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# Unicenter

## TCPaccess Telnet Server Getting Started

Version 6.0



**Computer Associates**  
The Software That Manages eBusiness



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# Contents

## Chapter 1: Introduction

Telnet Server Features .....	1-2
Related Documentation.....	1-3
CA Services: Enabling Solutions Through Experience .....	1-4
CA Education Services .....	1-4
Computer Associates: The Software That Manages eBusiness .....	1-5
For More Information.....	1-5

## Chapter 2: CA Common Services for z/OS and OS/390

CAIRIM .....	2-1
CA LMP.....	2-2
Requirements.....	2-2
Using CA LMP .....	2-3

## Chapter 3: System Requirements

Installation Materials.....	3-1
Installation Prerequisites .....	3-2
z/OS and OS/390 / ESA Release Level .....	3-2
PDSE/SMS Requirements .....	3-2
APF Authorizations.....	3-3
Callable System Services Library and Language Environment .....	3-3

---

## Chapter 4: Installation

Sample JCL to Unload the Tape.....	4-1
Installation Job Streams .....	4-2
Installation Steps.....	4-3

## Chapter 5: Customization

Configuring the TN3270E Server .....	5-1
--------------------------------------	-----

## Chapter 6: Diagnosis and Problem Reporting

Obtaining a SVC Dump .....	6-1
Obtaining JCL Output.....	6-2

## Appendix A: Installation Data Sets

## Index

# Introduction

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**Welcome to Telnet!** This is the first release of Unicenter TCPAccess Telnet Server. It provides you with a performance product that runs regardless of which IP protocol stack you have chosen – CA Unicenter TCPAccess Communications Server or IBM’s Communication Server IP.

Computer Associates values the unique qualities of Unicenter TCPAccess Telnet Server and its uncoupling from its traditional Unicenter TCPAccess Communications Server base means that Computer Associates can accelerate its development with frequent new releases, in response to your requirements, independent of transport layer enhancements.

Unicenter TCPAccess Telnet Server provides support for TN3270E sessions including printers, enabling installations to attach a printer directly to a Telnet session or application, with minimal virtual storage overheads. This new release offers SSL support to secure your sessions across the Internet. When integrated with Computer Associates Unicenter NetSpy Network Performance, a true measurement of response time is also possible. Unicenter TCPAccess Telnet Server is a natural choice for your telnet requirements when performance is a key differentiator.

## Telnet Server Features

Features include:

- SSL support.
- Use of UNIX System Services sockets.
- Provides verified RTM statistics to the Unicenter NetSpy Network Performance and also to Unicenter NetMaster Network Management for TCP/IP for true response time measurement.
- Supports the full TN3270E protocol (as defined in RFC2355 and its extensions), including TN3270E printer support.
- Response time metrics are captured to a data space. Computer Associates Unicenter TCPaccess Communications Server via a NETSTAT TELNET command can be used to query the response time data on a session level.

For information on using the NETSTAT commands see the *Unicenter TCPaccess Communications Server Systems Management Guide*.

- SMF record subtype 23 is expanded for the TN3270E server to include more information, including response time figures.

For details see the *Telnet Server System Management Guide*.

- An SMF exit point is defined to allow a user exit program to be called when an SMF record is about to be written by Unicenter TCPaccess Telnet Server.
- An SMF user exit point is available with the TN3270E.

For details, read the *Unicenter TCPaccess Telnet Server Planning Guide*. See the *Unicenter TCPaccess Telnet Server*

*Customization Guide* for information on configuring user exit programs.

## Related Documentation

With Unicenter TCPaccess Telnet Server, Computer Associates distributes a CA Common Services for z/OS and OS/390 (formerly known as Unicenter TNG Framework for OS/390 or CA90s) tape and the following guides:

Name	Contents
<i>CA Common Services for z/OS and OS/390 Administrator Guide</i>	Operating instructions for the CA Common Services for z/OS and OS/390.
<i>CA Common Services for z/OS and OS/390 Getting Started</i>	Installation procedures and installation JCL for CA Common Services for z/OS and OS/390.
<i>CA Message Guide</i>	Messages and codes for CA Common Services for z/OS and OS/390

### Unicenter TCPaccess Telnet Server Documentation

With Unicenter TCPaccess Telnet Server, Computer Associates distributes the following guides:

- *Release Summary*
- *Getting Started*
- *Planning Guide*
- *Customization Guide*
- *System Management Guide*

In addition, you will receive the *Unicenter TCPaccess Communications Server Prefixed Messages* and *Unicenter TCPaccess Communications Server Unprefixed Messages* guides.

## CA Services: Enabling Solutions Through Experience

When it comes to getting on the information fast track, CA Services can recommend and install a full suite of portal and knowledge management solutions to keep your business moving. And our associates offer the proprietary know-how on custom-fitting your enterprise for solutions ranging from life cycle management, data warehousing, and next-level business intelligence. Our experts will leave you with the technology and knowledge tools to fully collect, exploit, and leverage your data resources and applications.

## CA Education Services

Computer Associates Global Education Services (CA Education) offerings include instructor-led and computer-based training, product certification programs, third-party education programs, distance learning, and software simulation. These services help to expand the knowledge base so companies are better able to use CA's products more efficiently, contributing to their greater success. CA Education has been developed to assist today's technologists in everything from understanding product capabilities to implementation and quality performance. Because the vast community of education seekers is varied, so too are CA's methods of instruction. CA Education is committed to provide a variety of alternatives to traditional instructor-led training, including synchronous and asynchronous distance learning, as well as Unicenter simulation.

For training that must be extended to a wider audience-for a fraction of the cost and logistical hassle of sending everybody away to a class—CA Education offers excellent distance learning options.

## Computer Associates: The Software That Manages eBusiness

The next generation of eBusiness promises unlimited opportunities by leveraging existing business infrastructures and adopting new technologies. At the same time, extremely complicated management presents challenges – from managing the computing devices to integrating and managing the applications, data, and business processes within and across organizational boundaries. Look to CA for the answers. CA has the solutions available to help eBusinesses address these important issues. Through industry-leading eBusiness Process Management, eBusiness Information Management, and eBusiness Infrastructure Management offerings, CA delivers the only comprehensive, state-of-the-art solutions, serving all stakeholders in this extended global economy.

### For More Information

After walking through this *Getting Started* guide, you can refer to the numerous resources available to you for additional information. Your product CD contains useful instructional documents that showcase your software and provide detailed explanations about the product's comprehensive, feature-rich components. In addition, the online help system at [eSupport.ca.com](http://eSupport.ca.com) offers procedural information and answers to any questions you may encounter.



# CA Common Services for z/OS and OS/390

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To help you quickly understand all that CA Common Services for z/OS and OS/390 offers, this section provides a brief description of the common services that can be used by the Unicenter TCPaccess Telnet Server.

## CAIRIM

CAIRIM, CAI Resource Initialization Manager, is the common driver for a collection of dynamic initialization routines that eliminate the need for user SVCs, SMF exits, subsystems, and other installation requirements commonly encountered when installing systems software. These routines are grouped under the Computer Associates z/OS and OS/390 dynamic service code, S910. Some of the features of CAIRIM include:

- Obtaining SMF data
- Verification of proper software installation
- Installation of z/OS and OS/390 interfaces
- Automatic startup of CA and other vendor products
- Proper timing and order of initialization

No other services are required to operate properly.

**Note:** CAIRIM is mandatory for Unicenter TCPaccess Telnet Server. It must be installed and started with Unicenter TCPaccess Telnet Server within 30 minutes of IPL time. CAIRIM is part of the CA Common Services for z/OS and OS/390.

## CA LMP

The CA License Management Program (LMP) provides a standardized and automated approach to the tracking of licensed software. It uses common realtime enforcement software to validate the user's configuration. CA LMP reports on license, usage, and financial activities of Unicenter TCPaccess Telnet Server. The routines that accomplish this are integrated into the Computer Associates z/OS and OS/390 dynamic service code, S910 (the CAIRIM service).

Some of the features of CA LMP include:

- Common key data set can be shared among many CPUs
- *Check digits* are used to detect errors in transcribing key information
- Execution keys can be entered without affecting any CA software solution already running
- No special maintenance requirements

## Requirements

Unicenter TCPaccess Telnet Server requires CA Common Services for z/OS and OS/390 at genlevel 9901 or above, and OS2.10

## Using CA LMP

Unicenter TCPaccess Telnet Server requires CA LMP (License Management Program), one of the Common Services, to initialize correctly. CA LMP also provides a standardized and automated approach to the tracking of licensed software.

CA LMP is provided as an integral part of CAIRIM (Resource Initialization Manager), another one of the Common Services. If CAIRIM has not already been installed on your system, you must do so now. Once CAIRIM has been installed or maintained at Service Level C1/9901 or higher, CA LMP support is available for all CA LMP–supported CA software solutions. See the *CA Common Services for z/OS and OS/390 Getting Started* guide for detailed instructions on installing CAIRIM.

Examine the CA LMP Key Certificate you received with your Unicenter TCPaccess Telnet Server installation or maintenance tape.

The certificate contains the following information:

Fields	Descriptions
Product Name	The trademarked or registered name of the CA software solution licensed for the designated site and CPUs.
Product Code	A two–character code that corresponds to Unicenter TCPaccess Telnet Server.
Supplement	The reference number of your license for Unicenter TCPaccess Telnet Server, in the format <i>nnnnnnn – nnn</i> . This format differs slightly inside and outside North America, and in some cases may not be provided at all.
CPU ID	The code that identifies the specific CPU for which installation of Unicenter TCPaccess Telnet Server is valid.

<b>Fields</b>	<b>Descriptions</b>
Execution Key	An encrypted code required by CA LMP for Unicenter TCPaccess Telnet Server initialization. During installation, it is referred to as the LMP Code.
Expiration Date	The date ( <i>ddmmyy</i> as in 01AUG00) your license for Unicenter TCPaccess Telnet Server expires.
Technical Contact	The name of the technical contact at your site responsible for the installation and maintenance of Unicenter TCPaccess Telnet Server. This is the person to whom CA addresses all CA LMP correspondence.
MIS Director	The name of the Director of MIS, or the person who performs that function at your site. If the title but not the individual's name is indicated on the Certificate, you should supply the actual name when correcting and verifying the Certificate.
CPU Location	The address of the building where the CPU is installed.

The CA LMP execution key, provided on the Key Certificate, must be added to the CAIRIM parameters to ensure proper initialization of Unicenter TCPaccess Telnet Server. To define a CA LMP execution key to the CAIRIM parameters, modify member KEYS in the OPTLIB data set.

The parameter structure for member KEYS is as follows:

```
PROD(pp) DATE(ddmmyy) CPU(ttt-mmm/ sssss)
LMPCODE(kkkkkkkkkkkkkkk)
```

Where:

**pp** – Required. The two-character product code. For any given CA LMP software solution, this code agrees with the product code already in use by the CAIRIM initialization parameters for earlier genlevels of that software solution.

The two-character product code for Unicenter TCPAccess Telnet Server is: **2F**

*ddmmmyy* – The CA LMP licensing agreement expiration date.

*ttt – mmmm* – Required. The CPU type and model (for example: 3090 – 600) on which the CA LMP software solution is to run. If the CPU type and/or model require less than four characters, blank spaces are inserted for the unused characters.

*sssss* – Required. The serial number of the CPU on which the CA LMP software solution is to run.

*kkkkkkkkkkkkkkk* – Required. The execution key needed to run the CA LMP software solution. This CA LMP execution key is provided on the Key Certificate shipped with each CA LMP software solution.

The following is an example of a control card for the CA LMP execution software parameter. Although this example uses the Unicenter TCPAccess Telnet Server two-character product code, the CA LMP execution key value is invalid and is provided as an example only!

```
PROD(VP) DATE(01AUG00) CPU(3090 – — 600 /370623)  
LMPCODE(52H2K06130Z7RZD6)
```

For a full description of the procedure for defining the CA LMP execution key to the CAIRIM parameters, see the *CA Common Services for z/OS and OS/390 Getting Started* guide.



# System Requirements

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This section provides a brief overview of the requirements necessary for installing Unicenter TCPaccess Telnet Server using SMP/E. This information is provided for planning

It contains the following sections:

- [Installation Materials](#)
- [Installation Prerequisites](#)

Detailed information about security modifications is outlined in the *Planning Guide*.

## Installation Materials

Before beginning the installation procedure, make sure that you have the following Unicenter TCPaccess installation materials:

- The installation tape – the volume serial number is specified on the PML (product maintenance letter) received with the installation package
- The CA Common Services for z/OS and OS/390 tape and documentation
- The documentation list described in the chapter “Introduction”

## Installation Prerequisites

### z/OS and OS/390 / ESA Release Level

Unicenter TCPaccess Telnet Server requires an IBM supported release of OS/390 or z/OS. Contact Customer Support to verify that your system is at the correct supported level.

MVS/SP and MVS/ESA releases are not supported.

### PDSE/SMS Requirements

The Unicenter TCPaccess Telnet Server requires PDSE libraries. The installation jobs, ALLOCSMP and ALLOCTEL include a symbolic of SMSCLAS. This symbolic represents the SMS storage class and is used to allocate the PDSE libraries.

The following data sets are defined as PDSEs:

ALLOCTEL – TLNLOAD and ATLNLOAD  
ALLOCSMP – SMPLTS

#### **Note:**

- Support for non-SMS PDSEs is provided in DFSMS/MVS 1.4 and 1.5 with the appropriate maintenance applied. It is in the base of DFSMS 2.10. If you want to use non-SMS PDSEs replace STORCLAS with the UNIT= and VOL=SER= parameters.
- Some maintenance levels of data set utilities such as PDSMAN do not support PDSEs. If you are using such a product, be sure that it supports PDSEs or use the standard IBM IEBCOPY utility.

## APF Authorizations

The following libraries must be APF authorized:

*hlq*.LOAD      TCPaccess program library

*hlq*.LINK      TCPaccess client commands

*hlq*.TLNLOAD   Telnet Server program library\*

Other APF authorized libraries that must be available either through linked list or STEPLIBs for the Telnet SSL Server are: CEE.SCEERUN, GSK.SGSKLOAD and CBC.SCLBDLL.

## Callable System Services Library and Language Environment

You must have the Callable System Services library, SYS1.CSSLIB, available for the installation. Modules from this library are linked with Unicenter TCPaccess Telnet Server for USS support.

IBM's Language Environment link-time libraries, CEE.SCEELKED, CEE.SCEELKEX, CEE.SCEELPP and CBC.SCLBSID are now also required SMP/E data sets used by the CALLLIB facility.

***Important!*** *Unicenter TCPaccess Telnet Server will not install properly without these libraries.*



This chapter describes the steps to install Unicenter TCPaccess Telnet Server.

The following topics are discussed in this chapter:

- [Sample JCL to Unload the Tape](#)
- [Installation Job Streams](#)
- [Installation Steps](#)

## Sample JCL to Unload the Tape

**Important!** In order to install Unicenter TCPaccess Telnet Server, you must have READ access to the data sets on the installation tape. A list of these data sets is provided in the appendix "Installation Data Sets."

Copy and execute the JCL below to unload the control file from which you will be able to install and customize Unicenter TCPaccess Telnet Server. This control file, INSTJCL, is on your base tape.

```
//UNLDTCP JOB (TCPaccess), 'UNLOAD TCP SAMP',MSGCLASS=X
//*
//UNLOAD EXEC PGM=IEBCOPY
//INDD DD DISP=SHR,DSN=INSTLJCL,VOL=SER=NMD600,
// LABEL=(1,SL,EXPDT=980000),UNIT=UNITNAME
//OUTDD DD DSN=trgindx.CNTL,DISP=(NEW,CATLG,DELETE),
// VOL=SER=trgvol,SPACE=(TRK,(30,2,25)),UNIT=trgunit,
// DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=6160)
//SYSPRINT DD SYSOUT=holdcl
//SYSIN DD *
COPY INDD=((INDD,R)),OUTDD=OUTDD
```

## Installation Job Streams

The following Unicenter TCPaccess components are on the tape:

- Unicenter TCPaccess Communications Server
- Unicenter TCPaccess Telnet Server
- Unicenter TCPaccess FTP Server

The supplied job streams to install the Unicenter TCPaccess Telnet Server are as follows:

ALLOCSMP	Creates and defines the data sets necessary to set up an SMP environment.
ALLOCSHR	Creates and defines the data sets that are shared by the three products.
ALLOCTEL	Creates and defines the data sets needed to install the Telnet Server.
INSTSMPR	Runs the SMPE steps necessary to receive the products and associated maintenance from the tape.
INSTSMPA	Runs the SMPE steps necessary to apply and accept the products and apply the associated maintenance.

Additional system and language environment libraries are required for the installation process and DDdef statements for them are included in the JCL streams.

Check the naming conventions at your site and use the following chart to determine where they are defined.

Allocation Job	CSSLIB	SCEELKED	SCEELKEX	SCEECPP	SCLSID
ALLOCSMP					
ALLOCSHR		X			
ALLOCTEL	X		X	X	X

## Installation Steps

Member names referenced in the following instructions are located in the CNTL file that you loaded onto your system in the previous JCL.

1. Edit the symbolics, shown at the top of each JCL stream, to be consistent with the naming conventions of your site

You can edit the data set names in the following steps manually or you can use TCPNAMES, an edit macro supplied with Unicenter TCPaccess. To use TCPNAMES, copy the TCPNAMES member to a data set listed in the SYSPROC concatenation of your TSO logon procedure. Modify the JOBCARD member for TCPNAMES to use. The LNKINDX data set is allocated as a SYS1 data set if TCPNAMES is used.

### Note:

- For the link data set to be link listed, it must be catalogued in the master catalog.
- If you would like all data sets to be SMS controlled, make the following global changes:

All ALLOC jobs—'C ALL VOL=SER STORCLAS'

For ALLOCSMP—'C ALL VOLUME( STORCLAS(

Substitute the SMS storage class for all occurrences of SMPVOL, TRGVOL, DSTVOL and TLBVOL.

2. Verify that there is adequate space on the volume you have specified. Unicenter TCPaccess Telnet Server requires 190 cylinders of DASD.

**Note:** For the link data set to be link listed, it must be catalogued in the master catalog.

3. Execute ALLOCSMP to allocate the data sets for the SMP/E install.

**WARNING!** Unicenter TCPaccess Telnet Server 1.0 must be installed into a new CSI

4. Execute ALLOCSHR to allocate the SMP/E data sets shared by all products.
5. Execute ALLOCTEL.
6. Execute INSTSMR to RECEIVE products and associated maintenance.

- SMP/E requires a six MB region to install Unicenter TCPaccess Telnet server. If you are using a tape management system such as CA1, you must modify the label parameter on your DD statements to include EXPDT=98000.

LABEL=(2,SL,,EXPDT=98000)

- The INSTSMR job as distributed includes the FMIDs for all products. There are no changes required if all products are to be installed.

**Note:** To selectively install one or more of the products you must modify the job to include only the desired FMIDs.

The INSTSMR job as distributed includes the FMIDs for all products.

The FMIDs required for the Telnet Server are as follows:

C2E600I            C2E600X

C2E600S            C2C6000

C2E600T

7. Execute INSTSMPA to APPLY and ACCEPT the base product and to APPLY the associated maintenance.

The following DD statement is required if the Telnet Server is installed.

```
//GSKSSL DD PATH='/usr/lib/GSKSSL.x',  
// PATHOPTS=ORDONLY
```

**WARNING!** *The above path name is case-sensitive.*

It contains IMPORT statements that are used by the Binder during the APPLY step to resolve external references to Dynamic Link Library (DLL) functions. The PATH name specified is the IBM installed one. Modify it if you have changed the name at your site.

8. Get the latest maintenance.

Apply the latest maintenance prior to beginning any customization, as configuration files or parameters may have changed.

Check for the most recent PTFs via StarTCC by using the following URL: <http://support.ca.com/>

**Note:** If there are no applicable PTFs, the installation is complete and you can skip the remaining steps.

From the left panel, select StarTCC.

If you are not registered, you **must** perform the following steps:

- a. Select StarTCC Registration (required first time only).

**Note:** If you are registered, skip to c.

The registration screen appears. You must complete and submit this form to register for Total Client Care (TCC) via the Internet.

You must have your Site ID and PIN Number to complete the registration. Your Site ID and PIN Number will be associated with your new user ID. CA-TCC gives you access to additional services based on your site's licensed products.

- b. Once you fill out the information, you will be sent a confirming email notice.
- c. Once you have registered, select the path to Registered Clients Only.
- d. Enter your user ID and password on the dropdown panel.
- e. The StarTCC Solution Download main menu appears. Note the new item notification at the bottom of the screen regarding proper handling of solution downloads. This gives you detailed information of the actual download process.

***Important!*** *If you have problems with the StarTCC download process, contact Customer Support or your Customer Relationship Manager.*

- f. Select BROWSE/DOWNLOAD SOLUTIONS.
- g. Select PRODUCT AND RELEASE Search type. Then select the correct product.
  - For this product, choose:  
NTELNT-UNICENTER TCPACCESS TELNET  
SERVER
  - Select Release 6.0 and press SELECT at the bottom of the panel
- h. A panel should be presented showing all of the PTFs for this release.

You can check multiple SELECT boxes, press the UPDATE STARTCC SOLUTION CART at the bottom of the screen, and then download a ZIP file containing all the PTFs you have selected.

9. Review the latest HOLDDATA.

To get the latest HOLDDATA, go to the StarTCC database on the Web site located at <http://support.ca.com/> and download the \$\$HOLD.BIN file.

The file can be found in Solution 3, APAR QO20643, of NTCPAC - UNICENTER TCPACCESS COMMUNICATIONS SERVER, Release 6.0. Instructions for accessing the StarTCC database are included in Step 9.

This file HOLDDATA contains hold information for any PTFs that may have been PE'd.

There are two file formats:

- \$\$HOLD.VIEW (PART2 of the solution) is in ASCII format and can be viewed online
- \$\$HOLD.BIN (PART3) is in binary (EBCDIC) format and must be transferred to the mainframe in binary

10. Execute SRVPAC.

Before executing this job:

- Modify the SMPPTFIN DD statement to point to the DASD data set containing the PTFs. It must be a sequential file.
- Modify the SMPHOLD DD statement to point to the DASD data set containing the HOLDDATA. If there is no hold data, set the DD to DUMMY.

You may submit only the RECEIVE portion of this job first. This enables you to review any held PTFs, especially any with HOLD ACTION that may appear, and take appropriate action. It will also let you add additional BYPASS HOLD keywords to your APPLY statement.



# Customization

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You will need to customize the configuration files for Unicenter TCPAccess Telnet Server for your network. Refer to the *Customization Guide* for complete information.

## Configuring the TN3270E Server

The APPCFGTN member supplied in the .PARM library is configured for TN3270E on port 23 and SSL on ports 1023 and 1123, which AUTOLOG to TSO.

You need to consider updating the following:

- Update one or both of sample KEYRING statements supplied for a keyring created via SAF or a pair of HFS-defined pathnames.
- If you do **not** intend for Unicenter TCPAccess Telnet Server to communicate over all active CINET IP stacks, you need to code the PROVIDER(name) keyword on the TNGLOBAL statement. See the *Customization Guide* for details.

**Note:** A parameter is available on the TERMPROF statement to allow specification of logmodenames for TN3270E device types. The LUPOOL statement allows association of TN3270E printer LUs with their terminal LU counterparts. See the *Customization Guide* for details.



# Diagnosis and Problem Reporting

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Generally, Customer Support needs the following documentation to help diagnose problems thoroughly:

- SVC dump of the Unicenter TCPaccess Telnet Server and other related address spaces
- JCL output of the Unicenter TCPaccess Telnet Server job
- Case record from Customer Support

Refer to the *System Management Guide* for a complete description of diagnostic tools.

## Obtaining a SVC Dump

Read the IBM document *MVS/ESA System Commands Reference Summary* for the syntax of the required DUMP commands. In particular, include all jobs involved in the problem using the JOBNAME parameter of the DUMP command.

## Obtaining JCL Output

Copy the JCL output of RUNTLN to a file using the following procedure:

- If you are using JES2/SDSF, type **XDC** next to the job listed in SDSF and follow the panel instructions. This will let you copy to a data set of your choice. Generally, for every thousand lines of job output you need three 3390 tracks.
- If you are using JES3, you may use FLASHER or a similar product to copy the RUNTLN output to a data set in a similar fashion.

# Installation Data Sets

The following is a list of installation tape data sets.

File Number	Data Set Name
1	INSTLJCL
2	SMPMCS
3	C196000.F1
4	C196000.F2
5	C196000.F3
6	C196000.F4
7	C2C6000.F1
8	C2C6000.F2
9	C2C6000.F3
10	C2C6000.F4
11	C2E600C.F1
12	C2E600C.F2
13	C2E600I.F1
14	C2E600I.F2
15	C2E600I.F3
16	C2E600I.F4
17	C2E600S.F1

<b>File Number</b>	<b>Data Set Name</b>
18	C2E600S.F2
19	C2E600S.F3
20	C2E600S.F4
21	C2E600S.F5
22	C2E600T.F1
23	C2E600T.F2
24	C2E600T.F3
25	C2E600T.F4
26	C2E600X.F1
27	C2E600X.F2
28	C2E600X.F3
29	C2E600X.F4
30	C2E6000.F1
31	C2E6000.F2
32	C2E6000.F3
33	C2E6000.F4
34	C2E6000.F5
35	C2E6000.F6
36	C2E6000.F7
37	C2E6000.F8
38	C2E6000.F9
39	C2E6000.F10
40	C2E6000.F11
41	C2E6000.F12
42	C2E6000.F13

<b>File Number</b>	<b>Data Set Name</b>
43	C2E6000.F14
44	C2E6000.F15
45	C2F1000.F1
46	C2F1000.F2
47	C2F1000.F3
48	C2F1000.F4
49	C2F1000.F5
50	SMPPTFIN



# Index

## A

---

APF authorizations, 3-3

## C

---

CA Common Services for z/OS and OS/390, CA LMP, 2-3

CA Common Services for z/OS and OS/390

CA LMP, 2-2

CAIRIM, 2-1

CA LMP, 2-2

CAIRIM, 2-1

callable system services library, 3-3

## D

---

diagnosis and problem reporting, 6-1

## G

---

getting JCL output for problem reporting, 6-2

## I

---

installation

job streams, 4-2

materials, 3-1

steps, 4-3

INSTLJCL control file, 4-1

## J

---

JCL output for problem reporting, 6-2

JCL to unload the tape, 4-1

job streams, installation, 4-2

## L

---

license management program, 2-3

## P

---

problem reporting, 6-1, 6-2

---

## S

---

SMS requirements, 3-2

software prerequisites, 3-2

## U

---

unloading the product tape, JCL, 4-1





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