



**Program Directory for
IBM WebSphere Host On-Demand
Version 6**

Version 6 Release 0, Modification Level 0

Program Number 5733-A59

FMID HHOH600

for Use with
OS/390 V2R5 - V2R10
z/OS V1.1 - V1.2

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Note!

Before using this information and the product it supports, be sure to read the general information under “Notices” on page vii.

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1.0 Introduction

This program directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of IBM WebSphere Host On-Demand V6 for OS/390. This publication refers to IBM WebSphere Host On-Demand V6 for OS/390 as Host On-Demand. You should read all of this program directory before installing the program and then keep it for future reference.

The program directory contains the following sections:

- 2.0, "Program Materials" on page 3 identifies the basic and optional program materials and documentation for Host On-Demand.
- 3.0, "Program Support" on page 7 describes the IBM support available for Host On-Demand.
- 4.0, "Program and Service Level Information" on page 9 lists the APARs (program level) and PTFs (service level) incorporated into Host On-Demand.
- 5.0, "Installation Requirements and Considerations" on page 11 identifies the resources and considerations for installing and using Host On-Demand.
- 6.0, "Installation Instructions" on page 19 provides detailed installation instructions for Host On-Demand. It also describes the procedures for activating the functions of Host On-Demand, or refers to appropriate publications.
- Appendix A, "Host On-Demand Install Logic" on page 35 provides the install logic for Host On-Demand.

Before installing Host On-Demand, read 3.2, "Preventive Service Planning" on page 7. This section tells you how to find any updates to the information and procedures in this program directory.

Do not use this program directory if you are installing Host On-Demand with a SystemPac or ServerPac. When using these offerings, use the jobs and documentation supplied with the offering. This documentation may point you to specific sections of the program directory as required.

If you are installing Host On-Demand using the MVS Custom-Built Product Delivery Offering (CBPDO, 5751-CS3), a softcopy program directory is provided on the CBPDO tape which is identical to the printed copy shipped with your order. Your CBPDO contains a softcopy preventive service planning (PSP) upgrade for this product. All service and HOLDDATA for Host On-Demand are included on the CBPDO tape.

This program directory is now being maintained as a 'living document' that contains up-to-date program and service level information. Please always reference the latest level of the Program Directory at the following web site and follow the library/documentation path:

<http://www.ibm.com/software/webservers/hostondemand/>

1.1 Host On-Demand Description

IBM WebSphere Host On-Demand V6 for OS/390 gives you one-click access to your enterprise's data using the power of Java. One click opens the door to the intranet's key asset, the enterprise data needed for daily business operation.

With OS/390 as a powerful scalable server for Host On-Demand, large networks of workstations with Java-enabled browsers can be economically supported.

1.2 Host On-Demand FMIDs

Host On-Demand consists of the following FMID:

HHOH600

2.0 Program Materials

An IBM program is identified by a program number and a feature number. The program number for Host On-Demand is 5733-A59.

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

The program announcement material describes the features supported by Host On-Demand. 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 9-track magnetic tape (written at 6250 BPI), 3480 cartridge, or 4mm cartridge. The tape or cartridge contains all the programs and data needed for installation. It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, "Installation Instructions" on page 19 for more information about how to install the program.

Figure 1 describes the tape or cartridge.

<i>Figure 1. Basic Material: Program Tape</i>				
Medium	Feature Number	Physical Volume	External Label Identification	VOLSER
6250 Tape	CU000ML	1	IBM WebSphere Host On-Demand V6 (5733-A59)	HOH600
3480 cart	CU002ML	1	IBM WebSphere Host On-Demand V6 (5733-A59)	HOH600
4mm cart	CU004ML	1	IBM WebSphere Host On-Demand V6 (5733-A59)	HOH600

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for Host On-Demand.

2.3 Program Publications

The following sections identify the basic and optional publications for Host On-Demand.

2.3.1 Basic Program Publications

Figure 2 on page 4 identifies the basic unlicensed program publications for Host On-Demand. The publications are in softcopy form and can be accessed by following the information following.

Note: Host On-Demand V6 requires the addition of three (3) new *PASS RULES* added to your configuration file for your HTTP web server. Typically, this file is named **httpd.conf** and is typically found in your **/etc** directory in UNIX System Services. Listed below are the complete set of *Pass Rules* that you should have to successfully execute Host On-Demand V6. The new *Pass* rules for Host On-Demand (V6 only) are the *Pass* statements three, four, and five below, but you should have **all** the *Pass* rules as listed below in your **httpd.conf** file. Please verify that the following *Pass* statements exist in your **httpd.conf** file including the new *Pass* statements. Please also make sure that the statements are listed in the following order:

```
# *** ADD NEW PASS RULES HERE ***

Pass /hod/*.html /usr/lpp/HOD/hostondemand/HOD/*.html.ascii
Pass /hod/*.HTML /usr/lpp/HOD/hostondemand/HOD/*.HTML.ascii
Pass /hod/*.js /usr/lpp/HOD/hostondemand/HOD/*.js.ascii
Pass /hod/*.properties (continued on next line)
                        /usr/lpp/HOD/hostondemand/HOD/*.properties.ascii
Pass /hod/*.props /usr/lpp/HOD/hostondemand/HOD/*.props.ascii
Pass /hod/* /usr/lpp/HOD/hostondemand/HOD/*
```

It is extremely important that the *Pass* statement "Pass /hod/* /usr/.." is the last *Pass* rule encountered. If this is not the last statement, problems will occur when you try to access Host On-Demand *htmls* and online publications.

Figure 2. Basic Material: Unlicensed Publications

Publication Title	Form Number
IBM WebSphere Host On-Demand Getting Started	N/A
README	N/A

The main Host On-Demand publication is *Getting Started* which details installation (for non OS/390 operating systems), configuration(all operating systems) , and administration(all operating systems). The publications are included in soft copy form (HTML) with the product and are viewable from your browser once the product has been successfully installed using the URL format listed below:

- *Getting Started:*
 - **http://<server name>/<webserver alias>/<language>/doc/install/install.html**
- README:
 - **http://<server name>/<webserver alias>/<language>/doc/readme/readme.html**

where **<server name>** refers to your OS/390 server's TCP/IP host name, **<webserver alias>** refers to your web server's Pass Rule alias (look in your `/etc/httpd.conf` file in the Pass Rule section - default is **hod**), and **<language>** refers to your installed language prefix (ie., **en** for English, **de** for German, etc.). A table of all the supported languages, publication availability and their associated prefix is found after the table of basic publications. An example of a URL to point to the English language Host On-Demand *Getting Started* is:

<http://mvs048/hod/en/doc/install/install.html>

The publications are also available from the Host On-Demand product Web page at the following URL (follow the library/documentation path):

<http://www.ibm.com/software/webservers/hostondemand/>

Figure 3 identifies the supported languages and the associated language prefix that you use in the URLs above to access the publications. If a 'Y' is indicated, the document is provided in that language. If an 'N' is indicated, an English language manual will be displayed instead of a translated version.

Figure 3 (Page 1 of 2). Host On-Demand Supported Language Publication Availability with Prefix

Language	Language Prefix	README	Getting Started
Chinese	zh	Y	Y
Czech	cs	Y	Y
Danish	da	N	Y
Dutch	nl	N	Y
English	en	Y	Y
German	de	Y	Y
Greek	el	Y	Y
Finnish	fi	N	Y
French	fr	Y	Y
Hungarian	hu	Y	Y
Italian	it	Y	Y
Japanese	ja	Y	Y
Korean	ko	Y	Y
Norwegian	no	Y	Y
Polish	pl	Y	Y
Portugese	pt_PT	Y	Y
Portugese-Brazilian	pt	Y	Y

Figure 3 (Page 2 of 2). Host On-Demand Supported Language Publication Availability with Prefix

Language	Language Prefix	README	Getting Started
Russian	ru	Y	Y
Slovenian	sl	Y	Y
Spanish	es	Y	Y
Swedish	sv	N	Y
Turkish	tr	N	Y
Taiwanese	zh_TW	Y	Y

2.3.2 Optional Program Publications

No optional publications are provided for Host On-Demand.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for Host On-Demand.

2.5 Publications Useful During Installation

The publications listed in Figure 4 may be useful during the installation of Host On-Demand. To order copies, contact your IBM representative.

Figure 4. Publications Useful During Installation

Publication Title	Form Number
<i>OS/390 SMP/E User's Guide</i>	SC28-1740
<i>OS/390 SMP/E Commands</i>	SC28-1805
<i>OS/390 SMP/E Reference</i>	SC28-1806
<i>OS/390 SMP/E Messages and Codes</i>	SC28-1738
<i>UNIX System Services User's Guide</i>	SC28-1891
<i>UNIX System Services Command Reference</i>	SC28-1892
<i>UNIX System Services Planning</i>	SC28-1890
<i>UNIX System Services Messages & Codes</i>	SC28-1908

3.0 Program Support

This section describes the IBM support available for Host On-Demand.

3.1 Program Services

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

3.2 Preventive Service Planning

Before installing Host On-Demand, you should also review the current support, product information, and Hints and Tips on the following Web sites:

- Support site: <http://www.ibm.com/software/webservers/hostondemand/support/>
- Product information site: <http://www.ibm.com/software/webservers/hostondemand/>
- Program Directory softcopy: <http://www.ibm.com/software/webservers/hostondemand/>
- Hints and Tips site: <http://www.ibm.com/support/>

3.3 Statement of Support Procedures

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will provide the address to which any needed documentation can be sent.

Figure 5 identifies the component IDs (COMPID) for Host On-Demand.

<i>Figure 5. Component IDs</i>			
FMID	COMPID	Component Name	RETAIN Release
HHOH600	5733A5900	Host On-Demand V6	600

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of Host On-Demand. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs integrated.

4.1 Program Level Information

No APARs have been incorporated into Host On-Demand.

4.2 Service Level Information

No PTFs against this release of Host On-Demand have been incorporated in the product tape.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating Host On-Demand. The following terminology is used:

- *Driving system*: the system used to install the program.
- *Target system*: the system on which the program is installed.

In many cases, the same system can be used as both a driving system and a target system. However, you may want to set up a clone of your system to use as a target system by making a separate IPL-able copy of the running system. The clone should 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.

Some cases where two systems should be used include the following:

- When installing a new level of a product that is already installed, the new product will delete the old one. By installing onto a separate target system, you can test the new product while still keeping the old one in production.
- When installing a product that shares libraries or load modules with other products, the installation can disrupt the other products. Installing onto a test system or clone will allow you to assess these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system required to install Host On-Demand.

5.1.1 Machine Requirements

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

5.1.2 Programming Requirements

<i>Figure 6. Driving System Software Requirements</i>	
Program Number	Product Name and Minimum VRM/Service Level
Any one of the following:	
5668-949	System Modification Program/Extended (SMP/E) Release 1.8.1 with PTF UR51070 or higher
5647-A01	OS/390 SMP/E V2R5 orV6 (with PTF UR51068) or V7, V8, V9 or V10
5694-A01	z/OS Version 1 Release 1 or higher
5655-G44	IBM SMP/E for z/OS and OS/390 Version 3 Release 1 or higher

The OMVS address space must be active in order to complete the installation process.

5.2 Target System Requirements

This section describes the environment of the target system required to install and use Host On-Demand.

Host On-Demand installs in the MVS (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 Mandatory Requisites: A mandatory requisite is defined as a product that is required without exception; this product either **will not install** or **will not function** unless this requisite is met. This includes products that are specified as REQs or PREs.

<i>Figure 7. Mandatory Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
5647-D43	Domino Go Webserver for OS/390 V5R0M0 or later (IBM HTTP SERVER)
Any one of the following for base Operating System	
5647-A01	OS/390 Version 2 Release 5 through Release 10 (** see note **)
5694-A01	z/OS V1.1 or V1.2

Note: **If you are running with OS/390 V2R10, there is an LDAP PTF that is needed to properly display LDAP sessions. The PTF number is UW74965. Please contact IBM Support to obtain the proper service.

5.2.2.2 Functional Requisites: A functional requisite is defined as a product that is **not** required for the successful installation of this product or for the basic function of the product, but **is** needed at run time for a specific function of this product to work. This includes products that are specified as IF REQs.

<i>Figure 8 (Page 1 of 3). Functional Requisites</i>		
Program Number	Product Name and Minimum VRM/Service Level	Function
5655-A46	IBM Java V1R1M8 or V1.3 for OS/390 or z/OS (**see note below)	Java
	OS/390 Communications Server TCP/IP Services (must be running)	TCP/IP

Figure 8 (Page 2 of 3). Functional Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
Any one of the following needed for Browser Function:		
	Netscape Navigator 4.6, 4.7 or 6.0	Browser Function
	Netscape Navigator (OS/2) 4.61, IBM Mozilla	Browser Function
	Microsoft Internet Explorer 4.01 with SP1, 5.0, 5.1, 5.5, 6.0	Browser Function
	Java Plugin 1.3 (Sun, IBM)	Browser Function
Any one of the following for Web Application Server Requisite		
5647-A01	WebSphere Application Server for OS/390 V1.2	Configuration Servlet
5655-A98	WebSphere Application Server for OS/390 V3.02 or V3.5	Configuration Servlet
	Lotus Go Version 4.6.2	Configuration Servlet
	Netscape IPlanet (JRun) Version 4.1	Configuration Servlet
Any one or more for Client Function		
	Windows 95 Release 2 (Local Client Only)	Client
	Windows 98/ME (Local Client Only)	Client
	Windows 4.0 with SP5 (Local Client Only)	Client
	Windows 2000 - Professional, Server, or Advanced Server (Local Client Only)	Client
	IBM AIX V4.3.3, V4.3.4, V5.1	Client
	IBM OS/2 Warp Server 4	Client
	Sun Solaris V2.6, V2.7, V2.8	Client
	HP-UX V10.20, V11.00	Client
	Redhat Linux V6.2, V7.0, V7.1	Client
	SUSE Linux V6.4, V7.0, V7.1	Client
	Caldera OpenLinux V2.3	Client
	TurboLinux V6.0, V6.1	Client
	Windows Terminal Server V4 and Windows Terminal Services	Client
	Netstation V2R1M0	Client
Optional - The following for LDAP Server Function		
	IBM LDAP Directory Server for OS/390 V2R5-V2R10, z/OS V1.1, V2.2	LDAP Function

Figure 8 (Page 3 of 3). Functional Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
	IBM LDAP Directory Server V2.1, V3.1.1, V3.2.1 (aka IBM SecureWay Directory)	LDAP Function
	Netscape Directory Server V3.1 and V4.0 (Windows NT and AIX)	LDAP Function
Optional - Any one of the following needed for BEAN Builder Function (HACL and Host Access Beans for Java)		
	IBM VisualAge for Java Version 3.0, 3.5, or 4.0	BEAN Builder
	WebGain's (formerly Symantec) Visual Cafe Professional Development Edition V4.0 or V4.1	BEAN Builder
	Borland/Inprise JABuilder Version 3.5 or 4.0	BEAN Builder
Optional - For SSL, any one of the following OS/390 V2R6 elements if SSL support is desired:		
	OS/390 Communications Server: IP Security SSL DES (56-bit Export) - FMID JTCP35L	
	OS/390 Communications Server: IP Security SSL DES (168-bit US) - FMID JTCP35K	

Note: **Host On-Demand V6 supports running with Java V1.3 for OS/390 releases V2R8 through R10 and z/OS V1.1 and V1.2. Java V1.1.8 is supported on all Host On-Demand supported OS/390 and z/OS releases. If you are running with Java V1.1.8 and OS/390 V2R10, there is a java PTF that is required, Generic APAR OW45575(PTF6). This includes PTF UW74404 (for component HJVA11F for OS/390 V2R4 and V2R5) and PTF UW78944 (for component HJVA11G for OS/390 V2R6 and higher). This is **required** for running on R10 but is recommended for other releases. Please contact IBM support to obtain the proper service or go to the IBM Java website to download the latest service:

<http://www.ibm.com/java/jdk/index.html>

5.2.2.3 Toleration/Coexistence Requisites: A toleration/coexistence requisite is defined as a product which must be present on a sharing system. These systems can be other systems in a multisystem environment (not necessarily sysplex), a shared DASD environment (such as test and production), or systems that reuse the same DASD at different time intervals.

Host On-Demand has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites: A negative requisite identifies products which must *not* be installed on the same system as this product.

Host On-Demand has no negative requisites.

5.2.3 DASD Storage Requirements

Host On-Demand libraries can reside on 3390 DASD.

Figure 9 on page 15 lists the total space required for each type of library.

Library Type	Total Space Required
Target	1 MB
Distribution	250 MB
HFS	1000 MB

Notes:

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

2. Abbreviations used for the data set type are:

- U** Unique data set, allocated by this product and used only by this product. In order to determine the correct storage needed for this data set, this table provides all required information; no other tables (or program directories) need to be referenced for the data set size.
- S** Shared data set, allocated by this product and used by this product and others. In order to determine the correct storage needed for this data set, the storage size given in this table needs to be added to 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 others. This data set is NOT allocated by this product. In order to determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). This existing data set 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 one and reclaim the space used by the old release and any service that had been installed. You can determine whether or not 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 on the names and sizes of the required data sets, please refer to 6.1.6, "Allocate SMP/E Target and Distribution Libraries and Paths" on page 21.

3. Abbreviations used for the HFS Path type are:

- N** New path, created by this product.

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

5. All target libraries listed have the following attributes:

- The data set may be SMS managed
- It is not required for the data set to be SMS managed
- It is not required for the data set to reside on the IPL volume
- The values in the "Member Type" column are not necessarily the actual SMP/E element types identified in the SMPMCS.

6. All target libraries listed which contain load modules have the following attributes:

- The data set may be in the LPA
- It is not required for the data set to be in the LPA
- The data set may be in the LNKLIST
- It is not required for the data set to be APF authorized

Figure 10. Storage Requirements for SMP/E Work Data Sets

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
SMPWRK1	S	PO	FB	80	16	216
SMPWRK2	S	PDS	FB	80	16	216
SMPWRK3	S	PDS	FB	80	6	216
SMPWRK4	S	PDS	FB	80	6	216
SMPWRK6	S	PDS	FB	80	16	216
SYSUT1	U	SEQ	--	--	34	0
SYSUT2	U	SEQ	--	--	34	0
SYSUT3	U	SEQ	--	--	34	0
SYSUT4	U	SEQ	--	--	34	0

The following table provides an estimate of the storage needed in the SMP/E data sets for Host On-Demand. The estimates must be added to those of any other programs and service being installed to determine the total additional storage requirements.

If the table indicates that the SMPLTS data set must be a PDSE, but your existing SMPLTS is a PDS, you will need to allocate a new PDSE and copy your existing SMPLTS into it, and then change the SMPLTS DDDEF entry to indicate the new PDSE data set.

Figure 11. Storage Requirements for SMP/E Data Sets

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
SMPLTS	E	PDSE	U	0	15	0
SMPMTS	E	PDS	FB	80	0	0
SMPPTS	S	PDS	FB	80	0	0
SMPSCDS	S	PDS	FB	80	0	0
SMPSTS	S	PDS	FB	80	0	0

The following figures describe the target and distribution libraries and HFS paths required to install Host On-Demand. The storage requirements of Host On-Demand 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 12. Storage Requirements for Host On-Demand 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
LINKLIB	LMOD	TGTVOL	S	PO	U	0	6	1
SHOMINST	Sample, EXEC	TGTVOL	U	PDS	FB	80	3	5

Figure 13. Host On-Demand HFS Paths

DDNAME	T Y P E	Path Name
SHOM0001	N	/usr/lpp/HOD/IBM

Figure 14. Storage Requirements for Host On-Demand 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
AHOMHFS1	U	PDS	VB	32600	6761	1
AHOMINST	U	PDS	FB	80	3	5
AHOMMOD1	U	PDS	U	0	7	1

5.3 FMIDs Deleted

Installing Host On-Demand may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS. See Appendix A, "Host On-Demand Install Logic" on page 35 for more information on how to do this.

If you do not wish to delete these FMIDs at this time, you must install Host On-Demand into separate SMP/E target and distribution zones.

Note: These FMIDs will not automatically be deleted from the Global Zone. Consult the SMP/E manuals for instructions on how to do this.

5.4 Special Considerations

The distribution libraries are assumed to be contained in a single HFS data set whose mount point is */usr/lpp/HOD*. Host On-Demand can be installed into an existing HFS, but if you wish to create your own HFS, the sample job HOMHFS can be used to allocate the HFS. It is recommended that you create your own HFS for Host On-Demand for serviceability. The HOMISMKD JCL sample is used to create the directory structure for your HFS. HOMISMKD also creates a directory structure under the */usr/lpp/HOD* filesystem, which is assumed to already be allocated and mounted on the target system.

After you finish with the SMP/E portion of your installation including running HOMAPPLY and HOMACCPT, you will have to run the shell script **hod60mvs.sh** to complete the installation. Refer to **6.2, "Activating Host On-Demand"** on page 26 for more details.

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of Host On-Demand.

Please note the following:

- If you want to install Host On-Demand 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.
- Sample jobs have been provided to help perform some or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries required for SMP/E execution have been defined in the appropriate zones.
- The SMP/E dialogs may be used instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing Host On-Demand

6.1.1 SMP/E Considerations for Installing Host On-Demand

This release of Host On-Demand is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. The SMP/E dialogs may be used to accomplish the SMP/E installation steps.

6.1.2 SMP/E Options Subentry Values

The recommended values for some SMP/E CSI subentries are shown in Figure 15. Use of values lower than these may result in failures in the installation process. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. Refer to the SMP/E manuals for instructions on updating the global zone.

SUB-ENTRY	Value	Comment
DSSPACE	(1000,500,350)	Specifies the primary and secondary (in Tracks) and the number of directory blocks to be allocated for each SMPTLIB dataset.
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

Host On-Demand uses the CALLLIBS function provided in SMP/E to resolve external references during installation. When Host On-Demand is installed, ensure that DDDEFs exist for the following libraries:

- CEE.SCEELKED

Note: The DDDEFs above are used only to resolve the link-edit for Host On-Demand using CALLLIBS. These data sets are not updated during the installation of Host On-Demand.

6.1.4 Unload the Sample JCL from the Product Tape

The following sample installation jobs are provided on the distribution tape to help you install Host On-Demand:

Figure 16. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
HOMRECVE	RECEIVE	Sample RECEIVE job	IBM.HHOH600.F1
HOMALLOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HHOH600.F1
HOMDDCLN	DELETE	Sample job for deleting Version 2 DDDEFs (only for V2 migrations)	IBM.HHOH600.F1
HOMDDDEF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HHOH600.F1
HOMCOPY	COPY	Sample job to copy V2 to the current version (only for V2 migrations)	IBM.HHOH600.F1
HOMHFS	HFS	Sample job to define Host On-Demand HFS data set (Optional)	IBM.HHOH600.F1
HOMISMKD	MKDIR	Sample job to invoke the supplied HOMMKDIR EXEC to allocate HFS paths	IBM.HHOH600.F1
HOMAPPLY	APPLY	Sample APPLY job	IBM.HHOH600.F1
HOMACCPT	ACCEPT	Sample ACCEPT job	IBM.HHOH600.F1
HOMSERVR	START	Sample job for starting Host On-Demand	IBM.HHOH600.F1

You may copy the jobs from the tape by submitting the following job. Add a job card and change the lowercase parameters to uppercase values to meet your site's requirements before submitting.

Note: You will have to modify the following JCL and sample HOMRECVE job (if used) as the 6250 media ships on 2 tapes.

```

//STEP1 EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//IN DD DSN=IBM.HHOH600.F1,UNIT=tunit,VOL=SER=HOH600,
// LABEL=(2,SL),DISP=(OLD,KEEP)
//OUT DD DSNAME=jcl-library-name,
// DISP=(NEW,CATLG,DELETE),
// VOL=SER=dasdvol,UNIT=dunit,
// DCB=*.STEP1.IN,SPACE=(TRK,(3,1,2))
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN DD *
COPY INDD=IN,OUTDD=OUT
SELECT MEMBER=(HOMACCP,T,HOMALLOC,HOMAPPLY,HOMCOPY,HOMDDCLN)
SELECT MEMBER=(HOMDDDEF,HOMHFS,HOMISMKD,HOMMKDIR)
SELECT MEMBER=(HOMRECVE,HOMSERVR)
/*

```

where **tunit** is the unit value matching the product tape or cartridge, **jcl-library-name** is the name of the data set where the sample jobs will reside, **dasdvol** is the volume serial of the DASD device where the data set will reside, and **dunit** is the DASD unit type of the volume.

You can also access the sample installation jobs by performing an SMP/E RECEIVE for FMID HHOH600, and then copying the jobs from data set **hlq.HHOH600.F1** to a work data set for editing and submission. Note: "hlq" is the high-level qualifier specified as the DSPREFIX val in the SMPTLIB DDDEF or the OPTIONS entry of the global zone.

6.1.5 Perform SMP/E RECEIVE (HOMRECVE)

Edit and submit sample job HOMRECVE to perform the SMP/E RECEIVE for Host On-Demand. Consult the instructions in the sample job for more information.

NOTE: If you obtained Host On-Demand as part of a CBPDO, you can use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the Host On-Demand FMIDs as well as any service, HOLDDATA, or preventive service planning (PSP) information included on the CBPDO tape. For more information, refer to the documentation included with the CBPDO.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.6 Allocate SMP/E Target and Distribution Libraries and Paths

(HOMALLOC)

Edit and submit sample job HOMALLOC to allocate the SMP/E target and distribution libraries for Host On-Demand. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.7 Delete Version 2 DDDEFs - Version 2 migration only (HOMDDCLN)

Edit and submit sample job HOMDDCLN if you are migrating from Version 2 to the current version of Host On-Demand. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.8 Create DDDEF Entries (HOMDDDEF)

Edit and submit sample job HOMDDDEF to create the DDDEF entries for the SMP/E target and distribution libraries for Host On-Demand. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

This step may receive warning message GIM56501W and rc=4. This message is issued when DDDEF entries are added because they did not exist prior to running the job.

This step may also receive warning message GIM27701W and rc=4. This message is issued when DDDEF entries are added because they did not exist prior to running the job.

This step may also receive the following messages:

```
GIM35601E ** DATASET SUBENTRY WAS NOT ADDED BECAUSE  
          IT ALREADY EXISTS.  
GIM25601I - THE SPECIFIED ENTRY WAS NOT UPDATED  
          BECAUSE OF AN ERROR DURING UCLIN PROCESSING.
```

with a rc=12 and job failure if the **SCEELKED** or **LINKLIB** DDDEF entries already exist. You can either delete the **ADD** for **SCEELKED** or **LINKLIB** or change the **ADD** to a **REP** and rerun the job. This job must be rerun if the job fails with the messages above and rc=12.

6.1.9 Copy Version 2 HFS - V2 migrations only (HOMCOPY)

This job is only needed if you are migrating from Version 2. This job takes a copy of a previous version of the Host On-Demand HFS, dumps and restores it to a much larger HFS to be used for the current installation. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.10 Allocate Host On-Demand HFS Data Set (HOMHFS) - Optional

IBM WebSphere Host On-Demand V6 for OS/390 can be installed into any HFS. However, if you wish to create your own HFS for Host On-Demand, edit and submit sample job HOMHFS to allocate the HFS. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.11 Allocate HFS Mount Points and paths (HOMISMKD)

In this step you will create the HFS paths and the mount point for Host On-Demand. The instructions to create the mount point for Host On-Demand is detailed below as well as directions for running the HOMISMKD job which will create the paths.

The distribution libraries are assumed to be contained in a single HFS data set whose mount point is */usr/lpp/HOD*. Host On-Demand can be installed into an existing HFS or a new one created using the HOMHFS sample job. Use the commands below and the HOMISMKD job as needed to create the paths and mount points for Host On-Demand. If you created a new HFS, you will need to complete all three (3) steps below. If you are installing into an existing HFS, you will only have to do step #3 (omit steps 1 and 2).

Note: The TSO MKDIR commands must be invoked using a RACF userid with root authority in the OS/390 UNIX System. Path as well as mount point specification in the OS/390 UNIX System is case sensitive.

Follow these steps to create the mount point and directories:

1. From TSO issue the following TSO MKDIR command to create the */usr/lpp/HOD* mount point.

```
TSO MKDIR '-PATHPREFIX-/usr/lpp/HOD' MODE (7,5,5)
```

Note: Change the occurrences of the string *-pathprefix-* to the appropriate high level directory name. For users installing in the root, this would be null. For others, the high level directory may be something like */service/* or a more meaningful name. Please note the replacement string is case sensitive.

2. Issue the following MOUNT command to mount the HFS on the */usr/lpp/HOD* mount point. The HFS was previously allocated by the HOMHFS job.

Note: The mount command should be on one line.

Note: Change the **hfsprfx** qualifier to the name of the qualifier used in the HOMHFS installation job.

```
TSO MOUNT FILESYSTEM('hfsprfx.hom.hfs')  
MOUNTPOINT('-PATHPREFIX-/usr/lpp/HOD') TYPE(HFS)
```

Note: Change the occurrences of the string *-pathprefix-* to the appropriate high level directory name. For users installing in the root, this would be null. For others, the high level directory may be

something like /service/ or a more meaningful name. Please note the replacement string is case sensitive.

3. Edit and submit sample job HOMISMKD to allocate the HFS paths for Host On-Demand. Consult the instructions in the sample job for more information.

This job calls HOMMKDIR which creates the directory structure for Host On-Demand. HOMMKDIR is a REXX script which is called by HOMISMKD. HOMMKDIR should not be invoked by itself.

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

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.12 Perform SMP/E APPLY (HOMAPPLY)

Edit and submit sample job HOMAPPLY to perform an SMP/E APPLY CHECK for Host On-Demand. 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).

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:

This step should complete with Return Code = 0.

Expected Return Codes and Messages from APPLY:

This step should complete with Return Code = 0.

6.1.13 Perform SMP/E ACCEPT (HOMACCPT)

Edit and submit sample job HOMACCPT to perform an SMP/E ACCEPT CHECK for Host On-Demand. 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:

This step should complete with Return Code = 0.

Expected Return Codes and Messages from ACCEPT:

This step should complete with Return Code = 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.

6.1.14 Sample Job for starting Host On-Demand (HOMSERVER)

Edit the sample HOMSERVER job as a JCL example for starting Host On-Demand You will need to place this sample in an authorized PROCLIB and modify as necessary for your installation.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.15 Completing the Installation of Host On-Demand

To complete the install of Host On-Demand, the **hod60mvs.sh** shell script is provided in the /usr/lpp/HOD directory. This shell script will migrate V2.0, V3.0, V4.X or V5.X configuration data and install the current version of the software. Review the instructions in the shell script prior to running this script.

Here is a more detailed description of what this shell script does:

1. If you are migrating from Version 2.0, Version 3.0, Version 4.X, or Version 5.X to the current version of Host On-Demand, this script will do the following based on what version you are migrating from. Uncomment the shell script statements that are appropriate to the version you are migrating from.

- Delete these two directories:
 - /usr/lpp/HOD/ondemand/lib
 - /usr/lpp/HOD/ondemand/HOD
- The directory which has the Version 2.0, Version 3.0, Version 4.X or Version 5.X configuration data is not deleted and that configuration data will be migrated to the current version of the software. The directory which is not deleted is:
 - /usr/lpp/HOD/ondemand/private

2. Install Host On-Demand

This shell script will install the hod60mvs.tar.Z file. If no earlier version was installed the current version of Host On-Demand will be installed in the following directory:

- /usr/lpp/HOD/hostondemand

3. This shell script will also create the necessary installation directories for the Native Authentication Service (HODRAPD). Two directories will be created in the default /usr/lpp/HOD/hostondemand/private directory which will link to the HODRAPD module that was installed and link-edited by SMP/E during the Host On-Demand V6.0 SMP/E installation.

Note: Please note that the subdirectory named "ondemand" in earlier versions of this product has been renamed to "hostondemand" in the current version.

6.2 Activating Host On-Demand

6.2.1 Update Web Server Pass Rules and Resource Mapping Directives

To activate the functions of Host On-Demand, add the Pass Rules listed below to the *Pass Rule* section of your Web Server configuration file. The configuration file name is typically **httpd.conf**. (For IBM WebSphere Application Server and Domino Go Webserver). The **httpd.conf** file is typically found in your **/etc** directory in UNIX System Services. There are three new *Pass Rules* for Host On-Demand (V6 only). Listed below are all the *Pass Rules* that you will need to have in your **httpd.conf** file. The new *Pass Rules* are statements three, four, and five below.

These *Pass Rules* **must be** in the order listed and must be placed prior to the **Pass /*** *Pass Rule*. The rules assume an alias of **/hod/**. Consult your Web Server documentation for further details.

The *Pass Rules* are:

```
# *** ADD NEW PASS RULES HERE ***
```

```
Pass /hod/*.html /usr/lpp/HOD/hostondemand/HOD/*.html.ascii
Pass /hod/*.HTML /usr/lpp/HOD/hostondemand/HOD/*.HTML.ascii
Pass /hod/*.js /usr/lpp/HOD/hostondemand/HOD/*.js.ascii
Pass /hod/*.properties (continued on next line)
    /usr/lpp/HOD/hostondemand/HOD/*.properties.ascii
Pass /hod/*.props /usr/lpp/HOD/hostondemand/HOD/*.props.ascii
Pass /hod/* /usr/lpp/HOD/hostondemand/HOD/*
```

Note: Please note that the subdirectory named "ondemand" in earlier versions of this product has been renamed to "hostondemand" in the current version.

The following resource mapping directives should also be included among the other rules in the AddType section of the Web Server configuration file:

```
AddType .cab application/octet-stream binary 1.0
AddType .jar multipart/x-zip binary 1.0
```

6.2.2 Start Host On-Demand

The HOMSERVER sample job is supplied to start Host On-Demand. This job starts the **ServiceManager.sh** shell script, which starts the Host On-Demand Service Manager. The **ServiceManager.sh** shell script is found in the **/usr/lpp/HOD/hostondemand/lib** directory and must be modified for correct execution of Host On-Demand. You must modify the **ServiceManager.sh** for the correct level of both Java and your level of debug. Please note the comments in **ServiceManager.sh** regarding the CLASSPATH variables. You will need to uncomment one of the CLASSPATH statements that corresponds to your level of Java. Java V1.1.8 is supported for all Host On-Demand supported releases of OS/390(V2R5-R10) and z/OS V1.1 and V1.2. Java V1.3 is supported for OS/390 V2 R8-R10 and z/OS V1.1 and V1.2.

Note: You may want to rename the HOMSERVER sample job to a started PROC name of less than 8 characters (ie., HOMSRV). This will help when displaying subprocesses and stopping HOD. You will be able to cancel HOD and all subprocesses at once if your started PROC name is less than 8 characters.

Prior to starting Host On-Demand, copy the HOMSERVER sample job from your install library SHOMINST to an authorized PROCLIB. If you are installing in a directory other than the default directory (**/usr/lpp/HOD**) you must change the PARM parameter to point to the location where you have ServiceManager.sh installed.

The HOMSERVER procedure must be started from a RACF USERID with root authority in OS/390 UNIX System Services. Here are the basic instructions to enable Host On-Demand to be assigned to the appropriate USERID. These are not detailed instructions.

- Create a USERID for the HOMSERVER procedure, (for example you might create a HOMSERVER USERID)
 - Choose a default group that is defined to OS/390 UNIX (has an OS/390 UNIX segment with a GID (Groupid) defined; for example you might have a group called OMVSGRP which has all OS/390 UNIX users).

- Add an OS/390 UNIX segment giving the userid root authority by assigning it a UID of 0.
- Create a started class entry (or update ICHRIN03) for the HOMSERVER procedure
 - Make the entry name procname.* (for example, HOMSERVER.*)
 - Assign "=Member" to the user thereby making userid and the procname the same (for example HOMSERVER.*).
 - Assign the procname to the USSgroup that is the default group for the user (for example OMVSGRP).

To start Host On-Demand, start the sample job HOMSERVER.

To stop Host On-Demand, cancel sample job HOMSERVER.

Note: With a procname of 8 characters, you will need to provide the job's address space value to cancel the main proc. You will also need the address space value to cancel the subprocesses. If your procname is > 8 characters (ie., HOMSRV), you will only need to issue the 'cancel HOMSRV' command to cancel both the main process as well as the subprocesses.

6.2.3 Configuring Host On-Demand (Administration)

You must now load the Host On-Demand Administration Utility to define and configure USER and GROUP accounts, define emulator sessions, the Redirector and Database On-Demand, as necessary

1. Type the following URL into your browser URL area: `http://<server_name>/hod/HODMain.html` where `<server name>` refers to your OS/390's TCP/IP host name.
2. Select **README - Please!** to see information that was not included in this document, the **Getting Started** guide or the Helps.
3. Select **Administration Client** to begin configuring the Server.

Information about the Administration Utility and how to perform the above administration tasks is provided in the **Configuring Host On-Demand** section in **Getting Started**.

6.2.4 Starting the Optional Native (Platform) Authentication Service (HODRAPD)

Note: The following can be done only after the **hod60mvs.sh** has been successfully completed. The **hod60mvs.sh** shell script sets up **hodrapd** directories in your `/usr/lpp/HOD/hostondemand/private` directory for accessing the HODRAPD module that was installed during the SMP/E CALLLIBS processing. When the Native (Platform) Authentication Service is started from USS (UNIX System Services), the HODRAPD module is executed.

Provided below are the statements and links that are set-up for the HODRAPD module by the **hod60mvs.sh** shell script. These statements and links are provided in the event they are somehow removed at a later time:

```
#####
# Create installation directories for Native Authentication
#
# Two directories will be created in the
# $HOD60_INSTALL_DIR/hostondemand/private directories which will
# execute the HODRAPD module that was installed by SMP/E
# during the Host On-Demand V6.0 SMP/E installation.
#
#####

touch $HOD60_INSTALL_DIR/hostondemand/private/HODRAPD
ln -s $HOD60_INSTALL_DIR/hostondemand/private/(cont. on next line)
    HODRAPD $HOD60_INSTALL_DIR/hostondemand/private/hodrapd

chmod 744 $HOD60_INSTALL_DIR/hostondemand/private/HODRAPD
chmod +t $HOD60_INSTALL_DIR/hostondemand/private/HODRAPD
```

6.2.4.1 Setup for Starting the Native Authentication Service: The installation is designed to install the server load module into SYS1.LINKLIB. The module is automatically link-edited during the the JCLIN CALLLIBS processing during the APPLY. If you choose to install and execute the server from an alternative dataset, that dataset must be accessed by the system LNKST or LPALIB concatenation.

The authentication server is invoked as a USS (UNIX) command. The server must run under the ownership of an ID that has an OMVS segment defined that includes superuser authority.

The following example illustrates the RACF command used to create a user profile with superuser authority:

```
AU userid DFLTGRP(oegroup) name(AUTHSERV) OMVS(UID(0) HOME('/'))
```

Additionally, if your site is running in a BPX.DAEMON environment, then RACF NOPADCHK processing must be enabled for the dataset containing the HOMRAPD load module. The following example gives the appropriate RACF commands:

```
RALTER PROGRAM * ADDMEM ('your.rapd.dataset'/volser/NOPADCHK)
SETROPTS WHEN(PROGRAM) REFRESH
```

6.2.4.2 Starting the Native (Platform) Authentication Service in USS: To start the Native Authentication Service (HODRAPD) using USS (Unix System Services), go to the /usr/lpp/HOD directory on the system where HODRAPD is installed and at the command prompt, enter:

```
hodrapd.sh
```

Options such as logging, time-out values, and maximum number of requests the server will allow can be specified when you start the Native Authentication Service. To change the options, edit (oedit) **hodrapd.sh** in the /usr/lpp/HOD default directory. You **must** keep the (-x) option, but you can append the following options to the (-x) where the options are:

- l (ie., -xl)** Enable logging.
- t (ie., -xt)** Set socket timeout value, in seconds. The default is 20.
- c (ie., -xc)** Set the maximum number of requests the server will allow.

For example, to start the native authentication service and set the socket timeout to 100 seconds, edit the line where the hodrapd module is called (line 82) and change the call (i.e., hodrapd -x) to:

```
hodrapd -xt100
```

To start the platform authentication service with a maximum number of requests, edit the line where the hodraps module is called (i.e., hodrapd -x) to:

```
hodrapd -xc100
```

You will see a message displayed to USS that the Native Authentication Service is starting. When the Service has completely started, you will see a message display to your OS/390 console as follows:

```
BPXF024I (USER2) 08/11/00 09:32:27 hodrapd: PAS0001 Starting IBM
Platform Authentication Service.
```

You can also check the status of the Native Authentication Service by issuing the following from your USS prompt:

```
netstat -a
```

This command will display the status of the Service. The Native Authentication Service uses the *well_known_port=2569*. The netstat -a command will display the following based on your USERID for the Native Authentication Service:

```
MVS TCP/IP onetstat CS V2R8      TCPIP Name: TCPIP          09:37:37
User Id  Conn      Local Socket      Foreign Socket      State
-----  ----  -----
USER25  000002E5  0.0.0.0..2569    0.0.0.0..0        Listen
```

where USER2 is the USERID where the Native Authentication has been started from and USER25 is the Native Authenticated process that has started.

The **hodrapd.sh** shell script appends to your LIBPATH and NLSPATH. You may want to take the statements found in the shell script and add them to your /etc/profile on USS. You will need to re-execute your /etc/profile to activate the changes. You do this by entering *. profile* from your /etc directory. The LIBPATH and NLSPATH statements are provided below (using default paths):

```
export NLSPATH=$NLSPATH:/usr/lpp/HOD/hostondemand/lib/msgs/%N
export LIBPATH=$LIBPATH:/usr/lpp/HOD/hostondemand/lib/
```

6.2.5 OS/390 LDAP Directory Configuration

If you have an existing OS/390 Security Server LDAP Server and are running on OS/390 V2R5 and above, verify the following before configuring it for Host On-Demand:

- Verify that the LDAP Server is configured as described in the **OS/390 Security Server LDAP Server Administration and Usage Guide**(SC24-55861).
- Verify that a suffix has been added and associated with an object class.

You can use this suffix as the parent distinguished name (DN) for Host On-Demand or you can use a lower-level object.

Note: The original schema files shipped with OS/390 LDAP Server create about 100 DB2 tables. The original schema definitions create about 600 tables. Before attempting to use these schema files, be sure that DB2 is configured to allow over 600 DB2 tables to be created and used.

LDAP32K is the tablespace for most of the over 600 created tables. The SPUFI command for creating this tablespace should look similar to:

```
create large tablespace eeeeeee in dddddddd
  numparts 1 bufferpool BP32K
  using stogroup sysdeflt priqty 720 secqty 720;
```

where *sysdeflt* is the installation-dependent, systems default stogroup that you obtain from your local DB2 administrator.

To configure an existing LDAP directory for Host On-Demand, familiarize yourself with the LDAP directory and the default schema shipped with it. Decide how Host On-Demand will fit into your network and organizational structure, and design the LDAP directory information tree. For example,

- To build a directory information tree for an entire organization, use the organization object class for the suffix:

```
dn: o=MyOrganization
objectclass: organization
o: MyOrganization
```

- To build a directory information tree for one division of an organization, use the organizationalUnit object class for the suffix:

```
dn: ou=MyDivision, o=MyOrganization
objectclass: organizationalUnit
ou: MyDivision
```

To add to the directory information tree in the LDAP directory, use the `ldapadd` command.

The original schema files shipped with the OS/390 LDAP Server need to be updated to support the new Host On-Demand schema. Host On-Demand will provide delta schema files to bring the original schema up to the required level.

To add the Host On-Demand schema to the existing LDAP Directory:

1. From a USS command prompt change to the `/etc` directory that the LDAP Server is using.
2. Copy the following schema files from the `/usr/lpp/HOD/hostondemand/HOD/ldap` directory to the `/etc` directory as follows:

```
cp /usr/lpp/HOD/hostondemand/HOD/ldap/V2.1.IBM.390.at /etc/
cp /usr/lpp/HOD/hostondemand/HOD/ldap/V2.1.IBM.390.oc /etc/
cp /usr/lpp/HOD/hostondemand/HOD/ldap/V2.1.IBM.oc /etc/
```

- a. Edit the LDAP directory attribute file, **`sladp.at.conf`**, and append the following line:

```
include /etc/V2.1.IBM.390.at
```

Save your changes to **`sladp.at.conf`**.

b. Edit the LDAP directory object class file, **slapd.oc.conf**, and append the following lines:

```
include /etc/V2.1.IBM.390.oc
include /etc/V2.1.IBM.oc
```

Save your changes to **slapd.oc.conf**.

3. Restart the LDAP Server.

The following configuration changes are offered as possible performance enhancements:

- Add the following lines to **slapd.conf**:

```
index principalPtr eq
index dc eq
index o eq
index name eq
index objectClass eq
index uid eq
```

- Sizelimit is the number of entries LDAP will return on a search request; change the sizelimit to 5000.

6.2.6 Hints and Tips

1. For the best performance of Host On-Demand, we recommend that you install the latest version of Java for OS/390. For information on how to download Java, go to this web site:
<http://www.ibm.com/java/jdk/index.html>
2. If you are installing Host On-Demand in a directory other than the default directory (/usr/lpp/HOD), you need to change paths in these shell scripts:
 - hod60mvs.sh (full path is /usr/lpp/HOD/hod60mvs.sh)
 - ServiceManager.sh (full path is /usr/lpp/HOD/hostondemand/lib/ServiceManager.sh)
 - hodrapd.sh (full path is /usr/lpp/HOD/hodrapd.sh)

Refer to the shell script comments for instructions.

3. For product-support information, go to the Host On-Demand Support Site at
<http://www.ibm.com/software/webservers/hostondemand/support.html>
4. The program tape has both the **Getting Started** guide and the **README** which can be viewed via your browser once the product has been installed or from the Host On-Demand Web site. Please see Section 2.3 on how to access the publications via your browser.
5. Make sure that the CLASSPATH, LIBPATH, and PATH statements are all set correctly in your USS profile. For the CLASSPATH, LIBPATH, and PATH statements, you will need updates for your installed Java libraries as detailed below. Since Host On-Demand V6 supports both Java 1.1.8 (for all supported Host On-Demand OS/390 releases and all supported z/OS releases) and Java V1.3 (for OS/390 releases R8-R10 and z/OS V1.1,V1.2), you will need to point to your installed level of Java. You should also make sure that the CLASSPATH, LIBPATH, and PATH statements also include the proper WebSphere product statements (ie., usually /usr/lpp/internet/bin) Usually, the USS profile is found in your **/etc** directory in USS.

- The CLASSPATH environment variable should point to your installed OS/390 Java library directory base class. The CLASSPATH statement would include the first statement below for Java V1.1.8 support. For Java V1.3 support, you will not have to include any Java related CLASSPATH information.

```
CLASSPATH=/usr/lpp/java/J1.1/lib/classes.zip
```

- The LIBPATH environment variable should also point to the correct Java libs. The LIBPATH statement would include one of the following paths as below. The first is for Java V1.1.8 support, the second is for Java V1.3 support.

```
LIBPATH=/usr/lpp/java/J1.1/lib
LIBPATH=/usr/lpp/java/IBM/J1.3/lib
```

- The PATH environment variable should also point to the correct Java binaries. The PATH statement would include one of the following paths as below. The first is for Java V1.1.8 support, the second is for Java V1.3 support.

```
PATH=/usr/lpp/java/J1.1/bin
PATH=/usr/lpp/java/IBM/J1.3/bin
```

6. You cannot run two Host On-Demand servers on the same stack because the Service Manager listens on a specific IP port. Two service managers running at the same time will try to grab the same port; the result is that one of the two will fail.
7. If you decide the job name for the Host On-Demand server from HOMSERVR to something fewer than eight characters, beware that the job names for the tasks listening on ports 8999 and 3470 will get a digit appended to them. This is important if you decide to make port reservations in your TCPIP.PROFILE using the explicit job names.
8. Since the configuration files are all stored in the /private directory, you should ensure that the directory path is correct. If you installed Version 3 in the default directories, it would be /usr/lpp/HOD/ondemand/private. The installation script *hod60mvs.sh* will migrate your Version 3 /private directory. Double check to make sure the migration was successful and you see your Version 3 /ondemand/private files in /hostondemand/private.
9. Be aware that whatever method you may use to edit those files could cause problems such as carriage returns or blanks being inserted. Use a flat-text editor. Or simply use **FTP** to *ftp* your file to a Windows based text editor and then *ftp* back the modified file to your USS Host.
10. During the installation of Host On-Demand Version 6.0.X for OS/390, the /usr/lpp/HOD/hostondemand/private directory will be updated with files that will be updated in an execution environment, not just by maintenance (PTFs). It is advised that customers may now want to mount a separate (non-service) HFS onto the /usr/lpp/HOD/hostondemand/private directory as it is now updated during the execution of Host On-Demand. Please make sure you do a TSO MKDIR for the new mountpoint and also MOUNT the new HFS to the new mountpoint.
11. If you are running multiple stacks and you want the Host On-Demand server to run on one stack only, you need to create stack affinity by adding the respective environment variable to the ServiceManager.sh shell script:

```
export _BPXK_SETIBMOPT_TRANSPORT=XXXXXXXX
```

where XXXXXXXX is the name of the TCP/IP stack with which you want to establish affinity.

12. To conserve space on your system, once Host On-Demand is successfully installed, you may erase the `/usr/lpp/HOD/hod60mvs.tar.Z` file.
13. If you experience java Service Manager 'out-of-memory' errors, causing various tasks to fail such as:
 - Saving session information
 - Loading a large number of users
 - Attempting to save large blocks of trace data

The following two parameters can be used on the start-up command in the Host On-Demand Service Manager shell start-up script (`/usr/lpp/HOD/hostondemand/lib/ServiceManager.sh`)

a. `-mx32m`

- The `mx32m` parameter increases the maximum Java heap size. The heap size is increased from the default value of 3 to 32MB.

b. `-oss256k`

- The `oss256k` parameter increases the maximum Java stack size (per thread). The value is changed from the default of 128 KB to 256 KB.

These parameters have been added as a new start-up option line in your `ServiceManager.sh` script. The line is commented out by default. If you need to run Host On-Demand with increased Java heap and stack parameters, uncomment the line in the `ServiceManager.sh` shell script that begins as follows (making sure to comment out your previous executable statement):

```
java -mx32m -oss256k -classpath .:sm.zip:.....
```

Appendix A. Host On-Demand Install Logic

A.1 SMP/E Modification Control Statements

The SMP/E Modification Control Statements (SMPMCS) for Host On-Demand are contained in the SMPMCS file on the installation tape. The SMPMCS for each FMID in the product will be loaded to the SMPPTS data set, with a member name matching the FMID, when the FMID is SMP/E RECEIVED. You may browse or print these members using TSO/E, ISPF, or IEBGENER (or IEBPTPCH) .

A.2 SMP/E JCLIN

The files containing JCLIN are:

FMID HHOH600: 'high-level-qualifier'.HHOH600.F1(HHOH600)

Note: The high-level-qualifier is the qualifier specified as the DSPREFIX in the SMP/E OPTIONS.

Reader's Comments

Program Directory for IBM WebSphere Host On-Demand V6 for OS/390

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Accuracy of the definition of the installation tasks	1	2	3	4	5	N
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