



**Program Directory for
IBM WebSphere Application Server OEM Edition for z/OS
for Rational Team Concert, Rational Quality Manager,
and Rational Requirements Composer**

V7.0.0

Program Number 5724-V04

FMID HBBN700

for Use with
z/OS

Document Date: June 2011

GI11-9139-01

Note !

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 25.

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1.0 Introduction

This program directory is intended for system programmers who are responsible for program installation and maintenance. It contains information about the material and procedures associated with the installation of IBM WebSphere Application Server OEM Edition for z/OS.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 2 identifies the basic and optional program materials and documentation for WebSphere Application Server OEM Edition for z/OS.
- 3.0, “Program Support” on page 5 describes the IBM support available for WebSphere Application Server OEM Edition for z/OS.
- 4.0, “Program and Service Level Information” on page 7 lists the APARs (program level) and PTFs (service level) that have been incorporated into WebSphere Application Server OEM Edition for z/OS.
- 5.0, “Installation Requirements and Considerations” on page 8 identifies the resources and considerations that are required for installing and using WebSphere Application Server OEM Edition for z/OS.
- 6.0, “Installation Instructions” on page 14 provides detailed installation instructions for WebSphere Application Server OEM Edition for z/OS. It also describes the procedures for activating the functions of WebSphere Application Server OEM Edition for z/OS, or refers to appropriate publications.

1.1 WebSphere Application Server OEM Edition for z/OS Description

IBM WebSphere Application Server OEM Edition for z/OS provides a native Web services runtime environment for select system-level applications that run on z/OS and is provided at no charge. IBM WebSphere Application Server OEM Edition for z/OS has been tested and packaged for use on z/OS.

1.2 WebSphere Application Server OEM Edition for z/OS FMIDs

WebSphere Application Server OEM Edition for z/OS consists of the following FMID:

HBBN700

2.0 Program Materials

An IBM program is identified by a program number. The program number for WebSphere Application Server OEM Edition for z/OS is 5724-V04.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature numbers, and are required for the use of the product. Optional Machine-Readable Materials are orderable under separate feature numbers, and are not required for the product to function.

The program announcement material describes the features supported by WebSphere Application Server OEM Edition for z/OS. Ask your IBM representative for this information if you have not already received a copy.

2.1 Basic Machine-Readable Material

The distribution medium for this program is Digital Video Disc (DVDs). It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, "Installation Instructions" on page 14 for more information about how to install the program.

Figure 1 describes the program file content for WebSphere Application Server OEM Edition for z/OS.

Notes:

1. The data set attributes in this table must be used in the JCL of jobs that read the data sets. However, because the data sets are in IEBCOPY unloaded format, their actual attributes might be different.
2. If any RELFILEs are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

Figure 1. Program File Content for HBBN700 - WebSphere Application Server OEM Edition for z/OS

Name	O R G	R E C M	L R E C L	BLK SIZE
SMPMCS	SEQ	FB	80	6400
IBM.HBBN700.F1	SEQ	VS	32650	32654
IBM.HBBN700.F2	SEQ	VS	32650	32654
IBM.HBBN700.F3	SEQ	VS	32650	32654
IBM.HBBN700.F4	SEQ	VS	12976	12980
IBM.HBBN700.F5	SEQ	VS	8816	8820

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for WebSphere Application Server OEM Edition for z/OS.

2.3 Program Publications

The following sections identify the basic and optional publications for WebSphere Application Server OEM Edition for z/OS.

The basic publications and other information about IBM WebSphere Application Server OEM Edition for z/OS are available electronically at the IBM WebSphere Application Server OEM Edition for z/OS Web site:
<http://www-05.ibm.com/e-business/linkweb/publications/servlet/pbi.wss?CTY=US&FNC=SRX&PBL=GA320631>

Figure 2 identifies the basic unlicensed or licensed publications that are not available in hardcopy format, but are available through the internet or other media for WebSphere Application Server OEM Edition for z/OS.

<i>Figure 2. Basic Material: Other Unlicensed or Licensed Publications</i>		
Publication Title	Form Number	How Available
WebSphere Application Server OEM Edition for z/OS Configuration Guide	GA32-0631	WebSphere Application Server OEM Edition for z/OS Web site is listed above.

2.3.1 Optional Program Publications

No optional publications are provided for WebSphere Application Server OEM Edition for z/OS.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for WebSphere Application Server OEM Edition for z/OS.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 3 during the installation of WebSphere Application Server OEM Edition for z/OS. To order copies, contact your IBM representative or visit the IBM Publications Center at <http://www.ibm.com/shop/publications/order>.

Figure 3. Publications Useful During Installation

Publication Title	Form Number
<i>IBM SMP/E for z/OS User's Guide</i>	SA22-7773
<i>IBM SMP/E for z/OS Commands</i>	SA22-7771
<i>IBM SMP/E for z/OS Reference</i>	SA22-7772
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA22-7770

3.0 Program Support

This section describes the IBM support available for WebSphere Application Server OEM Edition for z/OS.

3.1 Program Services

Contact your IBM representative for specific information about available program services.

3.2 Preventive Service Planning

Before you install WebSphere Application Server OEM Edition for z/OS, make sure that you have reviewed the current Preventive Service Planning (PSP) information. The PSP Buckets maintain current lists (which have been identified since the package was created) of any recommended or required service for the installation of this package. This service includes software PSP information that contains HIPER and required PTFs against the base release.

Although SW, HW, and functional PSP Buckets might have overlap, review all that apply to this package to ensure that you identify all the known service that is required for your installation of this package.

Once you have received your installation CD, you should contact the IBM Support Center or use S/390 SoftwareXcel to obtain the latest PSP Bucket information. You can also obtain the latest PSP Bucket information by going to the following Web site:

<https://techsupport.services.ibm.com/server/390.psp390>

For program support, access the Software Support Web site at <http://www-01.ibm.com/software/support/>.

PSP Buckets are identified by UPGRADEs, which specify product levels; and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for WebSphere Application Server OEM Edition for z/OS are shown as follows:

Figure 4. PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
WASOEMZOS700	HBBN700	WebSphere App. Srvr. OEM Edition for z/OS V7.0.0

3.3 Statement of Support Procedures

Report any problems which you feel might be an error in the product materials to your IBM Support Center. You may be asked to gather and submit additional diagnostics to assist the IBM Support Center in their analysis.

Figure 5 on page 6 identifies the component IDs (COMPID) for WebSphere Application Server OEM Edition for z/OS.

<i>Figure 5. Component IDs</i>			
FMID	COMPID	Component Name	RETAIN Release
HBBN700	5655I3512	WEBS APP SVR OEM	700

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of WebSphere Application Server OEM Edition for z/OS. The program level refers to the APAR fixes that have been incorporated into the program. The service level refers to the PTFs that have been incorporated into the program.

4.1 Program Level Information

No APARs have been incorporated into WebSphere Application Server OEM Edition for z/OS.

4.2 Service Level Information

No PTFs against this release of WebSphere Application Server OEM Edition for z/OS have been incorporated into the Web deliverable.

It is highly recommended that you frequently check the WebSphere Application Server OEM Edition for z/OS PSP Bucket for HIPER and SPECIAL Attention PTFs against all FMIDs that you must install.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating WebSphere Application Server OEM Edition for z/OS. The following terminology is used:

- *Driving system*: the system used to install the program; where SMP/E executes.

The program might have specific operating system or product level requirements for using processes, such as binder or assembly utilities during the installation.

- *Target system*: the system on which the program is configured and run.

The program might have specific product level requirements, such as needing access to the library of another product for link-edits. These requirements, either mandatory or optional, might directly affect the element during the installation or in its basic or enhanced operation.

In many cases, you can use a system as both a driving system and a target system. However, you can make a separate IPL-able clone of the running system to use as a target system. The clone must include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

Use separate driving and target systems in the following situations:

- When you install a new level of a product that is already installed, the new level of the product will replace the old one. By installing the new level onto a separate target system, you can test the new level and keep the old one in production at the same time.
- When you install a product that shares libraries or load modules with other products, the installation can disrupt the other products. By installing the product onto a separate target system, you can access these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system that is required to install WebSphere Application Server OEM Edition for z/OS.

5.1.1 Machine Requirements

The driving system can run in any hardware environment that supports the required software.

5.1.2 Programming Requirements

Figure 6. Driving System Software Requirements

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in this product's shipment?
Any one of the following:				
5694-A01	z/OS	V01.10.00 or later	N/A	No
5655-G44	IBM SMP/E for z/OS	V03.04.00	N/A	No

Notes:

1. An SMP/E utility entry for the binder is required. You can specify any of these program names in the UTILITY entry: IEWLINK, HEWL, LINKEDIT, or HEWLH096. (The linkage editor which uses the names HEWLKED, HEWLF064, HEWLF440, and IEWLF128 cannot be used.)
2. The following installation job, as well as the SMP/E APPLY job, should be run under a user ID with UID(0), or with a user ID with READ access to the BPX.SUPERUSER resource in the RACF FACILITY class. This installation user ID must also have READ access to the FACILITY class resources BPX.FILEATTR.PROGCTL, BPX.FILEATTR.APF, and BPX.FILEATTR.SHARELIB.
 - BBN7IHFS or BBN7IZFS
 - BBN7ISMD

WebSphere Application Server OEM Edition for z/OS is installed into a file system, either HFS or zFS. Before installing WebSphere Application Server OEM Edition for z/OS, you must ensure that the target system file system data sets are available for processing on the driving system. OMVS must be active on the driving system and the target system file system data sets must be mounted on the driving system.

If you plan to install WebSphere Application Server OEM Edition for z/OS in a zFS file system, this requires that zFS be active on the driving system. Information on activating and using zFS can be found in *z/OS Distributed File Service zSeries File System Administration*, SC24-5989.

5.2 Target System Requirements

This section describes the environment of the target system that is required to install and use WebSphere Application Server OEM Edition for z/OS.

WebSphere Application Server OEM Edition for z/OS installs in the z/OS (Z038) SREL.

5.2.1 Machine Requirements

The target system can run in any hardware environment that supports the required software.

5.2.2 Programming Requirements

5.2.2.1 Installation Requisites: Installation requisites identify products that are required by and *must* be present on the system or products that are not required by but *should* be present on the system for the successful installation of this product.

Mandatory installation requisites identify products that are required on the system for the successful installation of this product. These products are specified as PREs or REQs.

Figure 7. Target System Mandatory Installation Requisites

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in this product's shipment?
5694-A01	z/OS	V01.10.00 or later	N/A	No

Note: Installation may require migration to new z/OS releases to be service supported. See http://www-03.ibm.com/systems/z/os/zos/support/zos_eos_dates.html.

Conditional installation requisites identify products that are *not* required for successful installation of this product but can resolve such things as certain warning messages at installation time. These products are specified as IF REQs.

WebSphere Application Server OEM Edition for z/OS has no conditional installation requisites.

5.2.3 DASD Storage Requirements

WebSphere Application Server OEM Edition for z/OS libraries can reside on all supported DASD types.

Figure 8 lists the total space that is required for each type of library.

Figure 8. Total DASD Space Required by WebSphere Application Server OEM Edition for z/OS

Library Type	Total Space Required in 3390 Trks
Target	70 Tracks
Distribution	41005 Tracks
z/FS or HFS	36000 Tracks

Notes:

1. For non-RECFM U data sets, IBM recommends using system-determined block sizes for efficient DASD utilization. For RECFM U data sets, IBM recommends using a block size of 32760, which is most efficient from the performance and DASD utilization perspective.

2. Abbreviations used for data set types are shown as follows.

- U** Unique data set, allocated by this product and used by only this product. This table provides all the required information to determine the correct storage for this data set. You do not need to refer to other tables or program directories for the data set size.
- S** Shared data set, allocated by this product and used by this product and other products. To determine the correct storage needed for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.
- E** Existing shared data set, used by this product and other products. This data set is *not* allocated by this product. To determine the correct storage for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old release and reclaim the space that was used by the old release and any service that had been installed. You can determine whether these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information about the names and sizes of the required data sets, see 6.1.12, “Allocate SMP/E Target and Distribution Libraries” on page 20.

3. Abbreviations used for the file system path type are as follows.

- N** New path, created by this product.
- X** Path created by this product, but may already exist from a previous release.
- P** Previously existing path, created by another product.

4. All target and distribution libraries listed have the following attributes:

- The default name of the data set may be changed.
- The default block size of the data set may be changed.
- The data set may be merged with another data set that has equivalent characteristics.
- The data set may be either a PDS or a PDSE.

The following figures describe the target and distribution libraries and file system paths required to install WebSphere Application Server OEM Edition for z/OS. The storage requirements of WebSphere Application Server OEM Edition for z/OS must be added to the storage required by other programs having data in the same library or path.

Note: The data in these tables should be used when determining which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

Figure 9. Storage Requirements for WebSphere Application Server OEM Edition for z/OS Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SBBN7JCL	Sample	ANY	U	PDS	FB	80	5	10
SBBN7MSG	MSG	ANY	U	PDS	VB	259	10	10

Figure 10. WebSphere Application Server OEM Edition for z/OS HFS or zFS Paths

DDNAME	T Y P E	Path Name
SBBN7COD	N	/usr/lpp/zWebSphereOEM/V7R0/IBM

Figure 11. Storage Requirements for WebSphere Application Server OEM Edition for z/OS Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
ABBN7JCL	U	PDS	FB	80	5	10
ABBN7HF1	U	PDSE	VB	259	15000	-
ABBN7HF2	U	PDSE	VB	259	12000	-
ABBN7HF3	U	PDSE	VB	259	12000	-
ABBN7MSG	U	PDS	VB	259	10	10

The following figures list data sets that are not used by SMP/E, but are required for WebSphere Application Server OEM Edition for z/OS to run.

Figure 12 (Page 1 of 2). Storage Requirements for WebSphere Application Server OEM Edition for z/OS Non-SMP/E Data Sets

Data Set Name	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
hlq.HBBN700.F1.BIN	U	PS	FB	80	6700	n/a
hlq.HBBN700.F2.BIN	U	PS	FB	80	12000	n/a

Figure 12 (Page 2 of 2). Storage Requirements for WebSphere Application Server OEM Edition for z/OS Non-SMP/E Data Sets

Data Set Name	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
hlq.HBBN700.F3.BIN	U	PS	FB	80	12000	n/a
hlq.HBBN700.F4.BIN	U	PS	FB	80	10	n/a
hlq.HBBN700.F5.BIN	U	PS	FB	80	10	n/a
hlq.HBBN700.SMPMCS	U	PS	FB	80	5	n/a

5.3 FMIDs Deleted

Installing WebSphere Application Server OEM Edition for z/OS might result in the deletion of other FMIDs. To see which FMIDs will be deleted, examine the ++VER statement in the SMPMCS of the product.

If you do not want to delete these FMIDs at this time, install WebSphere Application Server OEM Edition for z/OS into separate SMP/E target and distribution zones.

Note: These FMIDs are not automatically deleted from the Global Zone. If you want to delete these FMIDs from the Global Zone, see the SMP/E manuals for instructions.

5.4 Special Considerations

WebSphere Application Server OEM Edition for z/OS has no special considerations for the target system.

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of WebSphere Application Server OEM Edition for z/OS.

Please note the following:

- If you want to install WebSphere Application Server OEM Edition for z/OS into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.
- You can use the sample jobs that are provided to perform part or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries that are required for SMP/E execution have been defined in appropriate zones.
- You can use the SMP/E dialogs instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing WebSphere Application Server OEM Edition for z/OS

All installation steps must be run from a user ID that is defined to z/OS UNIX System Services, and the following attributes:

- UID(0) or READ access or higher to BPX.SUPERUSER in the FACILITY class.
- READ access or higher to BPX.FILEATTR.PROGCTL, BPX.FILEATTR.APF, and BPX.FILEATTR.SHARELIB in the FACILITY classes.

6.1.1 SMP/E Considerations for Installing WebSphere Application Server OEM Edition for z/OS

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of WebSphere Application Server OEM Edition for z/OS.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 13. Using values lower than the recommended values can result in failures in the installation. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. See the SMP/E manuals for instructions on updating the global zone.

Figure 13 (Page 1 of 2). SMP/E Options Subentry Values

Subentry	Value	Comment
DSSPACE	(2500,1200,2600)	Space allocation

Figure 13 (Page 2 of 2). SMP/E Options Subentry Values

Subentry	Value	Comment
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 Overview of the installation steps

Overview of steps required to install IBM WebSphere Application Server OEM Edition for z/OS.

1. Upload sample JCL from the client
2. Expand the sample jcl file by using the TSO Receive command
3. Review list of sample jobs
4. Run the job to allocate sequential data sets to FTP into
5. Upload the compressed RELFILES and SMPMCS from the client
6. Expand the RELFILES by using the TSO Receive command
7. Create SMP/E Environment (optional)
8. Perform SMP/E RECEIVE
9. Allocate SMP/E target and distribution libraries
10. Define File System (HFS or zFS)
11. Allocate HFS paths
12. Create DDDEF entries
13. Perform SMP/E APPLY
14. Perform SMP/E ACCEPT
15. Run REPORT CROSSZONE
16. Compile MMS data sets (Optional)

6.1.4 Upload Sample JCL from the client

On the client, there is a file containing sample installation JCL. This sample JCL contains a member (BBN7SEQA) that will allocate the sequential data sets on z/OS for the compressed RELFILES and SMPMCS contained on the client and other members to perform the SMP/E processing. Perform the following steps to upload it from the client to z/OS:

1. Allocate a data set on z/OS to use as the target of the upload. You can do this by creating a data set with the characteristics from the job below or by submitting the job below. If you choose to submit the following job you need to make the following updates:
 - a. Add a job card and modify the parameters to meet your site's requirements before submitting.
 - b. **hlq** will be the high level qualifier you choose to use for this data set.

c. (Optionally) Replace vvvvvv with the volser you choose to use for this data set.

```
//ALLOC EXEC PGM=IEFBR14
//*
//JCLBIN DD DSN=hlq.IBM.HBBN700.JCL.BIN,
// DISP=(NEW,CATLG,DELETE),
// DSORG=PS,
// RECFM=FB,
// LRECL=80,
// BLKSIZE=6160,
//* VOL=SER=vvvvvv,
// UNIT=SYSALLDA,
// SPACE=(TRK,(2,1))
```

2. Upload the sample jcl file in binary format from the client to this z/OS data set. If the client is attached to a Windows NT system, you can use FTP from a command prompt to upload the file. In the sample dialog shown below, commands or other information entered by the user are in bold, and the following values are assumed:

<i>Figure 14. User Entered Values</i>	
User enters:	Values
mvsaddr	TCP/IP address or hostname of the z/OS system
tsouid	Your TSO user ID
tsopw	Your TSO password
d:	Your client drive
hlq	High-level qualifier you used for the data set you allocated in the job above

```
C:\>ftp mvsaddr
Connected to mvsaddr.
220-FTPD1 IBM FTP CS V1R2 at mvsaddr, 07:18:16 on 2005-04-19.
220 Connection will close if idle for more than 60 minutes.
```

```
User (mvsaddr:(none)): tsouid
```

```
331 Send password please.
Password: tsopw
230 tsouid is logged on. Working directory is "tsouid."
```

```
ftp> cd ..
250 " "is the working directory name prefix.
```

```
ftp> cd hlq
250 "hlq." is the working directory name prefix.
```

```
ftp> binary
200 Representation type is Image
```

```

ftp> put d:\HBBN700\IBM.HBBN700.JCL.BIN
200 Port request OK.
125 Storing data set hlq.IBM.HBBN700.JCL.BIN
250 Transfer completed successfully.
ftp: 204800 bytes sent in 0.14Seconds 4996.00Kbytes/sec.

ftp> quit
221 Quit command received. Goodbye.

```

6.1.5 Expand the sample jcl file by using the TSO Receive command:

```
RECEIVE INDA('hlq.IBM.HBBN700.JCL.BIN')
```

When prompted on the TSO receive command, use the appropriate DSNAME as listed below:

```
DS('hlq.IBM.HBBN700.JCL')
```

6.1.6 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install WebSphere Application Server OEM Edition for z/OS. The RELFILEs will be prefixed with the high level qualifier ("hlq" in table below) used when the files are "received". The jobs are contained in the sample JCL data set **hlq.IBM.HBBN700.JCL** that was uploaded.

Figure 15 (Page 1 of 2). Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
BBN7SEQA	SMP/E	Sample job to allocate sequential data sets for FTPing the product data sets into	N/A
BBN7SMPE	SMP/E	Sample job to create an SMP/E environment (optional)	N/A
BBN7RCVE	RECEIVE	Sample SMP/E RECEIVE job for HBBN700	N/A
BBN7ALOC	ALLOCATE	Sample job to allocate target and distribution libraries	hlq.IBM.HBBN700.F5
BBN7DDEF	DDDEF	Sample job to define SMP/E DDDEFs	hlq.IBM.HBBN700.F5
BBN7IHFS	HFS ALLOCATE	Sample job to define HFS	hlq.IBM.HBBN700.F5
BBN7IZFS	zFS ALLOCATE	Sample job to define zFS	hlq.IBM.HBBN700.F5
BBN7ISMD	MKDIR	Sample job to invoke the supplied BBN7MKDR EXEC to allocate file system paths	hlq.IBM.HBBN700.F5
BBN7APLY	APPLY	Sample SMP/E APPLY job	N/A
BBN7ACPT	ACCEPT	Sample SMP/E ACCEPT job	N/A
BBN7CLNP	DELETE	Sample job for SMP/E Delete	hlq.IBM.HBBN700.F5

Figure 15 (Page 2 of 2). Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
BBN7DELS	DELETE	Sample job for data set and file System delete	hlq.IBM.HBBN700.F5
BBN7MSCP	MMS	Sample job for MMS	hlq.IBM.HBBN700.F5

6.1.7 Allocate sequential data sets to FTP into

Edit and submit sample job **BBN7SEQA** in the **hlq.IBM.HBBN700.JCL** data set to allocate data sets on z/OS to be used during the upload process. Use the instructions in the sample job for information on changes required.

Expected Return Codes and Messages: RC=0

6.1.8 Upload the compressed RELFILES and SMPMCS from the client

1. Upload the files in binary format from the client to the z/OS data set. If the client is a Windows NT system, you can use FTP from a command prompt to upload the files:

```
C:\>ftp mvsaddr
Connected to mvsaddr.
220-FTPD1 IBM FTP CS V1R2 at mvsaddr, 07:18:16 on 2005-04-19.
220 Connection will close if idle for more than 60 minutes.

User (mvsaddr:(none)): tsouid

331 Send password please.
Password: tsopw
230 tsouid is logged on. Working directory is "tsouid.".

ftp> cd ..
250 " " is the working directory name prefix.

ftp> cd hlq
250 "hlq." is the working directory name prefix.

ftp> binary
200 Representation type is Image

ftp> prompt
Interactive mode Off.

ftp> mput d:\HBBN700\IBM.HBBN700.F*
200 Port request OK.
125 Storing data set hlq.IBM.HBBN700.F1.BIN
250 Transfer completed successfully.
ftp: 290853360 bytes sent in 28.14Seconds 4996.00Kbytes/sec.
200 Port request OK.
```

```

125 Storing data set hlq.IBM.HBBN700.F2.BIN
250 Transfer completed successfully.
ftp: 509503120 bytes sent in 49.05Seconds 2323.40Kbytes/sec.
200 Port request OK.
125 Storing data set hlq.IBM.HBBN700.F3.BIN
250 Transfer completed successfully.
ftp: 502938560 bytes sent in 45.34Seconds 10044.10Kbytes/sec.
200 Port request OK.
125 Storing data set hlq.IBM.HBBN700.F4.BIN
250 Transfer completed successfully.
ftp: 240640 bytes sent in 00.08Seconds 10044.10Kbytes/sec.
200 Port request OK.
125 Storing data set hlq.IBM.HBBN700.F5.BIN
250 Transfer completed successfully.
ftp: 163360 bytes sent in 00.05Seconds 10044.10Kbytes/sec.

ftp> put d:\HBBN700\IBM.HBBN700.SMPMCS
200 Port request OK.
125 Storing data set hlq.IBM.HBBN700.SMPMCS
250 Transfer completed successfully.
ftp: 17680 bytes sent in 0.01Seconds 5377.95Kbytes/sec.

ftp> quit
221 Quit command received. Goodbye.

```

6.1.9 Expand the RELFILES by using the TSO Receive command:

Receive the following datasets:

```

RECEIVE INDA('hlq.IBM.HBBN700.F1.BIN')
RECEIVE INDA('hlq.IBM.HBBN700.F2.BIN')
RECEIVE INDA('hlq.IBM.HBBN700.F3.BIN')
RECEIVE INDA('hlq.IBM.HBBN700.F4.BIN')
RECEIVE INDA('hlq.IBM.HBBN700.F5.BIN')

```

When prompted on the TSO receive commands, use the appropriate DSNAME from the list below:

```

DS('hlq.IBM.HBBN700.F1')
DS('hlq.IBM.HBBN700.F2')
DS('hlq.IBM.HBBN700.F3')
DS('hlq.IBM.HBBN700.F4')
DS('hlq.IBM.HBBN700.F5')

```

6.1.10 Create SMP/E Environment (optional)

If you are using an existing CSI, do not run the sample job BBN7SMPE.

If you choose to create a new SMP/E environment for this install a sample job is provided or you may choose to use your own JCL. If you choose to use the sample job provided, edit and submit BBN7SMPE. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: RC=0

6.1.11 Perform SMP/E RECEIVE

Edit and submit sample job BBN7RCVE to perform the SMP/E RECEIVE for WebSphere Application Server OEM Edition for z/OS. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: RC=0

6.1.12 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job BBN7ALOC to allocate the SMP/E target and distribution libraries for WebSphere Application Server OEM Edition for z/OS. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: RC=0

6.1.13 Define File System (HFS or zFS)

IBM suggests to install WebSphere Application Server OEM Edition for z/OS into a new file system, HFS or zFS data set. For WebSphere Application Server OEM Edition for z/OS, the mountpoint is: `/-PathPrefix-/usr/lpp/zWebSphereOEM/V7R0` where `/-PathPrefix-` is the filesystem path prefix such as `/SERVICE`.

Please consult the instructions in the sample jobs for more information.

Edit and submit sample job either BBN7IHFS or BBN7IZFS to define HFS or zFS for WebSphere Application Server OEM Edition for z/OS. Both jobs will invoke BBN7MTFS exec to mount the newly allocated HFS or zFS on the driving system for the product installation.

Expected Return Codes and Messages: RC=0

6.1.14 Allocate File System Paths

The target system file system data set must be mounted on the driving system when running the sample BBN7ISMD job since the job will create paths in the file system.

Before running the sample job to create the paths in the file system, you must ensure that OMVS is active on the driving system, and that the target system's HFS or zFS file system is mounted to the driving system. zFS must be active on the driving system if you are installing WebSphere Application Server OEM Edition for z/OS into a file system that is zFS.

Edit and submit sample job BBN7ISMD to allocate the HFS or zFS paths for WebSphere Application Server OEM Edition for z/OS. Consult the instructions in the sample job for more information.

If you plan to create a new HFS for this product, you should consider updating the BPXPRMxx PARMLIB member to mount the new file system at IPL time. This may be helpful if an IPL occurs before the installation is complete.

Expected Return Codes and Messages: RC=0

6.1.15 Create DDDEF Entries

Edit and submit sample job BBN7DDEF to create DDDEF entries for the SMP/E target and distribution libraries for WebSphere Application Server OEM Edition for z/OS. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: RC=0

6.1.16 Perform SMP/E APPLY

Ensure you have the latest Enhanced HOLDDATA, then edit and submit sample job BBN7APPLY to perform an SMP/E APPLY CHECK for WebSphere Application Server OEM Edition for z/OS. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the APPLY CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Enhanced HOLDDATA introduced ERROR HOLDS against FMIDs for HIPER APARs. Prior to installing, you should ensure you have the latest Enhanced HOLDDATA (available at url <http://service.software.ibm.com/holddata/390holddata.html>). The FMID(s) should be installed regardless of the status of unresolved HIPERs, however, the software should not be deployed until the unresolved HIPERs have been analyzed to determine applicability.

There are two methods to complete an FMID installation where ++HOLDS for HIPERs exist for the FMID(s) being installed:

1. To ensure that all critical service is installed with the FMID(s), add the SOURCEIDs of PRP, and HIPER to the APPLY command. There may be PE or HIPER APARs that do not have resolving PTFs available yet. You need to analyze the symptom flags to determine if you want to BYPASS the specific ERROR HOLDS and continue the FMID installation.

```
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(PRP,HIPER,...)
GROUPEXTEND .
```

This method requires more initial research, but will provide resolution for all HIPERs that have fixes available and are not in a PE chain. There may still be unresolved PEs or HIPERs which will require the use of BYPASS.

2. To install the FMID(s) as it would have been installed prior to Enhanced HOLDDATA, you can add a BYPASS(HOLDCLASS(HIPER)) operand to the APPLY command. This will allow the FMID to be installed even though there are HIPER ERROR HOLDS against it. Note that not all ERROR HOLDS were bypassed, only the HIPER ERROR HOLDS. After the FMID(s) are installed, the SMP/E REPORT ERRSYSMODS command should be run to identify any missing HIPER maintenance.

```
APPLY S(fmid,fmid,...)
BYPASS(HOLDCLASS(HIPER))
other parameters documented in the program directory...
```

This method is the quicker of the two, but requires subsequent review of the REPORT ERRSYSMODS to investigate any HIPERs.

If you bypass any HOLDS during the installation of the FMID(s) because fixing PTFs were not yet available you can use the APAR Status Tracking (AST) function of ServiceLink or the APAR Tracking function of ResourceLink to be notified when the fixing PTF is available.

Once you have taken any actions indicated by the APPLY CHECK, remove the CHECK operand and run the job again to perform the APPLY.

Note: The GROUPEXTEND operand indicates that SMP/E apply all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from APPLY CHECK: RC=0.

Expected Return Codes and Messages from APPLY: RC=0.

6.1.17 Perform SMP/E ACCEPT

Edit and submit sample job BBN7ACPT to perform an SMP/E ACCEPT CHECK for WebSphere Application Server OEM Edition for z/OS. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the ACCEPT CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Before using SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. This will cause entries produced from JCLIN to be saved in the distribution zone whenever a SYSMOD containing inline JCLIN is ACCEPTed. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

Once you have taken any actions indicated by the ACCEPT CHECK, remove the CHECK operand and run the job again to perform the ACCEPT.

Note: The GROUPEXTEND operand indicates that SMP/E accept all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from ACCEPT CHECK: RC=0

If PTFs containing replacement modules are being ACCEPTed, SMP/E ACCEPT processing will linkedit/bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder may issue messages documenting unresolved external references, resulting in a return code of 4 from the ACCEPT step. These messages can be ignored, because the distribution libraries are not executable and the unresolved external references will not affect the executable system libraries.

Expected Return Codes and Messages from ACCEPT: RC=0

6.1.18 Run REPORT CROSSZONE

The SMP/E REPORT CROSSZONE command will identify requisites defined for products that have been installed in separate zones. This command will also create APPLY and ACCEPT commands in the SMP/PUNCH data set that you can use to install those cross-zone requisites it identifies.

After you have installed WebSphere Application Server OEM Edition for z/OS, it is recommended that you run REPORT CROSSZONE against the new or updated target and distribution zones. REPORT CROSSZONE requires a global zone with ZONEINDEX entries describing all the target and distribution libraries to be reported on.

For more information on REPORT CROSSZONE, see the SMP/E manuals.

6.1.19 COMPILE MMS DATA SETS (OPTIONAL)

After installing WebSphere Application Server OEM Edition for z/OS, if you choose to use the MVS Message Service (MMS), you must run the sample job BBN7MSCP in SBBN7JCL data set, and then the message file must be compiled into run-time files. It is only necessary to compile these message files once. After the installation of the additional products, compilation can begin.

For the MVS message service (MMS) to handle translated messages, your installation must use the MVS message compiler to format and install message files that contain English message skeletons and translated language message skeletons.

The following summarizes the steps for providing translated messages:

- Verify the message files are correctly installed on your system.
- Allocate space for each run-time message file. Edit and run the job in member CNLDEFCL to allocate run-time message files. CNLDEFCL is supplied in your SYS1.SAMPLIB library on the target system.
- Use the MVS message compiler to format the installation message file into a run-time message file. Edit and run the job in member CNLCOMP to compile and load the run-time message files. CNLCOMP is supplied in your SYS1.SAMPLIB library on the target system.
- Create installation exit routines, if needed.
- Create or update the SYS1.PARMLIB members to initialize values for MMS:
 - CNLLSTxx - to define the available languages for message translation. A sample CNLLSTXX is provided in the SYS1.SAMPLIB library.
 - CNLcccxx - to define the date and time formats.
 - CONSOLxx - to specify the CNLLSTxx member in effect for the system. 20 WebSphere
- Activate MMS.

See the description of how to activate MMS, creating installation exits, and how to handle translated messages in *z/OS MVS Planning: Operations*, SA22-7601.

6.2 Activating WebSphere Application Server OEM Edition for z/OS

6.2.1 HFS or zFS Execution

You will need to mount the file system in which you have installed WebSphere Application Server OEM Edition for z/OS in read-only mode prior to configuration and activation. If you choose to use the separate VAR and ETC file systems (as defined in sample job BBN7IHFS or BBN7IZFS from section 6.1.13), then these file systems can be mounted in read-write mode for configuration and activation on your target system.

IBM WebSphere Application Server OEM Edition for z/OS Configuration Guide, GA32-0631, contains the step-by-step procedures to activate the functions of IBM WebSphere Application Server OEM Edition for z/OS. You can download this publication from the following website
<http://www-05.ibm.com/e-business/linkweb/publications/servlet/pbi.wss?CTY=US&FNC=SRX&PBL=GA320631>

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very satisfied	<=====			=====	very dissatisfied
1	2	3	4	5	not applicable N

	Satisfaction					
Ease of product installation	1	2	3	4	5	N
Contents of Program Directory	1	2	3	4	5	N
Installation Verification Programs	1	2	3	4	5	N
Time to install the product	1	2	3	4	5	N
Readability and organization of Program Directory tasks	1	2	3	4	5	N
Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
Technical level of the installation tasks	1	2	3	4	5	N
Ease of getting the system into production after installation	1	2	3	4	5	N

How did you order this product?

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- CustomPac
- ServerPac
- Independent
- Other

Is this the first time your organization has installed this product?

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___ No

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G111-9139-01

