IBM

Program Directory for

IBM Tivoli NetView for z/OS

Japanese

Version 5 Release 3, Modification Level 00

Program Number 5697-ENV

FMID HENV53B

for Use with
z/OS

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GI10-3210-04

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 Tivoli NetView for z/OS. This publication refers to IBM Tivoli NetView for z/OS as Tivoli NetView for z/OS Version 5 Release 3.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 4 identifies the basic and optional program materials and documentation for Tivoli NetView for z/OS Version 5 Release 3.

- 3.0, "Program Support" on page 9 describes the Tivoli support available for Tivoli NetView for z/OS Version 5 Release 3.

- 4.0, "Program and Service Level Information" on page 11 lists the APARs (program level) and PTFs (service level) incorporated into Tivoli NetView for z/OS Version 5 Release 3.

- 5.0, "Installation Requirements and Considerations" on page 12 identifies the resources and considerations required for installing and using Tivoli NetView for z/OS Version 5 Release 3.

- 6.0, "Installation Instructions" on page 34 provides detailed installation instructions for Tivoli NetView for z/OS Version 5 Release 3. It also describes the procedures for activating the functions of Tivoli NetView for z/OS Version 5 Release 3, or refers to appropriate publications.

- Appendix B, "Program Level Information" on page 55 provides program level information for Tivoli NetView for z/OS Version 5 Release 3.

Before installing Tivoli NetView for z/OS Version 5 Release 3, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that were supplied with this program in softcopy form as well as this Program Directory and then keep them for future reference. Section 3.2, "Preventive Service Planning" on page 9 tells you how to find any updates to the information and procedures in this Program Directory.

Tivoli NetView for z/OS Version 5 Release 3 is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The Program Directory is provided in softcopy form on the CBPDO tape which is identical to the hardcopy form provided with your order. All service and HOLDDATA for Tivoli NetView for z/OS Version 5 Release 3 are included on the CBPDO tape.

Do not use this Program Directory if you are installing Tivoli NetView for z/OS Version 5 Release 3 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.

1.1 Tivoli NetView for z/OS Version 5 Release 3 Description

Building on the already rich functionality of Tivoli NetView for z/OS Version 5 Release 2, Version 5 Release 3 provides these additional enhancements.

- Expanded Tivoli Enterprise Portal (TEP) integration
  - Additional data and workspaces, including
    - NetView self-management information
    - Additional IP connections
    - DVIPA and sysplex information
    - Out-of-the-box situations and expert advice
- Cross-product linkage
  - Expanded workspace linkage to the OMEGAMON product suite for greater correlation of availability and performance management
  - Take Action Command Security using NetView for z/OS provides command authorization and security
  - NetView"s Discovery Library Adapter (DLA) makes NetView data available to other management products in IBM's Change and Configuration Management Database (CCMDB).
- IP Management
  - The ability to display IPv6 data and to operate in an IPv6 environment using IPv6 sockets
  - Expanded information on active IP connections
- NLDM enhancements, including Enterprise Extender support
- 3270 console support of DVIPA data
- Time to Value
  - Updated CNMSTYLE Report Generator

1.2 Tivoli NetView for z/OS Version 5 Release 3 FMIDs

Tivoli NetView for z/OS Version 5 Release 3 consists of the following FMIDs:

HENV53B
JENV53J

2.0 Program Materials

A Tivoli program is identified by a program number and a feature number. The program number for Tivoli NetView for z/OS Version 5 Release 3 is 5697-ENV and its feature number is 5822.

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 Tivoli NetView for z/OS Version 5 Release 3. Ask your Tivoli 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 magnetic tape or downloadable files. It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, "Installation Instructions" on page 34 for more information about how to install the program.

Information about the physical tape for the Basic Machine-Readable for Tivoli NetView for z/OS Version 5 Release 3 can be found on the CPBDO Memo to Users Extension.

Notes:

 1. The data set attributes in this table should be used in the JCL of jobs reading the data sets, but since the data sets are in IEBCOPY unloaded format, their actual attributes may be different.

 2. If any RELFILEs are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

Figure 1. Program File Content Base tape				
Name	ORG	RECFM	LRECL	BLK SIZE
SMPMCS	SEQ	FB	80	8800
HENV53B.F1	SEQ	FB	80	8800
HENV53B.F2	SEQ	U	0	6144
HENV53B.F3	SEQ	FB	80	8800
HENV53B.F4	SEQ	FB	23644	23648

Figure 2. Program File Content Base tape 2				
Name	**O R G**	**R E C F M**	**L R E C L**	**BLK SIZE**
JENV53J.F1	SEQ	FB	80	8800
JENV53J.F2	SEQ	FB	80	8880
JENV53J.F3	SEQ	FB	125	3125
JENV53J.F4	SEQ	U	0	6144
JENV53J.F5	SEQ	VB	516	8256

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for Tivoli NetView for z/OS Version 5 Release 3.

2.3 Program Publications

The following sections identify the basic and optional publications for Tivoli NetView for z/OS Version 5 Release 3.

2.3.1 Basic Program Publications

Figure 3 identifies the basic unlicensed program publications for Tivoli NetView for z/OS Version 5 Release 3. One copy of each of these publications is included when you order the basic materials for Tivoli NetView for z/OS Version 5 Release 3. For additional copies, contact your IBM and/or Tivoli representative.

Figure 3. Basic Material: Unlicensed Publications	
Publication Title	**Form Number**
Tivoli NetView for z/OS Version 5.3 Licensed Program Specifications	GC31-8848
Tivoli NetView for z/OS Version 5 Release 3 Installation: Getting Started	SC31-8872
Tivoli NetView for z/OS Version 5 Release 3 Installation: Migration Guide	SC31-8873
Tivoli NetView for z/OS Version 5 Release 3 Tuning Guide	SC31-8869

Figure 4 on page 6 identifies the basic licensed program publications for Tivoli NetView for z/OS Version 5 Release 3. The first copy is available at no charge to licensees of the basic material by ordering the

7xxx Feature Number. Order additional copies using the 8xxx Feature Number. A fee is charged for additional copies.

Figure 4. Basic Material: Licensed Publications	
Publication Title	**Form Number**
Tivoli NetView for z/OS Version 5 Release 3 Troubleshooting Guide	LY43-0093

Figure 5 identifies the basic unlicensed or licensed publications that are not available in hardcopy form, but are available through the internet or other media for Tivoli NetView for z/OS Version 5 Release 3.

Figure 5 (Page 1 of 3). Basic Material: Other Unlicensed or Licensed Publications		
Publication Title	**Form Number**	**How Available**
Tivoli NetView for z/OS Version 5 Release 3 Administration Reference	SC31-8854	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Security Reference	SC31-8870	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Installation: Getting Started	SC31-8872	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Installation: Migration Guide	SC31-8873	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Installation: Configuring Graphical Components	SC31-8875	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Installation: Configuring Additional Components	SC31-8874	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Installation: Configuring the Tivoli Netview for z/OS Enterprise Agents	SC31-6969	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 User's Guide	GC31-8849	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Application Programmer's Guide	SC31-8855	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Automation Guide	SC31-8853	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Command Reference Volume I	SC31-8857	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Command Reference Volume II	SC31-8858	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Messages and Codes Volume 1(AAU-DSI)	SC31-6965	PDF on CD

Publication Title	Form Number	How Available
Tivoli NetView for z/OS Version 5 Release 3 Messages and Codes Volume 2(DUI-IHS)	SC31-6966	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Customization Guide	SC31-8859	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Programming: Assembler	SC31-8860	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Programming: PL/I and C	SC31-8861	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Programming: REXX and the NetView Command List Language	SC31-8862	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Data Model Reference	SC31-8864	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 RODM & GMFHS Programmer's Guide	SC31-8865	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Programming: Pipes	SC31-8863	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Automated Operations Network User's Guide	GC31-8851	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Automated Operations Network Customization Guide	SC31-8871	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 SNA Topology Manager Implementation Guide	SC31-8868	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 NetView Management Console User's Guide	GC31-8852	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 MultiSystem Manager User's Guide	GC31-8850	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Web Application User's Guide	SC32-9381	PDF on CD
Tivoli NetView for z/OS Version 5 Release 3 Using Tivoli System Automation for GDPS/PPRC HyperSwap Manager with NetView	GI11-4704	PDF on CD
IBM Tivoli NetView for z/OS Volume 1 Manager	LCD4-4916	CD
IBM Tivoli NetView for z/OS Volume 2 Manager	LCD7-0828	CD
Tivoli NetView for z/OS Version 5 Release 3 Tivoli Enterprise Portal Agent Manager	LCD7-0829	CD
Tivoli NetView for z/OS Version 5 Release 3 Online Library Manager	LK2T-6175	CD

Figure 5 (Page 2 of 3). Basic Material: Other Unlicensed or Licensed Publications

Figure 5 (Page 3 of 3). Basic Material: Other Unlicensed or Licensed Publications		
Publication Title	**Form Number**	**How Available**
IBM Tivoli NetView for z/OS Kit Manager	LCD7-0830	CD

2.3.2 Optional Program Publications

No optional publications are provided for Tivoli NetView for z/OS Version 5 Release 3.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for Tivoli NetView for z/OS Version 5 Release 3.

2.5 Publications Useful During Installation

The publications listed in Figure 6 may be useful during the installation of Tivoli NetView for z/OS Version 5 Release 3. To order copies, contact your IBM representative or visit the IBM Publications Center on the World Wide Web at:
http://www.ibm.com/shop/publications/order

Figure 6. Publications Useful During Installation	
Publication Title	**Form Number**
IBM SMP/E for z/OS and OS/390 User's Guide	SA22-7773
IBM SMP/E for z/OS and OS/390 Commands	SA22-7771
IBM SMP/E for z/OS and OS/390 Reference	SA22-7772
IBM SMP/E for z/OS and OS/390 Messages, Codes, and Diagnosis	GA22-7770
z/OS V1R6 UNIX System Services Command Reference	SA22-7805
z/OS V1R6 UNIX System Services Messages and Codes	SA22-7807
z/OS V1R6 Communications Server IP Configuration Guide	SC31-8775
MVS Custom-Built Offering Planning and Installation	SC23-0352
IBM Tivoli Monitoring: Installation and Setup Guide	GC32-9407

3.0 Program Support

This section describes the Tivoli support available for Tivoli NetView for z/OS Version 5 Release 3.

3.1 Program Services

Contact your IBM and/or Tivoli representative for specific information about available program services.

3.2 Preventive Service Planning

Before installing Tivoli NetView for z/OS Version 5 Release 3, it is VERY IMPORTANT that you review 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 this package's installation. This includes software PSP information that contains HIPER, special attention and/or required PTFs against the base release.

While there can be overlap between SW, HW and functional PSP buckets, reviewing all that apply to this package will ensure that you identify any known service required for your installation of this package.

If you obtained Tivoli NetView for z/OS Version 5 Release 3 as part of a CBPDO, there is HOLDDATA and PSP information included on the CBPDO.

If the CBPDO for Tivoli NetView for z/OS Version 5 Release 3 is more than two weeks old when you install it, you should contact the IBM and/or Tivoli Support Center or use S/390 SoftwareXcel to obtain the current "PSP Bucket" or obtain the current PSP from the Web at https://techsupport.services.ibm.com/server/390.psp390

For program support, access the Software Support web site at http://www-3.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 Tivoli NetView for z/OS Version 5 Release 3 are:

Figure 7. PSP Upgrade and Subset ID		
UPGRADE	**SUBSET**	**Description**
TIVNETV530	HENV53B	NetView Base
	JENV53J	NetView Japanese

3.3 Statement of Support Procedures

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

Figure 8 on page 10 identifies the component IDs (COMPID) for Tivoli NetView for z/OS Version 5 Release 3.

Figure 8. Component IDs			
FMID	**COMPID**	**Component Name**	**RETAIN Release**
HENV53B	5697ENV00	NetView Base	53B
JENV53J	5697ENV00	NetView Japanese	53J

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of Tivoli NetView for z/OS Version 5 Release 3. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs incorporated into the program.

4.1 Program Level Information

Appendix B, "Program Level Information" on page 55 lists the APAR fixes for previous releases of NetView that have been incorporated into Tivoli NetView for z/OS Version 5 Release 3.

4.2 Service Level Information

No PTFs against this release of Tivoli NetView for z/OS Version 5 Release 3 have been incorporated into the product tape.

Over time it is HIGHLY recommended that you frequently check the Tivoli NetView for z/OS Version 5 Release 3 PSP bucket for HIPER and SPECIAL Attention PTFs against all FMID(s) which should be installed.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating Tivoli NetView for z/OS Version 5 Release 3. 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 Tivoli NetView for z/OS Version 5 Release 3.

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 9. Driving System Software Requirements	
Program Number	**Product Name and Minimum VRM/Service Level**
Any **one** of the following:	
5694-A01	z/OS Version 1 Release 6 or later
5655-G44	IBM SMP/E for z/OS and OS/390 Version 3 Release 1 or later

5.2 Target System Requirements

This section describes the environment of the target system required to install and use Tivoli NetView for z/OS Version 5 Release 3.

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

An installation requisite is defined as a product that is required and **must** be present or one that is not required but **should** be present on the system for the successful installation of this product.

A mandatory installation requisite identifies products that are required, without exception, or this product **will not install** on your system. This includes products specified as PREs or REQs.

Program Number	Product Name and Minimum VRM/Service Level
5694-A01	z/OS Release 1.6 or later

Figure 10. Mandatory Installation Requisites

A conditional installation requisite identifies products that are **not** required for successful install but may resolve such things as certain warning messages at installation time. They include products that are specified as IF REQs.

Program Number	Product Name and Minimum VRM/Service Level	Function
-	ACF/NCP Version 4.3.1 or later	All functions related to the ACF/NCP program
5697-D10	Tivoli Management Framework for OS/390 Version 3.7.1	Installation of Graphical Enterprise Workstation Components from OS/390 using Tivoli Software Installation Service (SIS)
Any **one** of the following:		

Figure 11 (Page 1 of 2). Conditional Installation Requisites

Figure 11 (Page 2 of 2). Conditional Installation Requisites		
Program Number	**Product Name and Minimum VRM/Service Level**	**Function**
5695-014	IBM Library for REXX on zSeries Release 1.4 (FMID HWJ9140,JWJ9142)	Running Compiled REXX Clists or Programs (See notes 1 & 2 below)
	IBM Library for REXX on zSeries Alternate Library Release 1.4 (FMID HWJ9143,JWJ9144)	Running Compiled REXX Clists or Programs (See notes 1 & 2 below)

Notes:

1. If you compile AON REXX Command Lists, the IBM Compiler for SAA REXX/370 R4(or higher) is needed.

2. Several components of NetView have REXX programs that have been compiled with the ALTERNATE option. If you access the REXX library from NetView (or from z/OS UNIX System Services for NetView's z/OS UNIX System Services Related Components), these REXX programs are run in compiled mode. Otherwise, the REXX alternate library is used and these REXX programs are run in the interpreted mode. Some of the components of NetView that have compiled REXX programs are MultiSystem Manager, UNIX for OS/390 Command Server, and the TSO Command Server.

   The TSO server jobs themselves are either batch TSO jobs or started tasks which should be set up to access the REXX library so that the TSO server REXX program will run in compiled mode. Otherwise, the REXX alternate library is used and the server will run in interpreted mode.

   Note: Your z/OS environment must be modified so that the REXX data set you are using (either SEAGLPA or SEAGALT) is APF-authorized. Edit your APF member in SYS1.PARMLIB and add the REXX data set (SEAGLPA or SEAGALT) if it is not already there. Re-IPL z/OS if necessary. If your system is set up to use dynamic APF services, you can avoid re-IPLing z/OS by using the SETPROG command to dynamically update the APF list. Refer to the Initialization and Tuning Reference for your z/OS system for more information on authorizing data sets.

5.2.2.2 Operational Requisites

An operational requisite is defined as a product that is required and **must** be present or a product that is not required but **should** be present on the system in order for this product to operate all or some of its functions.

A mandatory operational requisite identifies products that are required, without exception, or this product **will not operate** its basic function unless the requisite is met. This includes products specified as PREs or REQs.

Tivoli NetView for z/OS Version 5 Release 3 has no mandatory operational requisites.

A conditional operational requisite identifies products that are **not required** for the basic function but are needed at run time for this product to utilize specific functions. They may include products specified as IF REQs.

Figure 12. Conditional Operational Requisites		
5698-A79	ITM Tivoli Monitoring Services on z/OS V6.1 Fixpack 5	Tivoli NetView for z/OS Enterprise Agents

5.2.2.3 Toleration/Coexistence Requisites

A toleration/coexistence requisite is defined as a product that 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.

Tivoli NetView for z/OS Version 5 Release 3 has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites

A negative requisite identifies products that must *not* be installed on the same system as this product.

Tivoli NetView for z/OS Version 5 Release 3 has no negative requisites.

5.2.3 DASD Storage Requirements

Tivoli NetView for z/OS Version 5 Release 3 libraries can reside on all supported DASD types.

Figure 13 lists the total space required for each type of library.

Figure 13. Total DASD Space Required by Tivoli NetView for z/OS Version 5 Release 3	
Library Type	**Total Space Required**
Target	3078 Tracks of 3390
Distribution	3340 Tracks of 3390
HFS	150 Tracks of 3390

Notes:

1. Tivoli recommends use of system determined block sizes for efficient DASD utilization for all non-RECFM U data sets. For RECFM U data sets, Tivoli 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. 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. 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. 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 6.1.8, "Allocate SMP/E Target and Distribution Libraries" on page 40.

3. Abbreviations used for the HFS Path type are:

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.

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 LNKLST.
   - It is not required for the data set to be APF-authorized.

Figure 14 on page 17 estimates the storage requirements for the SMPCSI data set for SMP/E. This estimate must be added to those of any other programs and services being installed to determine the total additional space requirements.

Figure 14. Storage Requirements for SMPCSI Data Sets for SMP/E for Tivoli NetView for z/OS Version 5 Release 3		
DASD	**Tracks Required for SMPCSI Data**	**Tracks Required for SMPCSI Index**
3390	1230	61

Figure 15. Storage Requirements for SMP/E Work Data Sets						
Library DDNAME	**TYPE**	**ORG**	**RECFM**	**LRECL**	**No. of 3390 Trks**	**No. of DIR Blks**
SMPWRK1	S	PDS	FB	80	10	250
SMPWRK2	S	PDS	FB	80	10	250
SMPWRK3	S	PDS	FB	80	10	250
SMPWRK4	S	PDS	FB	80	10	250
SMPWRK6	S	PDS	FB	80	25	250
SYSUT1	U	SEQ	--	--	3	-
SYSUT2	U	SEQ	--	--	2	-
SYSUT3	U	SEQ	--	--	2	-
SYSUT4	U	SEQ	--	--	2	-

The following table provides an estimate of the storage needed in the SMP/E data sets for Tivoli NetView for z/OS Version 5 Release 3. 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 you existing SMPLTS into it and then change the SMPLTS DDDEF entry to indicate the new PDSE data set.

Figure 16. Storage Requirements for SMP/E Work 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 (1)		S	PDS	U	0	296	18
SMPMTS		S	PDS	FB	80	1	1
SMPPTS		S	PDS	FB	80	24	1
SMPSCDS		S	PDS	FB	80	8	5
SMPSTS		S	PDS	FB	80	1	1
Note: (1) If you are using SMP/E 3.2 or higher, than the SMPLTS dataset is not needed. If you have allocated it, it will be empty.							

The following figures describe the target and distribution libraries and HFS paths required to install Tivoli NetView for z/OS Version 5 Release 3. The storage requirements of Tivoli NetView for z/OS Version 5 Release 3 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 17 (Page 1 of 2). Storage Requirements for Tivoli NetView for z/OS Version 5 Release 3 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**
BNJPNL2	PNL	ANY	U	PO	FB	80	8	5
BNJSRC1	Source	ANY	U	PO	FB	80	12	3
CNMCLST	CLIST	ANY	U	PO	FB	80	805	55
CNMINST	SAMP	ANY	U	PO	FB	80	6	2
CNMLINK	LMOD	ANY	U	PO	U	0	800	205
CNMPNL1	PNL	ANY	U	PO	FB	80	670	175
CNMSAMP	SAMP	ANY	U	PO	FB	80	350	35
DSIPARM	SAMP	ANY	U	PO	FB	80	85	15
DSIPRF	SAMP	ANY	U	PO	FB	80	2	1
NVULIB	LMOD	ANY	U	PO	U	0	4	6
SBNJPNL3	PNL	ANY	U	PO	FB	80	391	240

					R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
Library DDNAME	Member Type	Target Volume	T Y P E	O R G				
SCNMAGNT	DATA	ANY	U	PO	VB	6160	10	1
SCNMLNKN	LMOD	ANY	U	PO	U	0	1	1
SCNMLNK1	LMOD	ANY	U	PO	U	0	1	1
SCNMLPA1	LMOD	ANY	U	PO	U	0	2	2
SCNMMAC1	MACRO	ANY	U	PO	FB	80	145	15
SCNMMJPN	LMOD	ANY	U	PO	U	0	8	9
SCNMPNL2	PNL	ANY	U	PO	FB	80	590	140
SCNMPLIB	PNL	ANY	U	PO	FB	80	5	2
SCNMUXCL	EXEC	ANY	U	PO	VB	516	8	2
SCNMUXLK	LMOD	ANY	U	PO	U	0	60	2
SCNMUXMS	SAMP	ANY	U	PO	FB	80	4	1
SDSIMSG1	MSG	ANY	U	PO	FB	80	5	1
SDSIOPEN	SAMP	ANY	U	PO	FB	80	3	1
SDUIMSG1	MSG	ANY	U	PO	FB	80	3	1
SEKGLANG	MSG	ANY	U	PO	FB	125	2	1
SFLBDAT1	TABLE	ANY	U	PO	VB	1028	6	1

Figure 17 (Page 2 of 2). Storage Requirements for Tivoli NetView for z/OS Version 5 Release 3 Target Libraries

DDNAME	T Y P E	Path Name
SCNMUX00	N	/usr/lpp/netview/v5r3/bin/IBM/
SCNMUX01	N	/usr/lpp/netview/v5r3/samples/IBM/
SCNMUX02	N	/usr/lpp/netview/v5r3/lib/IBM/
SCNMUX03	N	/usr/lpp/netview/v5r3/mibs/IBM/
SCNMUX07	N	/usr/lpp/netview/v5r3/samples/properties/IBM/

Figure 18. Tivoli NetView for z/OS Version 5 Release 3 HFS Paths

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
ABNJPNL2	U	PO	FB	80	10	5
ABNJPNL3	U	PO	FB	80	380	240
ABNJSRC1	U	PO	FB	80	14	3
ACNMAGNT	U	PO	VB	6160	9	1
ACNMCLST	U	PO	FB	80	810	60
ACNMINST	U	PO	FB	80	6	2
ACNMLINK	U	PO	U	0	1100	700
ACNMMAC1	U	PO	FB	80	140	15
ACNMMJPN	U	PO	U	0	8	8
ACNMPNL1	U	PO	FB	80	675	175
ACNMPNL2	U	PO	FB	80	600	175
ACNMSAMP	U	PO	FB	80	345	33
ACNMUXCL	U	PO	VB	516	100	5
ACNMUXLK	U	PO	U	0	60	2
ACNMUXMS	U	PO	FB	80	2	1
ADSIMSG1	U	PO	FB	80	2	1
ADSIOPEN	U	PO	FB	80	2	1
ADSIPARM	U	PO	FB	80	85	15
ADSIPRF	U	PO	FB	80	2	1
ADUIMSG1	U	PO	FB	80	2	1
AEKGLANG	U	PO	FB	125	1	1
AFLBDAT1	U	PO	VB	1028	5	1
ANVULIB	U	PO	U	0	5	7

Figure 19. Storage Requirements for Tivoli NetView for z/OS Version 5 Release 3 Distribution Libraries

5.3 FMIDs Deleted

Installing Tivoli NetView for z/OS Version 5 Release 3 may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS.

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

If you do not wish to delete these FMIDs at this time, you must install Tivoli NetView for z/OS Version 5 Release 3 into separate SMP/E target and distribution zones.

5.4 Special Considerations

The following table identifies README file names and installation methods associated with the noted Tivoli NetView for z/OS Version 5 Release 3 components.

Component Name	Web Page (1)	CD (2)	README
Figure 20. README file names and installation methods for Tivoli NetView for z/OS Version 5 Release 3 Components.			
NetView Web Application	x	x	znetview_webapp_readme_ja.htm
NetView Common Event Infrastructure	x	x	nvcei_read_ja.me
Viewer for Log XML files	x	x	logxmlviewer_readme.html
NMC Topology Console	x	x	egvread3.me
NMC Topology Server	x	x	egvread4.me
NetView Visual BLDVIEWS	x	x	VBVreadme_ja.txt
MultiSystem Manager Agents	x	x	msmagnt.me
MultiSystem Manager IP Agents	x	x	msmip.me
MultiSystem Manager TMR Agents	x	x	msmtmr_ja.me
NetView 3270 Management Console	x	x	flbread2.me
(1) URL: http://www.tivoli.com/nv390_supported			
(2) The readme documentation on the Tivoli NetView for z/OS Version 5 Release 3 CDROM is located in the readmes directory.			

The following NetView functions and features require the specified program levels or subsequent upward-compatible levels unless stated otherwise:

5.4.1 For all NetView Users

- If running z/OS V1.6 you will need

    UA18468

5.4.2 TCP/IP Connection Management

- z/OS V1.6, or later

- If running z/OS V1.6 you will need

  Communication Server for z/OS PTF UK06110

  Communication Server for z/OS PTF UK07070

- If running z/OS V1.7 you will need

  Communication Server for z/OS PTF UK06111

  Communication Server for z/OS PTF UK07071

5.4.3 IP Packet Trace Formatting

- z/OS V1.6, or later

- If running z/OS V1.7 you will need

  Communication Server for z/OS PTF UK06112

5.4.4 NetView for z/OS Tivoli Enterprise Portal Agent

- IBM Tivoli Monitoring V6.1 Fix Pack 5 or later

- IBM DB2 Universal Database (UDB) Workgroup Server Edition Version 8.2

- Optionally IBM Tivoli OMEGAMON XE for Mainframe Networks V3.1.0 or 4.1.0

- Optionally IBM Tivoli OMEGAMON DE for Distributed Systems V3.0.1 is required to link between NetView for /OS Tivoli Enterprise Portal Agent and OMEGAMON XE for Mainframe Networks V3.1 workspaces.

- Any Hardware that supports any of the following operating systems

  – Windows 2003 Server Standard with SP1

  – Windows 2003 Server Enterprise with SP1

  – Windows XP Professional with SP2

  – SUSE Linux Enterprise Server 9 (Intel)

  – SUSE Linux Enterprise Server 10 (Intel)

  – SUSE Linux Enterprise Server 9.0 for S/390 and zSeries (32-bit app, 64-bit kernel)

  – SUSE Linux Enterprise Server 10.0 for S/390 and zSeries (32-bin app, 64-bit kernel)

  – Red Hat Enterprise Linux 4 AS (Intel)

  – Red Hat Enterprise Linux 4 ES (Intel)

  – Red Hat Enterprise Linux 4 WS (Intel)

  – Red Hat 4.0 for S390 and zSeries (32-bit app, 64-bit kernel)

- Solaris 9 or later
- AIX 5.2 or later
- HP-UX 11iv2 with patch PHSS_30970 or later

5.4.5 NetView for z/OS Tivoli Enterprise Management Agent

- IBM Tivoli Monitoring V6.1 Fix Pack 5 or later
- IBM DB2 Universal Database (UDB) Workgroup Server Edition Version 8.2
- Optionally IBM Tivoli OMEGAMON XE for Mainframe Networks v4.1.0, IBM Tivoli OMEGAMON XE for CICS on z/OS v4.1.0, IBM Tivoli OMEGAMON XE on z/OS v4.1.0
- Any Hardware that supports any of the following operating systems

5.4.6 Opening Incident Records from NetView

One of the following
- For IBM Tivoli Information Management
  - IBM Tivoli Information Management for z/OS V7.1
  - Web Access for Information Management V1.2
  - IBM z/OS HTTP Server 5.2 or 5.3
- For Peregrine ServiceCenter
  - ServiceCenter Server 6.0 Server
  - ServiceCenter Web Client or Windows client for Database Management
  - Optionally, ServiceCenter Web Client for additional management of incidents

5.4.7 Application-Transparent Transport Layer Security (AT-TLS)

- z/OS V1.7, (Communications Server) or later

5.4.8 Mixed-Case Passwords

- z/OS V1.7 Security Server (RACF) or later

5.4.9 Comprehensive Network Address Translator (CNAT) Support

- IBM Tivoli NetView 7.1.2, or later

5.4.10 Support for Hot Standby Router Protocol (HSRP)

- IBM Tivoli NetView 7.1.1, or later

5.4.11 Support for Common Event Infrastructure

- IBM WebSphere Application Server V6.1.0.5 or the embedded version ofIBM WebSphere Application Server - Express V6.1.0.5 for the appropriate operating system

5.4.12 Tivoli NetView Management Console, NetView 3270 Management Console

- Topology Server

    - Any Hardware that supports any of the following operating systems

        - AIX 5.2 (5765-E61) or later with

            - C Set++ for AIX Applications xlC.rte 3.6.6.0 or later

            - IBM class libraries ibmcxx.ioc.rte 3.6.6.0 for later and ibmcxx.rt 3.6.6.0 or later

            - Information Presentation Facility ipfx.rte.2.2.0.0 or later

                Note: xlC.rte, ibmcxx.ioc.rte, ibmcxx.rte ipfx.rte and gskta.rte are included on the Tivoli NetView for z/OS Version 5 Release 3 product CD

        - Windows Server 2003 Standard with SP1

        - Windows Server 2003 Enterprise with SP1

        - Windows Server 2003 Data Center with SP1

        - Windows XP Professional with SP2

        - SuSE Linux Enterprise Server 9 for zSeries

        - SuSE Linux Enterprise Server 10 for zSeries

        - SuSE Linux Enterprise Server 10 (AMD64/EM64T) (32-bit app, 64-bit kernel)

        - Red Hat Enterprise Linux AS 4.0 for zSeries

        - Red Hat Enterprise Linux 5.0 for zSeries

        - Processor speed minimum of 350 MHz

        - Memory minimum 128 MB, 256 MB recommended

        - Install footprint of 60 MB of additional fixed disk space

- Topology Console

    - Any Hardware that supports any of the following operating systems with TCP/IP installed

        - Windows Server 2003 Standard with SP1

        - Windows Server 2003 Enterprise with SP!

        - Windows XP Professional with SP2

        - Windows Server 2003 Data Center with SP1

- Windows Vista Desktop

- SuSE Linux Enterprise Server 9 (Intel)

- SuSE Linux Enterprise Server 9 (AMD64/EM64T) (32-bit app, 64-bit kernel)

- SuSE Linux Enterprise Server 10 (Intel)

- SuSE Linux Enterprise Server 10 (AMD64/EM64T) (32-bit app, 64-bit kernel)

- Red Hat Enterprise Linux AS 4 (Intel)

- Red Hat Enterprise Linux ES 4 (Intel)

- Red Hat Enterprise Linux WS 4 (Intel)

- Red Hat Enterprise Linux (AMD64/EM64T) (32-bit app, 64-bit kernel)

- Red Hat Enterprise Linux 5 (Intel)

- Red Hat Enterprise Linux 5 (AMD64/EM64T) (32-bit app, 64-bit kernel)

- Solaris 9, or later

- Processor speed minimum of 350 MHz

- Memory 256 MB

- Install footprint of 50 MB of additional fixed disk space

- Color display 1024 x 768, 256 colors

- Maximum color palette is 16-bit high color; 256-color palette recommended (32-bit true color is not supported.)

5.4.13 Server communications with NetView for z/OS using LU 6.2

- For LU 6.2 connections, one of the following is required

  – AIX

    - IBM Communications Server for AIX, Version 6.1 (5765-E51)

  – Windows

    - IBM Communications Server for Windows NT 6.1.1 or later

5.4.14 Considerations for NMC Server Audit Log

To use a Web browser to view the audit log requires a browser which supports XSL (eXtensible Stylesheet Language). Common browsers which support XSL include:

- Mozilla 1.7 or later

- Microsoft Internet Explorer 6.0 or later

5.4.15 Considerations for NetView Web Application

- HTTP Server and Web Application Server

  – Any Hardware that supports any of the following operating systems running IBM WebSphere Application Server V6.1.0.5, or the embedded version of the IBM WebSphere Application Server Express V6.1.0.5

    - AIX 5.2 (5765-E61), or later

    - Windows Server 2003 Standard with SP1

    - Windows Server 2003 Enterprise with SP1

    - Windows Server 2003 Data Center with SP1

    - SuSE Linux Enterprise Server 9 for zSeries (64 bit kernel only) SP2, SP3 or later

    - SuSE Linux Enterprise Server 10 for zSeries (64 bit kernel only)

    - Red Hat Enterprise Linux AS 4 (Intel)

    - Red Hat Enterprise Linux ES 4 (Intel)

    - Red Hat Enterprise Linux WS 4 (Intel)

    - Red Hat Enterprise Linux 5.0 (Intel)

    - Red Hat Enterprise Linux 4.0 for zSeries (64 bit kernel only) with Update 2 or later

    - Red Hat Enterprise Linux 5.0 for zSeries (64 bit kernel only)

  – IBM WebSphere Application Server V6.1.0.5 or the embedded version of IBM

  – For additional requirements for IBM WebSphere Application Server V6.1.0.5, refer to the WebSphere documentation for the applicable platform.

    - Processor speed of at least 350MHZ

    - 256MB minimum

    - 550 MB of additional fixed disk space for Windows

    - 750 MB of additional fixed disk space for all other platforms

  Note: If the NetView Web Application is installed on the same work- station as an existing Tivoli NetView for NT or Tivoli NetView for AIX or in the same logical partition (LPAR) as IP resource discovery and management on Linux on zSeries, port assignment changes are required as described in the NetView Web Application README.

  – Supported locales for the Japanese version of the NetView Web Application

    - For Windows, UTF-8

    - For AIX, Ja_JP IBM-939

    - For Linux on zSeries, ja-JP.euc jP

- Web Browsers

- Mozilla 1.7 or later with Java Plug-in level 1.4.2_07

    - SUSE Linux Enterprise Server 9 (Intel)

    - SUSE Linux Enterprise Server 9 (AMD64/EM64T) (32-bit app, 64-bit kernel)

    - SUSE Linux Enterprise Server 10 (Intel)

    - SUSE Linux Enterprise Server 10 (AMD64/EM64T) (32-bit app, 64-bit kernel)

    - Red Hat Enterprise Linux AS 4 (Intel)

    - Red Hat Enterprise Linux ES 4 (Intel)

    - Red Hat Enterprise Linux WS 4 (Intel)

    - Red Hat Enterprise Linux 4 (AMD64/EM64T) (32-bit app, 64-bit kernel)

    - Red Hat Enterprise Linux 5 (Intel)

    - Red Hat Enterprise Linux 5 (AMD64/EM64T) (32-bit app, 64-bit kernel)

    - HP-UX 11iv2, or later (English only)

    - Solaris 9 or later

- Internet Explorer 6.0 or later with Java Plug-in level 1.4.2_07

    - Windows Server 2003 Standard with SP1

    - Windows Server 2003 Enterprise with SP1

    - Windows Server 2003 Data Center with SP1

    - Windows XP Professional with SP2

    - Windows Vista Desktop

5.4.16 Considerations for TCP/IP Resource Discovery and Management on Linux zSeries

- SuSE Linux Enterprise Server 9 for zSeries

- SuSE Linux Enterprise Server 10 for zSeries

- Red Hat Enterprise Linux AS 4.0 for zSeries

- Red Hat Enterprise Linux 5.0 for zSeries

- NetView Integrated TCP/IP Services Component (ITSC) 7.1.5

5.4.17 Considerations for Launching Tivoli Business System Manager (TBSM) from NMC or NMC from TBSM

- TBSM V1R5 (5698-BSM) or later

5.4.18 Considerations for SNMP MIB Browser, Real-time Poller/Grapher

The prerequisites are the same as for the NetView Web Application

5.4.19 Considerations for Event Automation Service to and from the Tivoli Enterprise Console (TEC)

- The Event Automation Service requires the following:

  - Tivoli Enterprise Console (TEC) 3.8 or 3.9

  Using secure framework communication also requires:

  - Tivoli Management Framework for OS/390 3.7.1 (5697-D10, 5698-FRA)

- For additional information on installing Event Automation Service workstation component, refer to the readme file identified in Figure 20 on page 21.

5.4.20 Considerations for OS/390 TCP/IP Stack Management and Telnet 3270 Management

- Optional: In order to be able to dynamically add to the set of resources monitored and displayed at NMC, DB2 for OS/390 Version 5 Release 1 (5655-DB2) or later is required

5.4.21 Considerations for Beeper/Pager Support

- IBM NetFinity for OS/2 Version 5.0 or later (if using the IBM sample for beeper/pager requests).

5.4.22 Support for issuing z/OS UNIX Service Commands from NetView

- REXX alternate run-time (save as for MultiSystem Manger component)

5.4.23 Support for IBM LAN Network Manager Enhanced Command Interface

- IBM LAN Network Manager Version 2.0 (03H3519, 03H3523 or 03H3527)

5.4.24 Management of Frame Relay (DTE) and Ethernet

- ACF/NCP Version 6 (5688-231)

5.4.25 NetView Parallel Transmission Group Support

- ACF/NCP Version 5 Release 4 (5668-738)

5.4.26 NetView Network Asset Management

Provides NCP vital product data (VPD) and hardware device vital product information for those devices that support the Request Product Set ID (PSID) architecture or signal converters that support LPDA-2 commands:

- ACF/NCP Version 4 Release 3.1 (5668-854) for the 3725
- ACF/NCP Version 5 Release 4 (5668-738) or later for the 3720 or 3745

5.4.27 NetView Performance Monitor (NPM) Alerts

- NPM Version 1 Release 6 (5665-333 MVS) or later for session alerts

5.4.28 Considerations for SAF Security Checking

z/OS (5694-A01) Security Server or later or an equivalent SAF product is required for SAF security checking of each of the following functions:

- RODM connections
- NetView operator passwords
- RMTCMD through the RMTOPS Class
- NetView command authorization
- NetView Span of Control access
- NetView operator logon information
- Graphical View security
- List RACF profile for NetView operators

5.4.29 Considerations for Tivoli NetView for z/OS Version 5 Release 3 Automated Operations Network Component

- Dynamic Display Facility (DDF) requires either a 3x79 Terminal with Extended Attribute Support with a display capable of seven colors or a workstation that supports the NetView 3270 Management Console, or a workstation-based 327x terminal emulator program that provides Extended Attribute Support with a display capable of seven colors.

- The SNA Automation feature has these additional requirements for Switched Network Backup Automation:
  - IBM 586x modems (except Model 1) with 2 or 4 wire SNBU couplers, if desired, or
  - The 786x, 7855, or LPDA-2 command set capable modems

    Note: Only the 786x Models 45, 46, and 47 can automatically switch back from SNBU.

Note: To use the SNBU automation, ACF/NCP Version 4 Release 3.1 (5684-854), or later is required. ACF/NCP Version 5 Release 4 (5668-738) or later is required for complete DMPX support of IBM 7861/8 Model 4x modems.

- TCP/IP for AIX Automation has these additional requirements:

  TCP/IP for AIX automation uses SNA to communicate between Tivoli NetView for AIX and IBM Tivoli NetView for z/OS, and requires:
    – AIX 5.2 (5694-A01) or later
    – Tivoli NetView for AIX 7.1.5 or later
    – AIX NetView Service Point 1.3.3 (5621-107)
    – IBM Communication Server for AIX 6.1 (5765-E51)

5.4.30 System Considerations for the MultiSystem Manager LAN Network Manager Feature

The MultiSystem Manager LAN Network Manager feature of Tivoli NetView for z/OS Version 5 Release 3 requires:

- IBM LAN Network Manager 2.0 (03H3519, 03H3523 or 03H3527) with NetView connectivity.

- Communications Manager/2 Version 1 Release 1 (79G0258 or 79G0257) or later configured with Service Point Application Router (SPAR)

5.4.31 System Considerations for the MultiSystem Manager TMR Feature

The MultiSystem Manager Tivoli Management Region (TMR) feature of Tivoli NetView for z/OS Version 5 Release 3 requires:

- IBM Tivoli Monitoring 5.1.2

- A compatible level between each of the following:

  – Tivoli Management Framework 3.7.1 or 4.1.1

  – Tivoli Enterprise Console (TEC) 3.8 or 3.9

- Any of the following Operating Systems:

  – AIX 5.2 (5765-E61) or later

  – Windows Server 2003 Standard SP1

  – Windows Server 2003 Enterprise SP1

  – Windows Server 2003 Data Center SP1

  – Solaris 9 or later

  – HP UX 11iv2, or later

- SUSE LINUX Enterprise Server 9 (Intel)

- SUSE LINUX Enterprise Server 9 (ADM64/EM64T) (32-bit app, 64-bit kernel)

- SUSE LINUX Enterprise Server 9 for zSeries

- Red Hat Enterprise Linux AS 4 (Intel)

- Red Hat Enterprise Linux ES 4 (Intel)

- Red Hat Enterprise Linux WS 4 (Intel)

- Red Hat Enterprise Linux 4 (AMD64/EM64T) (32-bit app, 64-bit kernel)

5.4.31.1 Considerations for Sending Commands from Tivoli NetView for z/OS Version 5 Release 3 to TEC

Sending commands from Tivoli NetView for z/OS Version 5 Release 3 to TEC requires:

- The MultiSystem Manager Tivoli Management Region (TMR) Feature

5.4.31.2 System Considerations for the MultiSystem Manager IP Network Feature

The MultiSystem Manager Internet Protocol feature requires the Event Automation Service (EAS) component of IBM Tivoli NetView for z/OS.

The MultiSystem Manager Internet Protocol feature of Tivoli NetView for z/OS Version 5 Release 3 runs in many different environments. The requirements for each environment are included below:

- **AIX**

  When the MultiSystem Manager IP agent is installed on Tivoli NetView for AIX, the IP agent can communicate with IBM Tivoli NetView for z/OS via SNA or TCP/IP. If you are using TCP/IP to communicate between the IP agent and IBM Tivoli NetView for z/OS, the following are required:

  - AIX 5.2 (5765-E61) at Recommended Maintenance level 05, or later

  - Tivoli NetView for AIX 7.1.5 or later

  If you are using SNA to communicate between the MultiSystem Manager IP agent and IBM Tivoli NetView for z/OS, the following are required:

  - AIX NetView Service Point 1.3.3 (5621-107)

  - IBM Communication Server for AIX V6.1 (5765-E51), or later

- **HP-UX**

  The MultiSystem Manager IP network feature for HP-UX uses TCP/IP to communicate between the MultiSystem Manager IP agent and IBM Tivoli NetView for z/OS The MultiSystem Manager IP agent for HP OpenView running on HP-UX requires:

  - HP-UX Version 11iv2 or later

  - Hewlett Packard Network Node Manager (HP OpenView) Version 5 Release 1, or later

- **Windows**

  The MultiSystem Manager IP network feature for Windows uses TCP/IP to communicate between the MultiSystem Manager IP agent and IBM Tivoli NetView for z/OS The MultiSystem Manager IP agent for Tivoli Netview for Windows requires:

  - One of the following

    - Windows Server 2003 Standard with SP1

    - Windows Server 2003 Enterprise with SP1

    - Windows Server 2003 Data Center with SP1

    - Windows XP Professional with SP2

  - Tivoli NetView for Windows 7.1.5, or later

- **Solaris**

  The MultiSystem Manager IP network agent for Solaris uses TCP/IP to communicate between the MultiSystem Manager IP agent and IBM Tivoli NetView for z/OS The agent can be installed on Tivoli NetView for Solaris or Hewlett Packard Network Node Manager.

  - The MultiSystem Manager IP feature for Tivoli Netview for Solaris requires:

    - Solaris 9 or later

    - Tivoli NetView for Solaris V7.1.5, or later

  - The MultiSystem Manager IP agent for OpenView for Solaris requires:

    - Solaris 9 or later

    - Hewlett Packard Network Node Manager (HP OpenView) Version 5 Release 1 or later

- **Linux**

  The MultiSystem Manager IP network feature for Linux uses TCP/IP to communicate between the MultiSystem Manager IP agent and IBM Tivoli NetView for z/OS The agent requires one of the following:

  - SUSE LINUX Enterprise Server 9 (Intel)

  - SUSE LINUX Enterprise Server 9 for zSeries

  - SUSE LINUX Enterprise Server 9 (AMD64/EM64T) (32-bit app, 64-bit kernel)

  - Red Hat Enterprise Linux 4 AS (Intel)

  - Red Hat Enterprise Linux 4 ES (Intel)

  - Red Hat Enterprise Linux 4 WS (Intel)

  - Red Hat Enterprise Linux 4 (AMD64/EM64T) (32-bit app, 64-bit kernel)

    with

    - NetView Integrated TCP/IP Services Component (ITSC) 7.1.5 or later

5.4.31.3 Tivoli NetView for z/OS Enterprise Management Agent

The Enterprise Management Agent is a separately orderable feature code that has its own FMIDs and CD media. GI11-4105-00 IBM Tivoli Monitoring Services on z/OS Program Directory describes how to do the SMP/E installation. The GI11-xxxx-00 IBM Tivoli NetView for z/OS Quickstart Memo describes the CD media you will receive as part of your order as well as how to get additional electronic media. This agent requires:

- IBM Tivoli Monitoring V6.1 Fix Pack 5 or later

- IBM DB2 Universal Database (UDB) Workgroup Server Edition V8.2

- Optionally

    IBM Tivoli OMEGAMON XE for Mainframe Networks V4.1.0

    IBM Tivoli OMEGAMON XE for CICS on z/OS V4.1.0

    IBM Tivoli OMEGAMON XE on z/OS V4.1.0

Note: You will need approximately 1275 cylinders of DASD space for the generation of your runtime environemnt (RTE).

Note

You are now aware of all of the installation requirements for Tivoli NetView for z/OS Version 5 Release 3. Proceed to 6.0, "Installation Instructions" on page 34 to begin your product installation.

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of Tivoli NetView for z/OS Version 5 Release 3.

If you obtained Tivoli NetView for z/OS Version 5 Release 3 as part of a CBPDO, you can use the RIMLIB job on the CBPDO tape to run the SMP/E RECEIVE as well as any service, HOLDDATA, or preventive service planning (PSP) information included on the CBPDO tape. For more information, refer to the *MVS CBPDO Memo to User Extension* included with the CBPDO.

This release of the Tivoli NetView for z/OS Version 5 Release 3 program is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands.

The procedure outlined in this chapter assumes that the user has a knowledge of SMP/E based on the *SMP/E User's Guide*. To resolve any SMP/E related problems in the procedure, refer to the *SMP/E User's Guide* and the *SMP/E Reference*. This installation process does not cover the PARMLIB or other changes to z/OS that are required to run Tivoli NetView for z/OS Version 5 Release 3. The z/OS changes required to run Tivoli NetView for z/OS Version 5 Release 3 are discussed in the *IBM Tivoli NetView for z/OS Installation: Getting Started, SC31-8872*.

Please note the following:

- The sample jobs are shown using REGION=0M. A region value equal to 0K or 0M gives the job all the storage available below and above 16 megabytes. Be aware that this can affect the performance of other jobs running in the system. If you do not choose to run with a region size of 0M, refer to z/OS SMP/E Reference, SA22-7772, for more information on how to determine region sizes.

- If you want to install Tivoli NetView for z/OS Version 5 Release 3 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 SMP/E jobs have been shipped with NetView and can be found listed in Figure 22 on page 37.

- 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.

- If you will be installing the IBM Library for REXX on zSeries (5695-014) for use with Tivoli NetView for z/OS Version 5 Release 3 then you should refer to its Program Directory for instructions on how to perform the installation.

The two basic choices for installing Tivoli NetView for z/OS Version 5 Release 3 are:

1. **Install into new target and distribution zones. This is the recommended method for Tivoli NetView for z/OS Version 5 Release 3 for users who will continue to use a prior version of NetView after Tivoli NetView for z/OS Version 5 Release 3 has been installed.** SMP/E jobs will

load the necessary code into the appropriate libraries, then try to delete any prior releases of NetView. Since you are installing into new CSI zones there is nothing to delete. SMP/E will continue by saying there was nothing deleted. There is no need to give any dummy library names for your prior NetView because SMP/E has no way to know that a previous release was ever installed.

When your testing is finished and you have migrated completely to Tivoli NetView for z/OS Version 5 Release 3, you can run a delete job to remove the old NetView, MultiSystem Manager, and AON/ANO FMIDs from the CSI zone(s). At that time you will have to provide SMP/E with access to the old LPALIB and LINKLIB libraries. For more information see 6.1.13.1, "APPLYing Tivoli NetView for z/OS Version 5 Release 3 on a System Having NetView Already Installed" on page 44. The *IBM Tivoli NetView for z/OS Installation: Configuring Additional Components, SC31-8874* contains additional information on running more than one NetView in a single host.

2. **Install the NetView program within existing target and distribution zones. This is the recommended method for installing Tivoli NetView for z/OS Version 5 Release 3 for those who wish to delete their prior release of NetView without keeping the prior and the new NetView available for use at the same time (as in choice 1).** If you install Tivoli NetView for z/OS Version 5 Release 3 into the same zone, you must provide access to your prior libraries via DDDEFs or DD statements. SMP/E will remove all traces of your previous release of NetView, including the FMIDs. In addition, you have to provide access to your SYS1.LPALIB so SMP/E may remove the old LPALIB modules. If by chance there are some traces of prior releases that still exist in SMP/E even though the libraries have been deleted, SMP/E will know and you will have to allocate dummy libraries for SMP/E and then apply again. When the apply and accept are complete, you may delete the dummy libraries. Be careful not to delete your real SYS1.LPALIB and SYS1.LINKLIB libraries. For more information see 6.1.13.1, "APPLYing Tivoli NetView for z/OS Version 5 Release 3 on a System Having NetView Already Installed" on page 44.

If you are installing Tivoli NetView for z/OS Version 5 Release 3 into existing SMP/E zones and/or existing target and distribution libraries, you should first make a backup of the zones, the target and distribution libraries and other SMP/E data sets that will be changed during the installation. This backup will allow you to start over in case a severe error occurs during installation.

There is no SYSGEN support for Tivoli NetView for z/OS Version 5 Release 3. If a SYSGEN is performed after the installation of Tivoli NetView for z/OS Version 5 Release 3 is complete, the GENERATE facility of SMP/E can be used to re-install Tivoli NetView for z/OS Version 5 Release 3.

6.1 Installing Tivoli NetView for z/OS Version 5 Release 3

The samples provided with Tivoli NetView for z/OS Version 5 Release 3 must be customized to work in your system's environment. Where possible, the samples call attention to places where customization is necessary; however, it is possible that additional customization might be required. For example, job card information might need to be customized. In addition to this program directory, read the comments in the JCL samples. They are designed to make it easy to find required changes. Some of the JCL values which should be verified and are most likely to need customization are coded in lower case; a JCL error occurs if the values are overlooked.

6.1.1 SMP/E Considerations for Installing Tivoli NetView for z/OS Version 5 Release 3

This release of Tivoli NetView for z/OS Version 5 Release 3 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 Environment

All SMP/E installation jobs provided assume that all necessary DD statements for the execution of SMP/E are defined using DDDEFs.

Sample jobs are provided to assist you in installing Tivoli NetView for z/OS Version 5 Release 3. After the RECEIVE step has been completed, if you used the defaults supplied, the sample jobs will be found in SMPTLIB: **NETVIEW.JENV53J.F2**. If you did not use the value of NETVIEW for the HLQ, then they will be in the dataset with the name you chose. Make a copy of these jobs in your own library and modify them to use during the installation of Tivoli NetView for z/OS Version 5 Release 3. Or you can use the UNLOAD job provided in the program directory to copy the install JCL from the tape. See 6.1.5, "Sample Jobs" on page 37.

6.1.3 SMP/E Options Subentry Values

The recommended values for some SMP/E CSI subentries are shown in Figure 21. 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.

Figure 21. SMP/E Options Subentry Values		
SUB-ENTRY	**Value**	**Comment**
DSSPACE	(300,500,900)	Use 900 directory blocks
PEMAX	SMP/E Default	Tivoli recommends using the SMP/E default for PEMAX.

6.1.4 SMP/E CALLLIBS Processing

Tivoli NetView for z/OS Version 5 Release 3 uses the CALLLIBS function provided in SMP/E to resolve external references during installation. When Tivoli NetView for z/OS Version 5 Release 3 is installed, ensure that DDDEFs exist for the following libraries:

- CSSLIB
- SCEELKED
- SEZADPIL
- SEZACMTX
- SISPLOAD

Note: The DDDEFs above are used only to resolve the link-edit for Tivoli NetView for z/OS Version 5 Release 3 using CALLLIBS. These data sets are not updated during the installation of Tivoli NetView for z/OS Version 5 Release 3.

If you are running a release of SMP/E prior to 3.2 verify that the SMP/E SMPLTS data set has been allocated. Refer to *SMP/E Reference* for information on allocating the SMPLTS data set.

Note: For Tivoli NetView for z/OS Version 5 Release 3, 296 tracks of 3390 DASD space is adequate for the SMPLTS.

6.1.5 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install Tivoli NetView for z/OS Version 5 Release 3:

Job Name	Job Type	Description	RELFILE
Figure 22. Sample Installation Jobs			
CNMJSMPJ	SMPZONE	Sample job to allocate SMP/E datasets	IBM.JENV53J.F2
CNMJCSIJ	SMPZONE	Sample job to allocate global, target and dlib zones, define the globalzone and default options to SMP/E	IBM.JENV53J.F2
CNMJUCLJ	SMPZONE	Sample job to update DSSPACE and/or PEMAX if using existing zones	IBM.JENV53J.F2
CNMRCVEJ	RECEIVE	RECEIVE job for Tivoli NetView for z/OS Version 5 Release 3	IBM.JENV53J.F2
CNMALOCJ	ALLOCATE	Allocate job for target and distribution libraries for Tivoli NetView for z/OS Version 5 Release 3 host.	IBM.JENV53J.F2
CNMJMKPJ	MKDIR	Sample job to create HFS mount point directory of target HFS data set that was allocated. Must be done from ID with root authority.	IBM.JENV53J.F2
CNMJMKMJ	MKDIR	Rexx exec invoked by CNMJMKPJ to create the HFS mount point directory of the target HFS data set.	IBM.JENV53J.F2
CNMJMKXJ	MKDIR	Sample job to execute the exec that creates HFS directories for z/OS UNIX System Services related components. Must be done from ID with root authority.	IBM.JENV53J.F2
CNMJMKDJ	MKDIR	Rexx exec invoked by CNMJMKXJ to create HFS directories for z/OS UNIX System Services related components HFS paths	IBM.JENV53J.F2
CNMDDEFJ	DDDEF	Sample job to define SMP/E DDDEFs for NetView	IBM.JENV53J.F2
CNMAPLYJ	APPLY	APPLY job for NetView. Must be done from ID with root authority.	IBM.JENV53J.F2
CNMACPTJ	ACCEPT	ACCEPT job for NetView	IBM.JENV53J.F2

You can access the sample installation jobs by performing an SMP/E RECEIVE and then copying the jobs from the relfiles to a work data set for editing and submission. See Figure 22 to find the appropriate relfile data set.

You may also choose to copy the jobs from the tape or product files by submitting the job below. Use either the //TAPEIN or the //FILEIN DD statement, depending on your distribution medium, and comment out or delete the other statement. Add a job card and change the lowercase parameters to uppercase values to meet your site's requirements before submitting.

```
//UNLOAD   EXEC PGM=IEBCOPY
//SYSPRINT  DD SYSOUT=*
//TAPEIN    DD DSN=IBM.JENV53J.F2,UNIT=tunit,
//             LABEL=(7,SL),DISP=OLD,
//             VOL=SER=ENV530
//FILEIN    DD DSN=IBM.JENV53J.F2,UNIT=SYSALLDA,DISP=SHR,
//          VOL=SER=filevol
//OUT       DD DSNAME=jcl-library-name,
//             DISP=(NEW,CATLG,DELETE),
//             VOL=SER=dasdvol,UNIT=SYSALLDA,
//             SPACE=(8800,(15,10,15))
//SYSUT3    DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN     DD *
    COPY INDD=xxxxIN,OUTDD=OUT
/*
```

In the sample above, update the statements as noted below:

> If using TAPEIN:
>> **tunit** is the unit value matching the product tape.
> If using FILEIN
>> **filevol** is the volume serial of the DASD device where the downloaded files reside.
> OUT
>> **libraryname** is the high level qualifier of your data set
>> **dasdvol** is the volume serial of the DASD device where the output data set will reside.
> SYSIN
>> **xxxxIN** is either TAPEIN or FILEIN depending on your input DD statement.

6.1.6 Establish the Correct SMP/E Environment for Tivoli NetView for z/OS Version 5 Release 3

6.1.6.1 SMP/E Data Sets for Tivoli NetView for z/OS Version 5 Release 3

If you chose to allocate a NetView SMP/E CSI then you may also wish to allocate separate SMP/E data sets for use with the new zones. Sample CNMJSMPJ is provided for that purpose. It is important that the data set names match between sample job CNMJSMPJ and those that are specified in all of the installation jobs supplied with Tivoli NetView for z/OS Version 5 Release 3. CNMJSMPJ is written to allow for a customer supplied second level qualifier to the data set names but does not require it. If you choose

to add a second level qualifier you should code it in the SMPSLQ parameter and be sure it contains the trailing period (e.g. SMPSLQ=USER.).

- **Expected Return Codes and Messages:** The CNMJSMPJ job is considered successful if return code zero is received.

6.1.6.2 SMP/E CSI for Tivoli NetView for z/OS Version 5 Release 3

Users who wish to allocate new CSI data sets and create a separate set of global, distribution and target zones for NetView may do so using the sample CNMJCSIJ. CNMJCSIJ will allocate and prime a global CSI data set, allocate and prime separate CSI data sets for the target and distribution zones, and initialize the zones once the CSIs are allocated and primed. Along with following the directions specified in the comments of the CNMJCSIJ sample, you should review the SMP/E options defined in CNMJCSIJ. These options were chosen for maximum flexibility and a minimum number of later updates; you may wish to change some options. For example, the NOPURGE option, prevents the deletion of global zone SYSMOD entries, HOLDDATA entries, SMPPTS MCS entries and SMPTLIB data sets during ACCEPT processing. Specifying PURGE could save some disk space if the consequences are acceptable. The *SMP/E User's Guide* and the *SMP/E Reference* will be helpful in determining whether or not to specify NOPURGE.

The ACCJCLIN option tells SMP/E to save inline JCLIN in the distribution zone whenever a SYSMOD containing inline JCLIN is ACCEPTed. The ACCJCLIN option can be specified in the CNMJCSIJ sample job, or a separate UCLIN job can be executed at a later time to add this option. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

- **Expected Return Codes and Messages:** The CNMJCSIJ job is considered successful if return code zero is received. If this is the first time you have run this job, and have uncommented the step to delete existing CSI's, and there are no existing CSIs to delete, you will get a return code of 8 for the delete step.

6.1.6.3 SMP/E access to Tivoli NetView for z/OS Version 5 Release 3 Data Sets

To establish the correct SMP/E access to Tivoli NetView for z/OS Version 5 Release 3 data sets, complete the following steps:

- Ensure that the SMP/E space requirements outlined in Figure 15 on page 17 and Figure 16 on page 17 are met by the SMP/E environment that will be used to install Tivoli NetView for z/OS Version 5 Release 3. If you choose to use samples CNMJSMPJ and CNMJCSIJ to create your SMP/E environment, these requirements are met and you may continue to 6.1.7, "Perform SMP/E RECEIVE" on page 40. If you are **not** using CNMJSMPJ and CNMJCSIJ to create your SMP/E environment, read the following items.

  – Storage requirements for the SMPCSI data sets are found in Figure 14 on page 17.

  – CNMJUCLJ can be used to set DSSPACE and PEMAX to the values shown in Figure 21 on page 36. CNMJUCLJ should only be used if the values in your current OPTIONS entry are less than the values shown in Figure 21 on page 36.

  – Run CNMJUCLJ, if necessary, before proceeding to 6.1.7, "Perform SMP/E RECEIVE" on page 40 .

> **Expected Return Codes and Messages:** The CNMJUCLJ job is considered successful if return code zero is received.

6.1.7 Perform SMP/E RECEIVE

Perform an SMP/E RECEIVE for Tivoli NetView for z/OS Version 5 Release 3.

Having obtained Tivoli NetView for z/OS Version 5 Release 3 as part of a CBPDO, use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the Tivoli NetView for z/OS Version 5 Release 3 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.

You can also choose to edit and submit sample job CNMRCVEJ to perform the SMP/E RECEIVE for Tivoli NetView for z/OS Version 5 Release 3. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: The CNMRCVEJ job is considered successful if return code zero is received.

6.1.8 Allocate SMP/E Target and Distribution Libraries

6.1.8.1 Allocate SMP/E Target and Distribution Libraries

Ensure that the Tivoli NetView for z/OS Version 5 Release 3 target and distribution libraries have sufficient space. To see the minimum sizes needed refer to Figure 19 on page 20 and Figure 17 on page 18. To allow for maintenance, the space allocations in allocation samples are larger than the actual minimum space required.

If you are installing the NetView program for the first time, or want to install a new copy of NetView, the allocation sample, CNMALOCJ, can be used to create the target and distribution libraries which are used exclusively by Tivoli NetView for z/OS Version 5 Release 3.

Optionally, CNMALOCJ can also allocate a target HFS data set, 'hhhhhh.NETVIEW.V5R3J.HFS', that can be used to install NetView code. If you wish to create a zFS you may not use job CNMALOCJ. You will need to consult z/OS documentation to learn how to create a zFS.

Note: You are not required to allocate a target HFS data set, however, it is recommended. If you do not wish to allocate a target HFS data set for NetView, you can still install into either your root HFS data set or into another HFS data set. Currently, CNMALOCJ will not allocate a target HFS data set. If you wish to allocate one you must uncomment the ALLOC2 step before running the CNMALOCJ sample job.

The target library SCNMLPA1 must be cataloged in the master catalog so that it can later be concatenated to SYS1.LPALIB via the LPALSTxx member of SYS1.PARMLIB. The target library CNMLINK must also be cataloged in the master catalog if it is to be added to the linklist via the LNKLSTxx member of SYS1.PARMLIB. The LPALIB and LNKLST concatenations are discussed further in the *IBM Tivoli NetView for z/OS Installation: Getting Started, SC31-8872*.

If you are allocating new Tivoli NetView for z/OS Version 5 Release 3 libraries run CNMALOCJ. After running CNMALOCJ you should proceed to 6.1.9, "Create Hierarchical File System Mount Point Directory" on page 41.

- **CNMALOCJ:**

  Expected Return Codes and Messages: The CNMALOCJ job is considered successful if return code zero is received.

6.1.9 Create Hierarchical File System Mount Point Directory

A mount point directory is required for the USS code. You can use CNMJMKPJ to create the HFS mount point directory, <PathPrefix>/usr/lpp/netview/, which will be used to mount your target HFS data set. CNMJMKPJ must be run by a userid that has SAF READ access to BPX.SUPERUSER.

Note: CNMJMKPJ assumes that the <PathPrefix>/usr/lpp/ directories already exist. If these directories do not exist, manually create the <PathPrefix>/usr/lpp/ directories **before** submitting CNMJMKPJ.

Note: When editing sample CNMJMKPJ, be sure that you use the same <PathPrefix> value when you edit sample CNMDDEFJ. The default value that is shipped with Tivoli NetView for z/OS Version 5 Release 3 is null. Remember that pathnames in z/OS UNIX System Services are case sensitive.

- **CNMJMKPJ:**

  Expected Return Codes and Messages: The CNMJMKPJ job is considered successful if return code zero is received.

6.1.10 Mount The Target Hierarchical File System Dataset

If you chose to allocate a new HFS, as defined in sample CNMALOCJ, then use the following TSO/E command to mount the target HFS dataset that was allocated by sample CNMALOCJ at the mount point directory:

```
MOUNT FILESYSTEM('hhhhhh.netview.V5R3J.HFS')
      MOUNTPOINT('<PathPrefix>/usr/lpp/netview/')
      TYPE(HFS) MODE(RDWR)
```

'hhhhhh.netview.V5R3J.HFS' is the name of your target HFS dataset and <PathPrefix> is the high-level directory name that will be used in sample CNMDDEFJ. Be sure to mount the target HFS dataset in read/write mode. After the steps in this program directory have been completed, you should re-mount the target HFS dataset in read only mode in order to protect the data installed. This command must be entered by a userid that has SAF READ access to BPX.SUPERUSER.

Note: If you re-ipl your target system, you will have to re-enter this command in order to re-mount the target HFS dataset. To automatically mount the target HFS dataset during the ipl process, modify your BPXPRMxx member of SYS1.PARMLIB. Instructions for modifying your BPXPRMxx member are provided

in the *IBM Tivoli NetView for z/OS Installation: Getting Started, SC31-8872*. This may be helpful if an IPL occurs before the installation is complete.

6.1.11 Create Hierarchical File System Directories

For Tivoli NetView for z/OS Version 5 Release 3, edit and submit sample CNMJMKXJ which creates HFS directories for z/OS UNIX System Services related components in NetView. CNMJMKXJ must be run by a userid that has SAF READ access to BPX.SUPERUSER.

Note: When editing sample CNMJMKXJ, be sure that you use the same <PathPrefix> value in sample CNMDDEFJ.

- **CNMJMKXJ:**

  Expected Return Codes and Messages: The CNMJMKXJ job is considered successful if return code zero is received.

6.1.12 Create DDDEF Entries

Add the DDDEFs for Tivoli NetView for z/OS Version 5 Release 3 target libraries and distribution libraries (for SMP/E CALLLIB and RESTORE processing) to the target zone into which Tivoli NetView for z/OS Version 5 Release 3 will be APPLYed. Also add the DDDEFs for distribution libraries to the distribution zone into which Tivoli NetView for z/OS Version 5 Release 3 will be ACCEPTed.

Run CNMDDEFJ before proceeding. Consult the instructions in the sample job for more information.

Note: Because pathnames in z/OS UNIX System Services are case sensitive, be sure when you change <PathPrefix> in the DDDEF3 step not to change the case of any characters in the HFS pathname.

- **CNMDDEFJ:**

  Expected Return Codes and Messages: The CNMDDEFJ job is considered successful if return code zero is received.

6.1.13 Perform SMP/E APPLY

Ensure you have the latest Enhanced HOLDDATA, edit and submit sample job CNMAPLYJ to perform an SMP/E APPLY CHECK for Tivoli NetView for z/OS Version 5 Release 3. Consult the instructions in the sample job for more information. You will have to uncomment the CHECK operand in order to run that function.

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).

Downlevel Enhanced HOLDDATA introduces 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.

Once you have taken any actions indicated by the APPLY CHECK, remove or comment out 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.

If you have previously installed NetView into target libraries that you will continue to use with Tivoli NetView for z/OS Version 5 Release 3, you will need to let SMP/E remove the old NetView from those target libraries at APPLY time. See section 6.1.13.1, "APPLYing Tivoli NetView for z/OS Version 5 Release 3 on a System Having NetView Already Installed" on page 44 for more information.

The APPLY job, CNMAPLYJ will apply one or more FMIDs. You may choose to apply FMIDs individually, or all at once. Make the changes as indicated in the JCL comments contained in CNMAPLYJ (as well as any other changes required by your site) and submit the job. Remember, you must comment out any FMIDs that you will not be applying.

Note: It is **strongly** recommended that you APPLY the NetView components in the order listed in the sample apply job. This is because Tivoli NetView for z/OS Version 5 Release 3 has many dependencies between components. These dependencies will cause unresolved external reference messages to be generated during the APPLY. The correct order for applying is

- HENV53B
- JENV53J

Note: The CNMAPLYJ job must be run by a userid that has SAF READ access to BPX.SUPERUSER.

Warning: Because Tivoli NetView for z/OS Version 5 Release 3 has been divided into two FMIDs this release, some load modules will be built with parts from multiple FMIDs. SMP/E will handle this automatically for you by keeping track of what parts are needed and adding them into load modules as they are applied. However, this means that some linkage editor steps will initially finish with a return code of 4. In order to keep the APPLY step from ending prematurely, you must set SMP/E to allow a return code of 4. (This is done automatically if you use the SMP/E sample installation jobs provided). This can also be done by using the SMP/E dialogs or UCLIN commands to set the return code for specific utilities such as IEWL, the binder.

- **CNMAPLYJ:**

  Expected Return Codes and Messages from APPLY CHECK: The job is considered successful if return code zero is received.

  Expected Return Codes and Messages from APPLY: The job is considered successful if return code zero is received.

6.1.13.1 APPLYing Tivoli NetView for z/OS Version 5 Release 3 on a System Having NetView Already Installed

You should do either 6.1.13.1.1, "Deleting a Previous Release of NetView" on page 44 or 6.1.13.1.2, "Running with a Previous Release of NetView" on page 44, but not both.

6.1.13.1.1 Deleting a Previous Release of NetView: If you have previously installed NetView into system libraries and you will use those libraries again with Tivoli NetView for z/OS Version 5 Release 3, but you do not want to continue using this release after your Tivoli NetView for z/OS Version 5 Release 3 install, you will need to use SMP/E to remove the old NetView from those libraries when SMP/E installs Tivoli NetView for z/OS Version 5 Release 3.

For SMP/E to remove the previous release of NetView from your system's libraries, you will have to take the following steps:

- You will have to run your APPLY job referencing your old NetView libraries and SMP/E zone.

- During an APPLY, all the elements from a previous release are deleted from your target libraries. If you have previously deleted old libraries or elements within a library, the SMP/E entry for them will still exist. An attempt will be made to delete elements, and processing will continue whether or not they are found. However, if SMP/E cannot find the data sets, it will halt the APPLY until you provide access to them. In this case, allocate dummy libraries and delete them after the APPLY.

- Any old NetView data sets that are deleted should be removed from your SMP/E zone DDDEFs (CNMDDEFJ). If you have a previous version of MultiSystem Manager or AON/ANO installed you will need to delete those data sets as well.

- Since the APPLY will have deleted BNJMTERM from SYS1.LPALIB, no IPLs should be performed with the CLPA option until the library SCNMLPA1 is concatenated to SYS1.LPALIB via a LPALSTxx member of SYS1.PARMLIB (refer to the *IBM Tivoli NetView for z/OS Installation: Getting Started, SC31-8872*).

Warning: If an IPL is performed before the SCNMLPA1 data set is allocated, a warning message will be displayed saying that the SCNMLPA1 data set cannot be allocated, and NetView will not start correctly.

To lessen the exposure to this situation, you might want to add SCNMLPA1 to the LPALSTxx member (refer to *IBM Tivoli NetView for z/OS Installation: Getting Started, SC31-8872*) before actually APPLYing Tivoli NetView for z/OS Version 5 Release 3.

6.1.13.1.2 Running with a Previous Release of NetView: If you have previously installed NetView and you plan to continue using this release after your Tivoli NetView for z/OS Version 5 Release 3 install, you **MUST** use separate SMP/E target zones for your Tivoli NetView for z/OS Version 5 Release 3 install. After your period of testing Tivoli NetView for z/OS Version 5 Release 3 is finished, you should delete the previous release of NetView.

When your migration is complete and you wish to delete your previous release of NetView, you may run an SMP/E job using a dummy FMID to delete the previous release and its parts from the old libraries and the previous release's target and distribution zones. A UCLIN job is used to clean out references to the dummy FMID from the CSI zones. This assumes you have installed Tivoli NetView for z/OS Version 5

Release 3 in a separate CSI(s) or zone(s) from the previous release. Figure 23 on page 45 lists the releases prior to Tivoli NetView for z/OS Version 5 Release 3.

Figure 23. NetView FMIDs to delete by Version/Release

Version/Release	MVS/370	MVS/XA	MVS/ESA
NetView V1R1	HNV1102	HNV1103	N/A[1]
NetView V1R2	HNV1202	HNV1203	N/A[1]
NetView V1R3	N/A[2]	HNV1303	HVNW140
NetView V2R1	N/A[2]	HVWW101	HXYZ101
NetView V2R2	N/A[2]	HVWW200	HXYZ200
NetView V2R3	N/A[2]	HVWW300	HXYZ300
NetView V2R4	N/A[2]	N/A[3]	HXYZ400
NetView V3R1	N/A[2]	N/A[3]	HPZ8100, HPZ8130
TME 10 NetView V1R1	N/A[2]	N/A[3]	HPZ8200
TME 10 NetView V1R2	N/A[2]	N/A[3]	HPZ8300
TME 10 NetView V1R3	N/A[2]	N/A[3]	HPZ8400
Tivoli NetView for z/OS V1R4	N/A[2]	N/A[3]	HPZ8500
Tivoli NetView for z/OS V5R1	N/A[2]	N/A[3]	HENV510
Tivoli NetView for z/OS V5R2	N/A[2]	N/A[3]	HENV520
MultiSystem Manager V1R1	N/A[4]	N/A[5]	HFLC100
MultiSystem Manager V1R2	N/A[4]	N/A[5]	HFLC200
MultiSystem Manager V2R1	N/A[4]	N/A[5]	HFLC300
MultiSystem Manager V2R2	N/A[4]	N/A[5]	HFLC400
AON/ANO FMIDs	N/A[6]	N/A[7]	HLR6110, HLR6200, HML6110, HML6111, H080100

Notes:

1. NetView was not shipped in MVS/ESA for this release.
2. NetView was not shipped in MVS/370 for this release.
3. NetView was not shipped in MVS/XA for this release.
4. MultiSystem Manager was not shipped in MVS/370.
5. MultiSystem Manager was not shipped in MVS/XA.
6. AON/ANO was not shipped in MVS/370 for this release.
7. AON/ANO was not shipped in MVS/XA for this release.

If you have not accepted all of your maintenance, you may have additional work to complete the cleanup of your global zones. You should use the REJECT command to delete any SYSMODs and HOLDDATA applicable to the dummy function and the old function. In addition, you should delete the FMIDs from the

GLOBALZONE entry to prevent SMP/E from receiving any SYSMODs or HOLDDATA applicable to either of those functions. Here are examples of the commands you can use to do this:

```
   SET     BDY(GLOBAL)       /* Set to global zone.       */.
   REJECT HOLDDATA NOFMID    /* Reject SYSMODs, HOLDDATA  */
          DELETEFMID         /* for the deleted functions.*/
          (nvdelet fmid2dl)  /* Delete the FMIDs from the */
                             /* GLOBALZONE entry.         */.
```

Figure 24. Additional delete logic

6.1.13.2 Running and verifying the APPLY of Tivoli NetView for z/OS Version 5 Release 3

Run the apply job CNMAPLYJ. It should end with a return code of 0. If the code is non zero then analyze the reports from the APPLY and take whatever action is necessary to resolve the errors. The analysis of APPLY reports is covered in detail in the *SMP/E User's Guide*.

You should be aware that you may receive a return code of 0 and still find unresolved references in your APPLY output. This is normal and not a problem. With SMP/E R8 and higher many modules are built twice. The first version is built without any references to HLL libraries resolved and stored in an SMP/E dataset, SMPLTS. This version will have unresolved external references. It is used by SMP/E to rebuild the module if you should update the level of any of your HLL's. SMP/E then builds the useable version of the module with the HLL libraries, resolving any external references. If the useable version builds correctly the APPLY job will end with a return code of 0. Please note that this is an explanation of how CALLLIBS works, not an instruction to run REPORT CALLLIBS each time maintenance is applied to your high level language. This need was eliminated in Language Environment Version 1 Release 3 and is applicable to all z/OS releases. You will still need to run REPORT CALLLIBS if your products have maintenance applied, but not if your high level language source is LE V1R3 or higher which includes all levels of OS/390 Release 3 or later.

Depending on the level of z/OS used, you will receive additional warning and informational messages when you run the APPLY jobs. Most of these are not a problem. Figure 25 lists the messages, and the approximate number of times each message will occur, for each set of FMIDs. This is not meant to be an exact list, as the level of your operating system may cause variations in the results, but is meant to be used as a guide in assessing whether your APPLY ran correctly. Note that, if you are using SMP/E 3.2 or higher you will not receive any of the messages listed in Figure 25.

Figure 25. Warning and Informational Messages Received during APPLY		
Message Number	**HENV53B**	**JENV53J**
GIM23913I	4825	1014
GIM23913W	3	0
GIM23914I	0	0
IEW2454W	33	175
IEW2646W	1	0
IEW2651W	1	0
IEW2650I	11	37

6.1.14 Perform SMP/E ACCEPT

Edit and submit sample job CNMACPTJ to perform an SMP/E ACCEPT CHECK for Tivoli NetView for z/OS Version 5 Release 3. 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.

Edit and submit the sample accept job to perform an SMP/E ACCEPT for Tivoli NetView for z/OS Version 5 Release 3. Consult the instructions in the sample job for more information.

If you have previously installed NetView into distribution libraries that you will continue to use with Tivoli NetView for z/OS Version 5 Release 3, you will need to let SMP/E remove the old NetView from those distribution libraries at ACCEPT time.

CNMACPTJ will accept one or more FMIDs. You will need to run this job for each FMID for which you did a RECEIVE and APPLY.

Make the changes as indicated in the JCL comments contained in CNMACPTJ (as well as any other changes required by your site) and submit the job. The analysis of ACCEPT reports is covered in detail in *SMP/E User's Guide*.

- **CNMACPTJ:**

  Expected Return Codes and Messages from ACCEPT CHECK: The job is considered successful if return code 0 is received.

  Expected Return Codes and Messages from ACCEPT: The job is considered successful if return code 0 is received.

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.

6.1.14.1 ACCEPTing Tivoli NetView for z/OS Version 5 Release 3 on a System Having NetView Already Installed

You should do either 6.1.14.1.1, "Deleting a Previous Release of NetView" or 6.1.14.1.2, "Running with a Previous Release of NetView," but not both.

6.1.14.1.1 Deleting a Previous Release of NetView: If you have previously installed NetView into system libraries and you will reuse those libraries with Tivoli NetView for z/OS Version 5 Release 3, but you do NOT want to continue using this release after your Tivoli NetView for z/OS Version 5 Release 3 install you will need to let SMP/E remove the old NetView from those libraries when SMP/E installs Tivoli NetView for z/OS Version 5 Release 3.

To allow SMP/E to remove the old NetView from your system's libraries, you will have to take the following steps:

- You will have to run your ACCEPT job using your old NetView libraries and SMP/E zone.

- During an ACCEPT, all the elements from a previous release are deleted from your distribution libraries. If you have previously deleted old libraries or elements within a library, the SMP/E entry for them will still exist. An attempt will be made to delete them and processing will continue whether or not the element is found. However, if SMP/E cannot find the data sets, it will halt the ACCEPT until you provide access to them. In this case, allocate dummy libraries and delete them after the ACCEPT.

- Any old NetView data sets that are deleted should also be removed from your SMP/E zone DDDEFs. If you have a previous version of MultiSystem Manager or AON/ANO installed you will need to delete those data sets as well.

6.1.14.1.2 Running with a Previous Release of NetView: If you have previously installed NetView and you plan to continue using this release after your Tivoli NetView for z/OS Version 5 Release 3 install, you **MUST** use separate SMP/E distribution zones for your Tivoli NetView for z/OS Version 5 Release 3 install.

When your migration is complete and you wish to delete your previous release of NetView, you may run the dummy SMP/E job to delete the old distribution libraries from the previous release's CSI zone. This assumes you have installed Tivoli NetView for z/OS Version 5 Release 3 in a separate CSI from the previous release. This process is described in 6.1.13.1.2, "Running with a Previous Release of NetView" on page 44 and the jobs provided perform the receive, apply, and accept steps.

6.1.15 Installing the PTFs

For information concerning PTF installation, refer to *SMP/E User's Guide*.

APPLY and ACCEPT any received maintenance.

6.1.16 Cleaning Up Obsolete Data Sets, Paths, and DDDEFs

The following DD names have allocated data sets that were used by previous releases of this product, are no longer used in this release. You may choose to delete these obsolete data sets after you delete the previous release from your system.

- SEKGCAS1
- AEKGCAS1
- SEKGLUTB
- AEKGLUTB
- SEKGPNL1
- AEKGPNL1
- SEKGSMP1
- AEKGSMP1
- SEKGMOD1
- AEKGMOD1
- SEKGMOD2
- SEKGLNK1
- SEZLCLST
- AEZLCLST
- SEZLINST
- AEZLINST
- SEZLLINK
- AEZLLINK
- SEZLPNLU

- AEZLPNLU
- SEZLSAMP
- AEZLSAMP

The following HFS paths, created and used by previous releases of this product, are no longer used in this release. You may choose to delete these obsolete HFS paths after you delete the previous release from your system.

- /usr/lpp/netview/bin/IBM/
- /usr/lpp/netview/samples/IBM/
- /usr/lpp/netview/lib/IBM/
- /usr/lpp/netview/mibs/IBM/
- /usr/lpp/netview/doc/IBM/
- /usr/lpp/netview/man/C/cat1/IBM/
- /usr/lpp/netview/samples/properties/IBM
- /usr/lpp/netview/samples/properties/startup/IBM
- /usr/lpp/netview/v5r1/*
- /usr/lpp/netview/v5r2/*

The following DDDEF entries, created and used by previous releases of this product, are no longer used in this release. You may choose to delete these obsolete DDDEF entries after you delete the previous release from your system.

- SEKGCAS1
- AEKGCAS1
- SEKGLUTB
- AEKGLUTB
- SEKGPNL1
- AEKGPNL1
- SEKGSMP1
- AEKGSMP1
- SEKGMOD1
- AEKGMOD1
- SEKGMOD2
- SEKGLNK1
- SEZLCLST

- AEZLCLST

- SEZLINST

- AEZLINST

- SEZLLINK

- AEZLLINK

- SEZLPNLU

- AEZLPNLU

- SEZLSAMP

- AEZLSAMP

6.2 Activating Tivoli NetView for z/OS Version 5 Release 3

6.2.1 HFS Execution

If you choose to have the HFS in which you have installed Tivoli NetView for z/OS Version 5 Release 3 mounted in read-only mode during execution, then no further tasks are required to accomplish this.

The publication *IBM Tivoli NetView for z/OS Installation: Getting Started, SC31-8872* contains the step-by-step procedures to activate the functions of Tivoli NetView for z/OS Version 5 Release 3. For additional information refer to the publications noted in Figure 3 on page 5.

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APAR numbers are provided in this document to assist in locating PTFs that may be required. Ongoing problem reporting may result in additional APARs being created. Therefore, the APAR lists in this document may not be complete. To obtain current service recommendations and to identify current product service requirements, always contact the IBM Customer Support Center or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

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OS/390	MVS/370
MVS	MVS/XA
MVS/370	MVS/ESA
MVS/XA	CBPDO
MVS/ESA	RACF
CBPDO	System/370
RACF	System/390
System/370	ServicePac
System/390	SystemPac
ServicePac	Parallel Sysplex
SystemPac	VTAM
Parallel Sysplex	SAA
VTAM	Language Environment
SAA	OS/390 UNIX System Services
Language Environment	AIX
OS/390 UNIX System Services	Netfinity
AIX	RISC System/6000
Netfinity	RISC/6000
RISC System/6000	RS/6000
RISC/6000	POWERserver
RS/6000	Tivoli Management Environment
POWERserver	Global Enterprise Manager
Tivoli Management Environment	LPDA
Global Enterprise Manager	DB2
LPDA	CandleNet Portal
DB2	OMEGAMON

Tivoli Management Framework Tivoli Management Region Tivoli Enterprise Console Tivoli Global
Enterprise Manager

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  Microsoft
  Windows
  Windows NT
  Windows 95
  Windows 98
  Windows 2000

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Appendix B. Program Level Information

The following APAR fixes against previous releases of NetView have been incorporated into Tivoli NetView for z/OS Version 5 Release 3:

OA01523	OA02136	OA02762	OA03340	OA03834
OA01535	OA02160	OA02777	OA03341	OA03836
OA01543	OA02164	OA02799	OA03371	OA03842
OA01548	OA02181	OA02811	OA03375	OA03844
OA01587	OA02191	OA02812	OA03393	OA03862
OA01614	OA02232	OA02818	OA03394	OA03896
OA01645	OA02246	OA02831	OA03409	OA03897
OA01666	OA02251	OA02836	OA03410	OA03925
OA01671	OA02257	OA02861	OA03411	OA03926
OA01688	OA02258	OA02862	OA03413	OA03930
OA01691	OA02260	OA02863	OA03499	OA03933
OA01703	OA02264	OA02883	OA03538	OA03938
OA01706	OA02298	OA02917	OA03540	OA03957
OA01718	OA02309	OA02920	OA03573	OA03963
OA01724	OA02335	OA02935	OA03575	OA03964
OA01728	OA02356	OA02944	OA03576	OA03976
OA01752	OA02358	OA02961	OA03587	OA03982
OA01767	OA02364	OA02969	OA03598	OA03992
OA01777	OA02370	OA02971	OA03600	OA04000
OA01783	OA02393	OA03015	OA03638	OA04042
OA01805	OA02398	OA03019	OA03722	OA04104
OA01821	OA02402	OA03027	OA03724	OA04105
OA01822	OA02432	OA03045	OA03725	OA04121
OA01824	OA02472	OA03053	OA03729	OA04128
OA01827	OA02473	OA03080	OA03736	OA04241
OA01833	OA02482	OA03086	OA03750	OA04258
OA01903	OA02497	OA03089	OA03752	OA04267
OA01907	OA02515	OA03092	OA03763	OA04304
OA01909	OA02526	OA03097	OA03774	OA04353
OA01975	OA02533	OA03098	OA03784	OA04381
OA01993	OA02535	OA03174	OA03798	OA04433
OA02015	OA02545	OA03206	OA03799	OA04440
OA02020	OA02557	OA03208	OA03800	OA04457
OA02062	OA02618	OA03212	OA03804	OA04474
OA02071	OA02647	OA03215	OA03807	OA04476
OA02073	OA02725	OA03257	OA03813	OA04477
OA02077	OA02748	OA03298	OA03814	OA04487
OA02084	OA02751	OA03330	OA03828	OA04521
OA02099	OA02758	OA03339	OA03831	OA04545

OA04559	OA05206	OA05878	OA06524	OA07202
OA04583	OA05224	OA05886	OA06536	OA07217
OA04584	OA05238	OA05890	OA06547	OA07227
OA04610	OA05239	OA05906	OA06559	OA07230
OA04627	OA05243	OA05909	OA06561	OA07234
OA04628	OA05258	OA05919	OA06566	OA07252
OA04641	OA05276	OA05939	OA06580	OA07253
OA04643	OA05286	OA05964	OA06590	OA07254
OA04667	OA05290	OA05965	OA06595	OA07305
OA04668	OA05291	OA05970	OA06597	OA07306
OA04678	OA05304	OA05973	OA06598	OA07315
OA04738	OA05354	OA05986	OA06631	OA07325
OA04743	OA05430	OA05991	OA06656	OA07338
OA04775	OA05431	OA06015	OA06657	OA07377
OA04796	OA05436	OA06056	OA06675	OA07378
OA04811	OA05456	OA06084	OA06680	OA07384
OA04815	OA05466	OA06093	OA06693	OA07408
OA04828	OA05490	OA06117	OA06700	OA07420
OA04831	OA05505	OA06145	OA06705	OA07444
OA04880	OA05512	OA06157	OA06706	OA07455
OA04887	OA05522	OA06182	OA06736	OA07474
OA04898	OA05539	OA06208	OA06743	OA07492
OA04899	OA05553	OA06226	OA06768	OA07509
OA04936	OA05564	OA06236	OA06782	OA07516
OA04937	OA05577	OA06241	OA06812	OA07517
OA04955	OA05583	OA06242	OA06825	OA07529
OA04963	OA05585	OA06257	OA06826	OA07540
OA04978	OA05595	OA06265	OA06828	OA07547
OA04998	OA05601	OA06273	OA06832	OA07564
OA04999	OA05621	OA06277	OA06835	OA07583
OA05011	OA05622	OA06298	OA06851	OA07601
OA05013	OA05640	OA06299	OA06856	OA07670
OA05014	OA05643	OA06301	OA06872	OA07741
OA05017	OA05656	OA06317	OA06882	OA07747
OA05018	OA05662	OA06321	OA06928	OA07752
OA05024	OA05679	OA06334	OA06986	OA07754
OA05029	OA05760	OA06335	OA07010	OA07755
OA05066	OA05768	OA06337	OA07029	OA07756
OA05070	OA05781	OA06410	OA07056	OA07781
OA05082	OA05829	OA06465	OA07062	OA07800
OA05089	OA05834	OA06466	OA07089	OA07804
OA05140	OA05839	OA06482	OA07124	OA07813
OA05178	OA05840	OA06506	OA07141	OA07835
OA05189	OA05845	OA06512	OA07175	OA07844
OA05202	OA05852	OA06517	OA07190	OA07848
				OA07892

OA07893	OA08497	OA09548	OA10416	OA11424
OA07899	OA08533	OA09610	OA10427	OA11447
OA07922	OA08549	OA09672	OA10432	OA11494
OA07930	OA08552	OA09702	OA10465	OA11510
OA07938	OA08569	OA09705	OA10468	OA11542
OA07947	OA08593	OA09748	OA10507	OA11588
OA07958	OA08605	OA09757	OA10544	OA11594
OA07974	OA08628	OA09772	OA10548	OA11676
OA07994	OA08639	OA09778	OA10567	OA11788
OA07995	OA08649	OA09781	OA10712	OA11813
OA08020	OA08653	OA09790	OA10727	OA11850
OA08051	OA08697	OA09811	OA10730	OA11900
OA08056	OA08739	OA09821	OA10732	OA11915
OA08070	OA08740	OA09830	OA10733	OA11964
OA08071	OA08827	OA09852	OA10766	OA12006
OA08081	OA08847	OA09863	OA10787	OA12008
OA08115	OA08851	OA09893	OA10788	OA12010
OA08116	OA08904	OA09945	OA10792	OA12094
OA08117	OA08933	OA09999	OA10815	OA12095
OA08134	OA08934	OA10032	OA10829	OA12163
OA08146	OA08943	OA10035	OA10862	OA12177
OA08223	OA08958	OA10036	OA10867	OA12183
OA08235	OA08974	OA10046	OA10887	OA12212
OA08247	OA08989	OA10047	OA10905	OA12228
OA08255	OA08998	OA10067	OA10907	OA12340
OA08257	OA09153	OA10068	OA10935	OA12414
OA08288	OA09156	OA10069	OA10962	OA12450
OA08296	OA09161	OA10070	OA10971	OA12514
OA08298	OA09209	OA10088	OA10990	OA12532
OA08313	OA09250	OA10098	OA11000	OA12548
OA08332	OA09255	OA10122	OA11016	OA12621
OA08335	OA09260	OA10140	OA11024	OA12630
OA08337	OA09261	OA10142	OA11072	OA12640
OA08349	OA09262	OA10161	OA11141	OA12646
OA08368	OA09263	OA10166	OA11142	OA12745
OA08377	OA09264	OA10168	OA11173	OA12751
OA08379	OA09293	OA10199	OA11192	OA12768
OA08386	OA09304	OA10200	OA11215	OA12826
OA08388	OA09328	OA10234	OA11230	OA12847
OA08431	OA09334	OA10257	OA11247	OA12852
OA08436	OA09343	OA10299	OA11251	OA12868
OA08461	OA09394	OA10353	OA11281	OA12874
OA08474	OA09455	OA10367	OA11300	OA12890
OA08480	OA09511	OA10394	OA11344	OA12916
OA08484	OA09546	OA10411	OA11348	OA12926
				OA12950

OA13052	OA14781	OA15550	OA16711	OA17948
OA13072	OA14787	OA15591	OA16720	OA17956
OA13083	OA14810	OA15626	OA16774	OA18006
OA13121	OA14821	OA15630	OA16777	OA18021
OA13140	OA14832	OA15631	OA16844	OA18039
OA13167	OA14842	OA15664	OA16848	OA18044
OA13187	OA14869	OA15667	OA16871	OA18056
OA13212	OA14893	OA15671	OA16928	OA18057
OA13244	OA14925	OA15681	OA16957	OA18061
OA13254	OA14940	OA15714	OA17043	OA18156
OA13275	OA14953	OA15729	OA17125	OA18157
OA13356	OA14982	OA15739	OA17132	OA18171
OA13377	OA15010	OA15748	OA17134	OA18189
OA13383	OA15027	OA15773	OA17136	OA18206
OA13391	OA15029	OA15822	OA17144	OA18208
OA13449	OA15030	OA15859	OA17157	OA18256
OA13481	OA15031	OA15862	OA17166	OA18257
OA13538	OA15058	OA15904	OA17171	OA18263
OA13546	OA15065	OA15907	OA17176	OA18292
OA13586	OA15090	OA15919	OA17220	OA18317
OA13592	OA15135	OA15923	OA17245	OA18398
OA13616	OA15146	OA15931	OA17283	OA18406
OA13631	OA15253	OA15933	OA17316	OA18413
OA13652	OA15260	OA15993	OA17329	OA18432
OA13787	OA15271	OA16008	OA17368	OA18446
OA13805	OA15293	OA16198	OA17371	OA18449
OA13824	OA15313	OA16235	OA17376	OA18489
OA13851	OA15351	OA16276	OA17380	OA18511
OA14016	OA15373	OA16297	OA17381	OA18542
OA14070	OA15375	OA16298	OA17416	OA18625
OA14195	OA15381	OA16305	OA17489	OA18658
OA14198	OA15404	OA16317	OA17528	OA18681
OA14226	OA15406	OA16393	OA17539	OA18718
OA14271	OA15411	OA16440	OA17558	OA18735
OA14453	OA15416	OA16482	OA17598	OA18745
OA14500	OA15419	OA16535	OA17634	OA18750
OA14501	OA15462	OA16577	OA17676	OA18779
OA14506	OA15472	OA16605	OA17701	OA18877
OA14542	OA15478	OA16614	OA17740	OA18886
OA14569	OA15482	OA16630	OA17758	OA18949
OA14570	OA15520	OA16644	OA17786	OA18951
OA14598	OA15524	OA16650	OA17787	OA18970
OA14612	OA15538	OA16684	OA17925	OA18972
OA14707	OA15545	OA16688	OA17932	OA18974
OA14712	OA15547	OA16700	OA17937	OA19063
				OA19064

OA19102	OW23869	OW25444	OW26388	OW27996
OA19175	OW23954	OW25491	OW26409	OW28000
OA19259	OW23986	OW25504	OW26420	OW28005
OA19292	OW24010	OW25519	OW26442	OW28006
OA19334	OW24049	OW25591	OW26447	OW28018
OA19385	OW24053	OW25597	OW26505	OW28040
OA19482	OW24085	OW25607	OW26642	OW28128
OA19509	OW24098	OW25629	OW26743	OW28162
OA19614	OW24129	OW25630	OW26754	OW28186
OA19669	OW24130	OW25631	OW26789	OW28198
OA19693	OW24161	OW25639	OW26797	OW28222
OA19812	OW24166	OW25641	OW26798	OW28250
OA19848	OW24323	OW25680	OW26801	OW28273
OA19851	OW24351	OW25709	OW26803	OW28298
OA19857	OW24356	OW25760	OW26838	OW28359
OA19873	OW24414	OW25832	OW26868	OW28360
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Contacting Customer Support

For support for this or any Tivoli product, you can contact Tivoli Customer Support in one of the following ways:

Submit a problem management record (PMR) electronically at **IBMSERV/IBMLINK**.

Submit a problem management record (PMR) electronically from our Web site at http://www.tivoli.com/support.

Send e-mail to **support@tivoli.com**.

Customers in the United States can also call 1-800-TIVOLI8 (1-800-848-6548).

International customers should consult the Web site for customer support telephone numbers.

You can also review the *Customer Support Handbook*, which is available on our Web site at http://www.tivoli.com/support/handbook/.

When you contact Tivoli Customer Support, be prepared to provide identification information for your company so that support personnel can readily assist you. Company identification information may also be needed to access various online services available on the Web site.

The support Web site offers extensive information, including a guide to support services (the Customer Support Handbook); frequently asked questions (FAQs); and documentation for all Tivoli products, including Release Notes, Redbooks, and Whitepapers. The documentation for some product releases is available in both PDF and HTML formats. Translated documents are also available for some product releases.

You can order documentation by e-mail at **swdist@tivoli.com**. Please provide the publication number, part number, or order number of the desired document. Alternatively, you can provide the document title, version number, and date of publication.

We are very interested in hearing about your experience with Tivoli products and documentation. We also welcome your suggestions for improvements. If you have comments or suggestions about our documentation, please contact us in one of the following ways:

Send e-mail to **pubs@tivoli.com**.

Complete our customer feedback survey at http://www.tivoli.com/support/feedback.