starting apply of log changes

Reason: .

Action: .See additional messages.

PC10133E (NotesR5) Error getting changed info

Reason: .

Action: .See additional messages.

PC10134E (NotesR5) Error in applying changed info

Reason: .

Action: .See additional messages.

PC10135E (NotesR5) Error deleting temporary file

Reason: .

Action: .See additional messages.

PC10136E (NotesR5) Could not create temp file

Reason: .The file name reported was the last name tried.

Action: .See additional messages.

PC10137E (NotesR5) Inconsistant versions

Reason: .The version of the Notes PlugIn does not match the version of UPSTREAM.

Action: .Upgrade both to the latest version.

PC10138E (NotesR5) Server not logging

Reason: .The server is not using transaction logging so your request to backup transaction logs can't be serviced.

Action: . Turn on transaction logging on the server or turn off transaction logs for this backup.

PC10139E (NotesR5) Insufficient memory

Reason: .While saving the transaction log file name, there was insufficient memory.

Action: .Close applications or free memory.

PC10140D (NotesR5) No transaction logs to archive

Reason: .

Action: .

PC10141W (NotesR5) No transaction logs to archive

Reason: .There were no transaction logs to archive and you requested a transaction log only backup. No backup will be performed.

Action: .Specify the FORCELOG=Y plug in parameter if you wish to guarantee that log file backups will always backup something.

PC10142E (NotesR5) Log file not found

Reason: .This is an internal FDR/UPSTREAM error.

Action: .Contact FDR/UPSTREAM Tech Support.

PC10143D (NotesR5) Can't determine if new backup needed

Reason: .The following error was returned in a NSFIsNewBackupNeeded Notes call.

Action: .See additional messages.

PC10144E (NotesR5) Invalid DBCHANGEDCHECK parameter

Reason: .The form for DBCHANGEDCHECK is: DBCHANGEDCHECK=Y|N

Action: .Respecify.

PC10145I (NotesR5) Database not logged (%s)

Reason: .This database is not logged and will be backed up fully.

Action: .

PC10146I (NotesR5) Database DBIID changed (%s)

Reason: .This database's DBIID changed since the last backup and will be backed up fully.

Action: .

PC10150D (NotesR5) Setting up log backup

Reason: .This may be somewhat time consuming and there will be no display during this process.

Action: .

PC10152E (NotesR5) Error saving existing parameters

Reason: .While setting up a backup using the NotesR5 PlugIn, there was an error saving your existing parameters.

Action: .Verify your workpath is correct.

PC10153E (NotesR5) Error saving existing parameters

Reason: .While setting up a backup using the NotesR5 PlugIn, there was an error saving your existing parameters.

Action: .Verify your workpath is correct.

PC10154D (NotesR5) Error setting attributes

Reason: .

Action: .See additional messages.

PC10155D (NotesR5) Error resetting file information

Reason: .

Action: .See additional messages.

PC10156W (NotesR5) Error completing log backup

Reason: .While attempting to notify Notes that the log file backup had completed, there was an internal error.

Action: .See additional messages.

PC10157E (NotesR5) Can't restore log files only

Reason: .Log files must be applied to specific restored Notes databases.

Action: .Respecify.

PC10158E (NotesR5) Insufficient memory

Reason: .While attempting to save a restored database name for later log file application, there was insufficient memory.

Action: .Close applications or free memory.

PC10159W (NotesR5) Error bringing database online

Reason: .There was a Notes error bringing the specified database back online after a DB restore.

Action: .See Notes return code.

PC10160E (NotesR5) Insufficient memory

Reason: .While attempting to allocate memory for the list of databases to pass to the Notes log recovery facility there was insufficient memory.

Action: .Close applications or free memory.

PC10161W (NotesR5) Error bringing database online

Reason: .There was a Notes error bringing the specified database back online after applying transaction logs following a restore.

Action: .See Notes return code.

PC10162E (NotesR5) Error recovering databases from logs

Reason: .There was a Notes error recovering the selected databases from the logs.

Action: .See Notes return code

PC10163D (NotesR5) Recovery complete

Reason: .

Action: .

PC10164E (NotesR5) Error setting field

Reason: .During log file recovery there was an error setting one of the UPSTREAM fields.

Action: .Contact FDR/UPSTREAM Tech Support.

PC10165E (NotesR5) Must not restore logs directly

Reason: .You specified that the internal name for a transaction log file be restored. Transaction logs can only be restored by selecting transaction logs in the plug in parameters.

Action: .Notes will restore the file when necessary. If you truly want to manually restore a transaction log, you can set the environment variable USNOTESALLOWLOGRESTORE to any value and rerun the restore request.

PC10166D (NotesR5) Beginning log file recovery

Reason: .Subsequent restores are log files specified by Notes. For GUI 32-bit Windows, the restore dialogs will not be associated with the main window. This is due to the way that Notes requests log files and can not be avoided.

Action: .

PC10167E (NotesR5) Error saving plug in parameters

Reason: .

Action: .See additional messages.

PC10168W (NotesR5) Error in a pending log force

Reason: .After completing the backup of the existing logs (which didn't require a force) when we attempt to restart the log search so that we can perform the force we got a Notes error.

Action: .See additional messages.

PC10171E No non pending log entries

Reason: .This is an internal FDR/UPSTREAM error.

Action: .Contact FDR/UPSTREAM Tech Support.

PC10172D (NotesR5) Error getting attributes

Reason: .

Action: .See additional messages.

PC10173E (NotesR5) Recovery time specified wrong

Reason: .You must specify recovery time as 14 numeric digits: YYYYMMDDHHMMSS.

Action: .Respecify.

PC10174E (NotesR5) Recovery time specified wrong

Reason: .The date is invalid.

Action: .Respecify.

PC10175E (NotesR5) Recovery time can't be used

Reason: .When attempting to convert the specified recovery time to Notes format, there was a non-specific Notes error.

Action: .Respecify.

PC10176E (NotesR5) Recovery time bad

Reason: .Recovery time specifies a time before 1/1/70.

Action: .Respecify.

PC10177I (NotesR5) Using recovery time: %s

Reason: .

Action: .

PC10178E (NotesR5) Directory environment missing

Reason: .The "Directory" environment variable is missing from the NOTES.INI file and there is no NOTES_DATA_DIRECTORY environment variable.

Action: .Set the NOTES_DATA_DIRECTORY environment variable to the main Domino data directory.

PC10179E (NotesR5) TRANSLOG_Path environment missing

Reason: .The "TRANSLOG_Path" environment variable is missing from the NOTES.INI file or the environment.

Action: .Set the TRANSLOG_Path environment variable.

PC10180E (NotesR5) No transaction logs found

Reason: .

Action: .Contact FDR/UPSTREAM Tech Support.

PC10181E (NotesR5) Non log requires a destination

Reason: .An active log or notes.ini file is backed up to a pseudo directory (a made up name). You must specify a proper destination. Note that active logs or the notes.ini file should only be restored in the event of a disaster.

Action: .Respecify.

PC10182E (NotesR5) notes.ini not found in USNOTESINI

Reason: .The USNOTESINI environment variable was set, but the notes.ini file was not found there.

Action: .Properly specify USNOTESINI.

PC10183E (NotesR5) notesini not found

Reason: Since you specified a log file backup, UPSTREAM attempts to locate the notes.ini file. It looked for the USNOTESINI environment variable, it looked in the "Directory" notes environment variable, and it looked in the directory above that variable but was still unable to find the file.

Action: Specify USNOTESINI in your job stream or as an environment variable pointing to the fully qualified file name of the notes.ini file.

PC10184E (NotesR5) Error creating Notes archive file

Reason: There was an error creating the file used to hold the last backup archived.

Action: See additional messages.

PC10185E (NotesR5) Error opening Notes archive file

Reason: There was an error opening the file used to hold the last backup archived.

Action: See additional messages.

PC10186E (NotesR5) Error writing Notes archive file

Reason: There was an error writing to the file used to hold the last backup archived.

Action: See additional messages.

PC10187E (NotesR5) Error reading Notes archive file

Reason: There was an error reading the file used to hold the last backup archived.

Action: See additional messages.

PC10188I (NotesR5) Archive file not found.

Reason: UPSTREAM keeps track of the last archived log file in the following name. If UPSTREAM has yet to archive a log file, this is a normal message; otherwise this is an error and extra log files may be backed up.

Action: None

PC10189E (NotesR5) LOGBACKUPPROFILE bad.

Reason: The LOGBACKUPPROFILE Notes R5 PlugIn parameter is an override for the backup profile if you are using multiple copies of UPSTREAM for your backups and the log file is backed up in another spec. This must follow the backup profile rules.

Action: Respecify.

PC10190D (NotesR5) User requested manual log restore

Reason: The user specified the USNOTESALLOWLOGRESTORE environment variable which allows an archive log to be restored. Normally, these are only restored when Notes requests them and then it is automatic.

Action: None

PC10191I (NotesR5) Error opening to check DBIID

Reason: There was an error opening a database to check it's DBIID to determine if the file had changed.

Action: UPSTREAM will attempt to include it in the backup.

PC10192I (NotesR5) Error opening DBIID file for read

Reason: There was an error opening the UPSTREAM database's DBIID file.

Action: See additional messages.

PC10193I (NotesR5) Error opening DBIID file for write

Reason: There was an error opening the UPSTREAM database's DBIID file.

Action: See additional messages.

PC10194I (NotesR5) Error reading DBIID file

Reason: There was an error reading the UPSTREAM database's DBIID file.

Action: See additional messages.

PC10195I (NotesR5) Error writing DBIID file

Reason: There was an error reading the UPSTREAM database's DBIID file.

Action: See additional messages.

PC10196I (NotesR5) No prior logged backup for %s - it will be backed up now

Reason: The DBIID file was not found for this database. This is generally because this is a non-logged database. The database will now be backed up.

Action: None

PC10197I (NotesR5) Error opening database to check DBIID

Reason: There was a Notes error opening the database to check the DBIID to determine if the database needs to be fully backed up. Thus, the full database will be backed up.

Action: None

PC10198I (NotesR5) Error getting log info checking DBIID

Reason: There was a Notes error retrieving the log info for a database. Thus the full database will be backed up.

Action: None

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