VSE Installation

The installation steps described in this chapter must be followed in sequence in order to install Com-plete successfully. You are recommended to use the provided examples up to successful initialization in order to ensure that the installation was successful. Once a functional system is available, you can start customizing the product as required.

All sample JCL referred to in the installation steps is illustrated in*VSE Sample JCL*.

This document covers the following topics:

- The Installation Tape
- Installation Steps
- Startup Procedure
- What Next?

The Installation Tape

Tape Contents

The installation tape is created using IBM standard labels with volume serial number COM*vrs*. The tape can be ordered in any format supported by Software AG.

File Nr.	File Name	Description / Remarks
1	SMT111.TABS	SMA tables
2	COMvrs.BASE	System file
3	COMvrs.USER	User ID file
4	COMvrs.CTLG	Catalog file
5	COMvrs.NS22	NSPOOL INPL data set
6	COMvrs.CBLK	Com-plete control block listings
7	COMvrs.LIBR	Library data set in LIBR backup format. Rewind the tape and use the number in the first column to operate the tape using the statement // MTC FSF ...
8	APSvrs.LIBR	Library data set in LIBR backup format. Rewind the tape and use the number in the first column to operate the tape using the statement // MTC FSF ...
9	APSvrs.Lnnn	Most current patch level of APSvrs.LIBR
10	HTPvrs.LIBR	Library data set in LIBR backup format. Rewind the tape and use the number in the first column to operate the tape using the statement // MTC FSF ...
11	HTPvrs.INPL	HTTP server INPL data set
12	HTPvrs.UPDW	Natural Web Interface update INPL data set
13	HTPvrs.Lnnn	Most current patch level of HTPvrsLIBR
14	HTPvrs.Inn	Most current patch level of HTPvrsINPL

Notes:

1. The files may not be on the installation tape in the order shown above: please consult the report of your tape creation system.
2. The notation *vrs* stands for current version, release and maintenance level.

Copying Contents of the Tape to Disk

Step 1: Unload the Tape

- Copy the files on the installation tape to disk using the LIBR utility for the Com-plete library. Refer to *VSE Sample JCL* for sample JCL (JCLINST1).

  Check for a README file on the delivered source. If a README file exists, it may contain important information concerning the installation and migration procedure.

Note:
Restore of the APSvrs.LIBR dataset is mandatory for Com-plete 6.2.

Installation Steps

Step 1: Create the Com-plete User Data library

- The SAGLIB.COMUSER library contains installation-dependent modules and user programs. This sublibrary is recommended, since future maintenance to the system may replace the private distribution libraries completely, thereby destroying any user modules in that library.

  Create the library using the sample job JCLINST2 (Sublib=SAGLIB.COMUSER).

Step 2: Allocate and Initialize the Com-plete VSAM System Data Containers

- Only for a new installation or for an upgrade from a version*lower*than 4.6.:

  Allocate, initialize and load the Com-plete system information data sets by modifying sample job JCLINST4 to reflect appropriate size and placement of the files. Please refer to the description of using VSAM in the Com-plete System Programming documentation for more information on this VSAM file.

Step 3: Allocate and Initialize the Capture Data Set(s)

- Required only if capture is used at your installation.

  Com-plete capture data sets are defined as VSAM data sets in the current version. Sample job JCLINST5 provides JCL to allocate and initialize two capture data sets. You must modify the job to reflect appropriate size and placement of the capture data sets.

  Note:
  In VSE, the Com-plete account records (SMF-records) are written to the capture data set.

Step 4: Allocate and Initialize the Com-plete SD Dataset

- The Com-plete SD dataset must be defined as a VSAM dataset in the current version. For detailed information on this file, please refer to the description of using VSAM in the Com-plete System Programming documentation. To allocate and initialize the SD dataset, modify sample job JCLINST6 to reflect your requirements and run this job.

Step 5: Allocate and Initialize the Com-plete VSAM Spool Data Set

- Required.

  The Com-plete spool data set reside on a VSAM file. To allocate and initialize this file, modify sample job JCLINST7 to reflect appropriate size and placement of the data set. Then run the job.

Step 6: Allocate and Initialize the Com-plete Dump File

- Required.

The Com-plete Dump File data set must be defined as a VSAM dataset. For detailed information on this file, refer to the Com-plete System Programming documentation. To allocate and initialize the Dump File dataset, modify sample job JCLINST8 to your requirements and run the job.

Step 7: Update VTAM Definitions

- Required only if the Com-plete interface with VTAM is to be used.

  To enable the Com-plete VTAM interface, you must define an ACB to VTAM in the PRD2.CONFIG data set (MEMBER=VTMAPPL.B). The following sample definition generates an ACB called "COM46" with the necessary privileges for Com-plete:

```
                VBUILD TYPE=APPL
COM46   APPL         AUTH=(ACQ,PASS)
```

  To use this feature, you must specify the Com-plete system parameter =COM46.

  Please refer to VTAM documentation for more information.

Step 8: Install the Com-plete Batch Online Interface

Required.

The Com-plete BATCH utilities and migration jobs require ACCESS when performing some or all of their functions.

Batch applications that use Com-plete services communicate with the target Com-plete via ACCESS. This communication is based on an Adabas SVC (ACCESS SVC) and a DBID (ACCESS NODE ID).

The Com-plete BATCH interface module loads a module with name ACSTAB and search this module for an entry name BATCH.

1. Modify the sample ACSTAB module on the source data set to reflect the system requirements for SVC and NODE ID.

2. Assemble and linkedit the module into the SUB=SAGLIB.COMUSER library. Modify sample job JCLINSTF to do this.

   Note that the DBID chosen may be greater than 255 and that the value of both DBID and SVC must correspond to the values of ACCESS-ID and ACCESS-SVC specified in the SYSPARM member.

Step 9: Set the Com-plete System Parameters (SYSPARM)

- Sample job JOBCOM61 contains a set of Com-plete parameters called SYSPARM. Copy them to the library SAGLIB.COMUSER and ensure that the following parameters reflect your installation requirements:

PATCHAR	Choose a unique single character value for your installation.
VTAMAPPL	Must be changed to the ACB name you have set up in installation step **Update VTAM Definitions**.
ACCESS-SVC	Must be set to the Adabas SVC number (see installation step **Install the Com-plete Batch Online Interface**).
ACCESS-ID	Must be set to the database ID (see installation step **Install the Com-plete Batch Online Interface**).

The following two statements are mandatory in Com-plete 6.2:

```
SERVER=(OPERATOR,TLINOPER,TLSPOPER)
SERVER=(COMPLETE,TLINCOMP)
```

The SERVER statements for Console, Natural and Power must be put after the Com-plete server.

Step 10: Assemble and Link the Adabas Link Module

This module is delivered in source format as ADALCO on the Adabas distribution libraries. It must be assembled and linked in the dataset SAGLIB.COMUSER.

The following source update must be applied if you have an Adabas version below 6.2.

1. In the WAIT subroutine, change the statement:

   BP GOTWAIT to
   BNZ GOTWAIT

2. In the WAIT subroutine, add the following lines after the statement
   BNZ GOTWAIT
   SPACE:

```
*                        new statements
*    SET OS-WAIT FLAG IN ECB
*
      IPK    ,             GET CALLERS KEY
      SPKA   0             SET KEY ZERO
      OI     0(R1),X'80'   SET OS-WAIT FLAG
      SPKA   0(R2)         BACK TO USER'S KEY
*                        end of new statements
```

If the Adabas SVC is running in AMODE 31, link ADALCO in AMODE 31:

```
// EXEC LNKEDT,PARM='AMODE=31'
```

If the Adabas SVC is running in AMODE 24, then the ADALCO module must also be linked in AMODE 24 and the following source updates must be applied (in this case, the thread extension cannot be used):

3. At Label EXIT:

   change the return via:

```
BR     RE    to   DC  XL2'0B0E'   =  BSM  R0,RE
```

4. In the GOTWAIT subroutine, change the branch to the wait routine:

```
BALR   RE,RF to   DC  XL2'0CEF'   =  BASSM RE,RF
```

Step 11: Install the Com-plete High Level Language Interface

- Optional.

  Applications that use Com-plete functions must be linked with the Com-plete high level language interface modules. These modules provide a standard interface between the application and Com-plete.

  These modules are provided on the supplied load data set. If you are migrating from a previous version of Com-plete, some applications may need to be relinked with the new version of the HLLI modules. For details, see **Migration**.

Step 12: Install the UDEBUG Environment

Optional.

Com-plete provides an online debugging utility (UDEBUG). In order to establish the working environment, proceed as follows:

1. Allocate two UDEBUG profile and symbol datasets by running job JCLINST1 and include these datasets in the Com-plete startup procedure.

2. Include the list of required UDEBUG residentpage modules in your SYSPARM member. A list of these modules is given in member DBUGSAMP in the supplied source datasets.

   The UDEBUG facility is described in detail in the Utilities documentation.

Step 13: Installing the Extended Console Server (UQ M Function)

- Specify a SERVER sysparm for the Console Server:

  ### Syntax:

```
SERVER=(name,TLINCONS,slots,consname,hcset)
```

  where:

name	is a unique server name within Com-plete
TLINCONS	is the name of the server initialization program
slots	specify the number of messages held in the incore table
consname	is the console name for MCSOPER Macro. It must be unique in the system.
hcset	specifies wether the hardcopy set is to be received by this console. Default is N.

Example:

```
SERVER=(CONSOLE,TLINCONS,2000,COMP51A,Y)
```

Step 14: Install NSPOOL

Optional.

The printout spooling facility NSPOOL is described in the Com-plete Application Programming documentation. The required dataset for running NSPOOL is on the Com-plete installation tape and is loaded as part of the Com-plete installation. The dataset name is COM*vrs*.NS22.

1. Run an INPL of NSPOOL.

2. If NSPOOL is to be used in a Natural environment running under Natural Security, you must stow the following modules in the Natural Security system library; otherwise, proceed to the next point.

   ```
   SPSE01-N,
   SPSE02-S,
   SPSE01-&,
   SPSE02-&,
   SPSE03-&
   SPAPPL-N *
   SPUSER-N *
   ```

   * required only for Natural Security version 2.2.8 and above.

   See also the section **Default Authorization** below.

3. With Natural 2.2, you must place the following modules in the Natural system library and delete them from the NSPOOL library:

   ```
   SPSEC01N
   SECERROR *
   NSCDAU  *
   NSCDU  *
   NSCLU-G *
   NSCLU-M *
   SNAAREXT *
   SNAASEXT *
   SNAUREXT *
   SNAUSEXT *
   ```

* not required for Natural Security version 2.2.8 and above

4. Set the parameter MEMRES in the NATPARM module to 10k to allow Natural to load the program at execution time.

5. The Natural startup application (for example, NAT22) must be cataloged with ULIB as PV (privileged).

Step 15: Install the POSIX Server

The Telnet tn3270 support, HTTP server and LPD print server support of Com-plete 6.2 require the POSIX runtime to be active.

All load modules used by the POSIX runtime are contained in APS*vrs*.LOAD which is mandatory for Com-plete 6.2 even if you do not plan to use any POSIX-based components.

1. To activate the POSIX runtime, add the following SERVER statement to your SYSPARMs:

   ```
   SERVER=(POSIX,PAENKERN)
   ```

   Note:
   Servers are started in the order in which their SERVER= statements are found in the SYPARMs. The servers OPERATOR, POSIX, COMPLETE must be defined in this order.

2. POSIX runtime parameters can be specified directly in the Com-plete SYSPARM member, or in a separate member concatenated to the Com-plete SYSPARMs in the startup JCL procedure. The POSIX runtime may require additional parameters to be set, please refer to the SMARTS Installation and Operations for a detailed description of those parameters. In particular, the above mentioned TCP/IP based Com-plete components need to know which TCP/IP stack to use. This definition must be made using the following POSIX runtime parameter:

   ```
   CDI_DRIVER=('tcpip,PAAxSOCK [,...]')
   ```

   The HTTP server requires an additional CDI driver definition:

   ```
   CDI_DRIVER=('cgistdio,HAANPCGI')
   ```

   Note:
   Servers are started in the order in which their SERVER= statements are found in the SYPARMs. The servers OPERATOR, POSIX, COMPLETE must be defined in this order.

   If your TCP/IP connection uses an ID other than 00, insert the line

   ```
   //OPTION SYSPARM='nn'
   ```

Step 16: Activate the TELNET Server

Prerequisite: the POSIX server must be installed.

- The TELNET server is activated by simply assigning an IP port number for it. Contact the IP administrator of your host for a port number, and specify it using the Com-plete startup parameter TELNETPORT=port_number.

No SERVER= statement is required for the TELNET server.

Step 17: Install the HTTP Server

Install the HTTP server as described in the HTTP Server documentation.

In general, the following steps are necessary:

1. Make sure the POSIX runtime is setup properly, including the CDI drivers (see above).
2. Add a SERVER statement to your SYPARMs:

   ```
   SERVER=(HTTP,HAENSERV,CONF=HAANCONF).
   ```

   Note that this server definition must be placed behind the definitions of the servers OPERATOR, POSIX, and COMPLETE in the SYSPARMs.
3. Use the sample module HAANCONF from the HTTP server source library as a pattern to setup your own configuration. This is the place where you specify, for example, the port number your HTTP server will be using. Assemble this module.

Startup Procedure

Com-plete can be run in a STATIC (BG, F1, F2 ...) or DYNAMIC partition. If you start Com-plete in a DYNAMIC partition, you need Adabas with ESA features for ACCESS support.

Step 1: Modify Procedure JOBCOM61

- Review sample job JOBCOM61 in the source library for correct data set names.

  Note:
  For more information on the data sets and their purpose, see the Com-plete System Programming documentation.

Step 2: Initialize Com-plete System Intercept

- In VSE environments, communication between the Com-plete nucleus and the user program is handled by the Com-plete SVC (Supervisor Call - normally 200).

  The program COMSIP is used to dynamically install the SVC without an IPL. COMSIP requires a prior SET SDL for the SVC, and therefore must run in the BG partition.

  #### Executing the COMSIP Program

  ```
  * $$ JOB   JNM=COMSIP,DISP=D,CLASS=?
  * $$ LST   DISP=D,CLASS=A
  // JOB     COMSIP   initialize Com-plete system adapter V51
  // ASSGN   SYSLST,IGN
  // DLBL    SAGLIB,'.....LIBRARY'
  // EXTENT  ,vvvvvv
  // LIBDEF  PHASE,SEARCH=SAGLIB.APSvrs,TEMP
  // UPSI    00000000
  // EXEC    COMSIP,SIZE=AUTO
  ```

```
// ASSGN   SYSLST,UA
/*
/&
* $$ EOJ
```

Note:
In a multi-processor environment, this step can only run before the second CPU is started.

Insert the following in the ASI BG JCL procedure immediately before the START of the POWER partition so that the Com-plete SVC will be installed automatically during each IPL.

```
// DLBL    SAGLIB,'.....LIBRARY'
// EXTENT  SYS010,vvvvvv
// ASSGN   SYS010,DISK,VOL=vvvvvv,SHR
// LIBDEF  PHASE,SEARCH=SAGLIB.APSvrs,TEMP
SET SDL
CRSVATBL,SVA
/*
// UPSI    00000000
// EXEC    COMSIP,SIZE=AUTO
```

CRSVATBL and COMSIP must be loaded from the same library. They can be used in all currently supported versions of Com-plete.

Step 3: Initialize Com-plete for the First Time

- Start Com-plete by submitting the created job. Monitor the startup messages carefully for any signs of problems. When the initialization is complete, a message to that effect is written to the operator console.

  A message is also sent to the console to notify you that the VTAM interface has initialized.

Step 4: Log On

- Log on through VTAM to the specified VTAM application name. The Com-plete ULOG menu is displayed, prompting you for user ID and password. Log on to Com-plete using user ID SAGADMIN and password ADMIN.

  This user ID has a definition on the Com-plete system data container with the required authorization to define more user IDs to the system, using the user ID maintenance facility described in the Com-plete Utilities documentation.

  After defining other user IDs, you are recommended to change the password for user SAGADMIN and use this user ID in emergency cases only.

What Next?

Com-plete is now up and ready for work. How you continue depends on whether you have installed Com-plete for the first time or whether you are migrating from a previous version.

- If you have installed Com-plete for the first time, no further migration is necessary. You can continue with customization steps described in the System Programming documentation and the Utilities documentation.

- If you are migrating from a previous version of Com-plete, see**Migration**.