



**Program Directory for  
Tivoli NetView for OS/390  
US English**

Version 1 Release 4, Modification Level 00

Program Number 5697-B82

FMID HPZ8500

for Use with  
OS/390

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G110-4801-02

**Note!**

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

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## 1.0 Introduction

This program directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of Tivoli NetView for OS/390. This publication refers to Tivoli NetView for OS/390 as Tivoli NetView for OS/390 Version 1 Release 4. You should read all of this program directory before installing the program and then keep it for future reference.

The program directory contains the following sections:

- 2.0, "Program Materials" on page 10 identifies the basic and optional program materials and documentation for Tivoli NetView for OS/390 Version 1 Release 4.
- 3.0, "Program Support" on page 16 describes the Tivoli support available for Tivoli NetView for OS/390 Version 1 Release 4.
- 4.0, "Program and Service Level Information" on page 18 lists the APARs (program level) and PTFs (service level) incorporated into Tivoli NetView for OS/390 Version 1 Release 4.
- 5.0, "Installation Requirements and Considerations" on page 19 identifies the resources and considerations for installing and using Tivoli NetView for OS/390 Version 1 Release 4.
- 6.0, "Installation Instructions" on page 48 provides detailed installation instructions for Tivoli NetView for OS/390 Version 1 Release 4. It also describes the procedures for activating the functions of Tivoli NetView for OS/390 Version 1 Release 4, or refers to appropriate publications.
- Appendix A, "Program Level Information" on page 73 provides program level information for Tivoli NetView for OS/390 Version 1 Release 4.

Before installing Tivoli NetView for OS/390 Version 1 Release 4, read 3.2, "Preventive Service Planning" on page 16. This section tells you how to find any updates to the information and procedures in this program directory.

Do not use this program directory if you are installing Tivoli NetView for OS/390 Version 1 Release 4 with a SystemPac or ServerPac. When using these offerings, use the jobs and documentation supplied with the offering. This documentation may point you to specific sections of the program directory as required.

If you are installing Tivoli NetView for OS/390 Version 1 Release 4 using the MVS Custom-Built Product Delivery Offering (CBPDO, 5751-CS3), a softcopy program directory is provided on the CBPDO tape which is identical to the printed copy shipped with your order. Your CBPDO contains a softcopy preventive service planning (PSP) upgrade for this product. All service and HOLDDATA for Tivoli NetView for OS/390 Version 1 Release 4 are included on the CBPDO tape.

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## 1.1 Tivoli NetView for OS/390 Version 1 Release 4 Description

Building on the already rich functionality of Tivoli NetView for OS/390 Release 3, Release 4 provides these additional enhancements.

- Internet Protocol (TCP/IP) and Simple Network Management Protocol (SNMP)
  - REXEC client support provides for execution of functions in remote systems
  - RSH (remote shell) client support starts a UNIX shell on a remote system and executes a single command in that shell
  - NetView IPLOG receives forwarded UNIX system log messages, which can then pass through NetView automation
  - TN3270 support allows you to log in to remote TCP/IP connected systems either from the NetView command line or the NetView Management Console (NMC)
  - NetView provides device management using SNMP (SNMPVIEW). This provided information about TCP/IP stacks and resources
  - Ability to manage TCP/IP sessions from a web browser
  - HOST and INFC SNMP traps can be correlated to determine if a host that is having problems is associated with a reported interface problem
  - The ability to manage diagnostic traces to help resolve TCP/IP problems from one focal point NetView across multiple domains
  - TN3270 server function has been extended to support multiple TN3270 interfaces on the CISCO CIP
  - The following additional capabilities are available from the NMC
    - A real-time poller that enables the operator to select an SNMP-managed resource, poll performance and other data for the resource, and display the poll reply data in a customizable graphical format
    - The ability to discover and manage OS/390 TCP/IP stack resources and telnet 3270 servers and clients as views in NMC
    - The ability to use menu-driven, resource-specific, TCP/IP commands against any resource with an IP address
    - A UNIX System Services command line that allows operators to issue any UNIX System Services command for which they are authorized
- Installation, Customization, Usability, Reliability
  - Consolidation and elimination of some parameter files
  - Introduction of the CNMSTYLE initialization member in DSIPARM to provide a central location for many customizable initialization parameters

- Documentation improvement, including separating the Installation manuals into four books, one each for new users, migrating users, advanced topics and graphics
- The MultiSystem Manager command sets are now included in the default NMC database
- Other Enhancements
  - The HTML-based tutorial now includes both an operator tutorial and a systems programmer tutorial.
  - REXX-style logic can be coded in initialization members to allow for conditional inclusion of files and assignment of parameter values based on settings in CNMSTYLE.
  - The NetView LIST command displays operator information (excluding passwords) stored in the NETVIEW, BASE, LANGUAGE, or OMVS segments in OS/390 or z/OS Security Server, even if the operator is not logged on or cannot log on.
  - The main menu now shows only those menu items that are available. If a menu item is not active, you can choose not to display the item on the menu or show it grayed out.
  - The ASSIGN command now allows you to establish the priority of an assignment and to specify which assignment takes precedence if "MSG =" assignment and "MEMBER =" assignment both match on a message
  - Exploitation of the MVS Load-to-Global function strengthens NetView's already robust reliability.
  - You can use MVS Workload Manager (WLM) to balance the workload among NetView tasks. When WLM is enabled, NetView calls WLM during task initialization and passes it the task information to allow WLM to assign it to the appropriate service class. Each service class can be given different performance goals and importance
- Network management and graphical support
  - Session Monitor provides up-to-date outboard Advanced Peer-to-Peer Networking (APPN) path information for sessions through 221x or other DLUR-connected routers that support the HPR Session Awareness architecture.
  - NetView graphical SNA topology supports new attributes for Logical Units (LU) and Logical Links involved in TN3270 sessions. For LUs these attributes report client IP address, client port address, and client DNS name. For Logical Links, these attributes report DLUR local LS address and DLC name.
  - The new NetView Resource Monitor (NRM) monitors and manages NetView tasks, status and resources (such as CPU and storage usage) on all your connected NetView systems from a single NMC.
  - MSM Tivoli Management Region (TMR) agent, which displays information about your Tivoli resources and monitors, now offers additional collection options and improved performance.
  - RODM Collection Manager provides both a wizard and drag-and-drop capability for dynamically building customized views and aggregates with object groupings of your choice. Views now support dynamic updates.

- In addition to retrieving inventory data from Tivoli Inventory for IBM and CISCO network interconnect devices, you can now retrieve data for other resource types (such as managed nodes and end points) for which the inventory database has data. This can include both software and hardware information.
- Other enhancements to NMC include
  - The ability to schedule resource status reporting. For resources that are down for scheduled maintenance, this allows status reporting to go "offline" as well.
  - The NMC View Bar grid layout allows you to see more views in the View Bar without scrolling than the former single row of views allowed.
  - The NMC Web Launch Exit enables access to OEM resource-specific diagnostic pages.
  - The NMC client can act as a Web server, allowing users on Web browsers to see NMC views in view-only mode.
  - Icons are resizable
  - The Java Application Services (JAS) point-and-click GUI allows the NMC user to start, stop, and display current status of OS/390 Java services. These functions are also available from the NetView and operating system command line facilities and from UNIX System Services.
- Automation
  - Automation policy can now exploit the calendar capabilities supplied with the CHRON command. Also, the existing automation policy repository has been repackaged to allow access by other NetView components including NMC, and by user and vendor applications
  - NetView's Automated Operations Network (AON) component now supports new VTAM commands and enhancements to display TCP/IP data in the VTAM DISPLAY command
  - MVS and subsystem commands entered from any MVS console or console interface can be managed by automatically intercepting and optionally modifying them before passing them on for execution. The commands can also be suppressed entirely.
  - Remote commands (RMTCMD) can now be sent to other NetView domains over TCP/IP sessions (in addition to existing LU6.2 support).

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## 1.2 Tivoli NetView for OS/390 Version 1 Release 4 FMIDs

Tivoli NetView for OS/390 Version 1 Release 4 consists of the following FMIDs:

HPZ8500  
JPZ8504  
JPZ8510  
JPZ8514  
JPZ8517  
JPZ8520  
JPZ8524  
JPZ8540

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## 1.3 Tivoli NetView for OS/390 Version 1 Release 4 Ordering Options

When you ordered Tivoli NetView for OS/390 Version 1 Release 4 you specified two things:

- An Installation option
- A National Language Support (NLS) option.

The materials you received for Tivoli NetView for OS/390 Version 1 Release 4 contain functions associated with all installation options and NLS choices.

Figure 1 shows the different ordering options and the components that are received with each option:

<i>Figure 1. Ordering Option Components</i>			
<b>Component</b>	<b>Unattended Option</b>	<b>Procedural Option</b>	<b>Graphical Enterprise Option</b>
NetView System Services Base HPZ8500	x	x	x
NetView System Services US English JPZ8504	x	x	x
NetView Unattended Base JPZ8510	x	x	x
NetView Unattended US English JPZ8514	x	x	x
NetView Base OE US English JPZ8517	x	x	x
NetView Procedural Base JPZ8520		x	x
NetView Procedural US English JPZ8524		x	x
NetView Graphical Enterprise Base JPZ8540			x



## 1.3.1 Tivoli NetView for OS/390 Version 1 Release 4 Installation Options

When you ordered Tivoli NetView for OS/390 Version 1 Release 4 you specified an appropriate option pertaining to the environment where you planned to use the product. The installation options are:

- Unattended
- Procedural
- Graphical Enterprise

Your Unattended, Procedural, or Graphical Enterprise option was ordered through the use of unique feature numbers which specified the installation option.

The *Tivoli NetView for OS/390 Installation: Getting Started, SC31-8767*, provides instructions to set the appropriate installation option during the administration phase of installation.

### 1.3.1.1 Tivoli NetView for OS/390 Version 1 Release 4 Graphical Enterprise Option

The Graphical Enterprise option provides all of the function of Tivoli NetView for OS/390 Version 1 Release 4, and should be used on any system where an operations staff is expected to be present and where NetView-to-NetView sessions will be required. This option is appropriate for systems that will provide focal point operations for either network management or system automation. It allows an operations staff at a central site to support multiple systems, including both those in the same data center and those located at remote sites. The Graphical Enterprise option provides the following functions in support of this environment:

- NetView Management Console
- NetView Graphic Monitor Facility
- NetView 3270 Management Console
- NetView Graphic Monitor Facility Host Subsystem
- Session monitor operator panels
- Hardware monitor operator panels
- Resource Object Data Manager (RODM)
- System Network Accounting and Topology Manager (SNATM)
- NetView MultiSystem Manager
- NetView Automated Operations Network
- NetView OS/390 UNIX System Services Related Components

This includes functions such as the UNIX for OS/390 Command Server, NetView IP Discovery, NMC MIB Browser, Java SNMP Command Line Interface, and AON SNMP Support,

### 1.3.1.2 Tivoli NetView for OS/390 Version 1 Release 4 Procedural Option

The Procedural option is a subset of the Graphical Enterprise option. It contains all the base NetView function of the Graphical Enterprise option, but does **not** contain the following:

- NetView Management Console
- NetView Graphic Monitor Facility
- NetView 3270 Management Console
- NetView Graphic Monitor Facility Host Subsystem
- System Network Accounting and Topology Manager (SNATM)
- NetView MultiSystem Manager

Resource Object Data Manager (RODM) and NetView OS/390 UNIX System Services Related Components are included in this installation option.

You can install the Procedural option from the Graphical Enterprise option libraries if you have a DSLO license. Refer to *Tivoli NetView for OS/390 Installation: Getting Started, SC31-8767*, for complete instructions.

### 1.3.1.3 Tivoli NetView for OS/390 Version 1 Release 4 Unattended Option

For multiple host networks, you can install the Unattended option to manage networks from the central system NetView program. The Unattended option provides system and network management for remote hosts, as well as NetView-to-NetView communication.

Resource Object Data Manager (RODM) and NetView OS/390 UNIX System Services Related Components are included in this installation option.

You can install the Unattended option from the Graphical Enterprise option libraries or the Procedural option libraries if you have a DSLO license. Refer to *Tivoli NetView for OS/390 Installation: Getting Started, SC31-8767* for complete instructions.

## 1.3.2 Tivoli NetView for OS/390 Version 1 Release 4 NLS Options

When you ordered Tivoli NetView for OS/390 Version 1 Release 4 you specified a language in which you want to run Tivoli NetView for OS/390 Version 1 Release 4. The NLS options for Tivoli NetView for OS/390 Version 1 Release 4 are:

- US English
- Japanese

The NLS option was specified through the use of unique feature numbers.

**NLS note**

To install both NetView US English feature and NetView Japanese feature on the same operating system, they must be installed into separate target and distribution zones with maintenance applied to each independently. A separate SMPLTS is needed for each target zone. If you try to install both the NetView US English feature and the NetView Japanese feature into the same target and distribution zones, some features will not install correctly.

---

## 2.0 Program Materials

A Tivoli program is identified by a program number and a feature number. The program number for Tivoli NetView for OS/390 Version 1 Release 4 is 5697-B82.

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

The program announcement material describes the features supported by Tivoli NetView for OS/390 Version 1 Release 4. 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 3480 cartridge or 4mm cartridge. The tape or cartridge contains all the programs and data needed for installation. It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, "Installation Instructions" on page 48 for more information about how to install the program.

#### Notes:

1. The data set attributes in these tables should be used in the JCL of jobs accessing the tape, but since the data sets on the tape are in IEBCOPY unloaded format, their actual attributes may be different.
2. If you are installing Tivoli NetView for OS/390 Version 1 Release 4 using the MVS Custom-Built Product Delivery Offering (CBPDO) (5751-CS3), some of the information in these figures may not be valid. Consult the CBPDO documentation for actual values.
3. If any RELFILES are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

#### 2.1.1 Unattended Option

Figure 2 describes the tapes or cartridges for Tivoli NetView for OS/390 Version 1 Release 4 Unattended Option for US English.

Medium	Feature Number	Physical Volume	External Label Identification	VOLSER
3480 cart.	5852	1	U 1/2 VOLSER=PZ8500	PZ8500
3480 cart.	5852	2	U 2/2 VOLSER=PZ8510	PZ8510
4mm tape	5505	1	U 1/2 VOLSER=PZ8500	PZ8500
4mm tape	5505	2	U 2/2 VOLSER=PZ8510	PZ8510

<i>Figure 2 (Page 2 of 2). Basic Material: Program Tape. Unattended Option for US English</i>				
<b>Medium</b>	<b>Feature Number</b>	<b>Physical Volume</b>	<b>External Label Identification</b>	<b>VOLSER</b>
CDROM			LK3T-9614 NetView/390 CDROM (non-SIS format)	
CDROM			LCD4-4913 NetView/390 CDROM (SIS format)	

## 2.1.2 Procedural Option

Figure 3 describes the tapes or cartridges for Tivoli NetView for OS/390 Version 1 Release 4 Procedural Option for US English.

<i>Figure 3. Basic Material: Program Tape. Procedural Option for US English</i>				
<b>Medium</b>	<b>Feature Number</b>	<b>Physical Volume</b>	<b>External Label Identification</b>	<b>VOLSER</b>
3480 cart.	5832	1	U 1/3 VOLSER=PZ8500	PZ8500
3480 cart.	5832	2	U 2/3 VOLSER=PZ8510	PZ8510
3480 cart.	5832	3	U 3/3 VOLSER=PZ8520	PZ8520
4mm tape	5503	1	U 1/3 VOLSER=PZ8500	PZ8500
4mm tape	5503	2	U 2/3 VOLSER=PZ8510	PZ8510
4mm tape	5503	3	U 3/3 VOLSER=PZ8520	PZ8520
CDROM			LK3T-9614 NetView/390 CDROM (non-SIS format)	
CDROM			LCD4-4913 NetView/390 CDROM (SIS format)	

## 2.1.3 Graphical Enterprise Option

Figure 4 describes the tapes or cartridges for Tivoli NetView for OS/390 Version 1 Release 4 Graphical Enterprise Option for US English.

<i>Figure 4 (Page 1 of 2). Basic Material: Program Tape. Graphical Enterprise Option for US English</i>				
<b>Medium</b>	<b>Feature Number</b>	<b>Physical Volume</b>	<b>External Label Identification</b>	<b>VOLSER</b>
3480 cart.	5812	1	U 1/4 VOLSER=PZ8500	PZ8500
3480 cart.	5812	2	U 2/4 VOLSER=PZ8510	PZ8510
3480 cart.	5812	3	U 3/4 VOLSER=PZ8520	PZ8540
3480 cart.	5812	4	U 4/4 VOLSER=PZ8540	PZ8540
4mm tape	5501	1	U 1/4 VOLSER=PZ8500	PZ8500
4mm tape	5501	2	U 2/4 VOLSER=PZ8510	PZ8510

Figure 4 (Page 2 of 2). Basic Material: Program Tape. Graphical Enterprise Option for US English

Medium	Feature Number	Physical Volume	External Label Identification	VOLSER
4mm tape	5501	3	U 3/4 VOLSER=PZ8520	PZ8520
4mm tape	5501	4	U 4/4 VOLSER=PZ8540	PZ8540
CDROM			LK3T-9614 NetView/390 CDROM (non-SIS format)	
CDROM			LCD4-4913 NetView/390 CDROM (SIS format)	

## 2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for Tivoli NetView for OS/390 Version 1 Release 4.

## 2.3 Program Publications

The following sections identify the basic and optional publications for Tivoli NetView for OS/390 Version 1 Release 4.

### 2.3.1 Basic Program Publications

Figure 5 identifies the basic unlicensed program publications for Tivoli NetView for OS/390 Version 1 Release 4. One copy of each of these publications is included when you order the basic materials for Tivoli NetView for OS/390 Version 1 Release 4. For additional copies, contact your Tivoli representative.

Figure 5 (Page 1 of 2). Basic Material: Unlicensed Publications

Publication Title	Form Number
<i>Tivoli NetView for OS/390 Licensed Program Specifications</i>	GC31-8235
<i>Tivoli NetView for OS/390 Online Library on CD-ROM</i>	LK2T-9133
<i>Tivoli NetView for OS/390 Administration Reference</i>	SC31-8222
<i>Tivoli NetView for OS/390 Security Reference</i>	SC31-8606
<i>Tivoli NetView for OS/390 Installation: Getting Started</i>	SC31-8767
<i>Tivoli NetView for OS/390 Installations: Migration Guide</i>	SC31-8768
<i>Tivoli NetView for OS/390 Installation: Configuring Graphical Components<sup>(1)</sup></i>	SC31-8769
<i>Tivoli NetView for OS/390 Installation: Configuring Additional Components</i>	SC31-8770
<i>Tivoli NetView for OS/390 Planning Guide</i>	GC31-8226
<i>Tivoli NetView for OS/390 User's Guide</i>	GC31-8241
<i>Tivoli NetView for OS/390 Tuning Guide<sup>(3)</sup></i>	SC31-8240

<i>Figure 5 (Page 2 of 2). Basic Material: Unlicensed Publications</i>	
<b>Publication Title</b>	<b>Form Number</b>
<i>Tivoli NetView for OS/390 Tutorial</i>	SK2T-6097
<i>Tivoli NetView for OS/390 Application Programmer's Guide</i>	SC31-8223
<i>Tivoli NetView for OS/390 Automation Guide</i>	SC31-8225
<i>Tivoli NetView for OS/390 Command Reference Volume I</i>	SC31-8227
<i>Tivoli NetView for OS/390 Command Reference Volume II</i>	SC31-8735
<i>Tivoli NetView for OS/390 Messages and Codes</i>	SC31-8237
<i>Tivoli NetView for OS/390 Customization Guide</i>	SC31-8228
<i>Tivoli NetView for OS/390 Customization: Using Assembler</i>	SC31-8229
<i>Tivoli NetView for OS/390 Customization: Using PL/I and C</i>	SC31-8230
<i>Tivoli NetView for OS/390 Customization: Using REXX and the NetView Command List Language</i>	SC31-8231
<i>Tivoli NetView for OS/390 Data Model Reference</i>	SC31-8232
<i>Tivoli NetView for OS/390 RODM &amp; GMFHS Programmer's Guide</i>	SC31-8233
<i>Tivoli NetView for OS/390 Bridge Implementation Guide</i>	SC31-8238
<i>Tivoli NetView for OS/390 Customization: Using Pipes</i>	SC31-8248
<i>Tivoli NetView for OS/390 Automated Operations Network User's Guide<sup>(2)</sup></i>	GC31-8661
<i>Tivoli NetView for OS/390 Automated Operations Network Customization Guide<sup>(2)</sup></i>	SC31-8662
<i>Tivoli NetView for OS/390 APPN Topology and Accounting Agent Guide<sup>(1)</sup></i>	SC31-8224
<i>Tivoli NetView for OS/390 SNA Topology Manager and APPN Accounting Manager Implementation Guide<sup>(1)</sup></i>	SC31-8239
<i>Tivoli NetView for OS/390 NetView Management Console User's Guide</i>	GC31-8665
<i>Tivoli NetView for OS/390 MultiSystem Manager User's Guide</i>	GC31-8607
(1) Enterprise option only	
(2) Enterprise and Procedural options only	
(3) When available	

Figure 6 identifies the basic licensed program publications for Tivoli NetView for OS/390 Version 1 Release 4. 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 6. Basic Material: Licensed Publications

Publication Title	Form Number	Feature Number
<i>Tivoli NetView for OS/390 Diagnosis Guide</i>	LY43-0108	

## 2.3.2 Optional Program Publications

No optional publications are provided for Tivoli NetView for OS/390 Version 1 Release 4.

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## 2.4 Other Materials

Additional Tivoli NetView for OS/390 Version 1 Release 4 reference material can be located as follows:

- For an overview of Tivoli network computing products, and a link to the Tivoli NetView for OS/390 Version 1 Release 4 home page, visit the following Internet World-Wide Web site(s):  
<http://www.tivoli.com/>  
and  
<http://www.tivoli.com/nv390/>
- To access Tivoli NetView for OS/390 Version 1 Release 4 tools that can be downloaded, visit the following Web site:  
[http://www.tivoli.com/nv390\\_tools](http://www.tivoli.com/nv390_tools)

Additional Tivoli NetView for OS/390 Version 1 Release 4 MultiSystem Manager reference material can be located as follows:

- The FLCVREAD member in NETVIEW.V1R4M0.CNMSAMP provides instructions for accessing MultiSystem Manager informal documentation for BLDVIEWS and FLCARODM.
- Documentation and tools for building a MultiSystem Manager Open Topology Interface agent application can be uploaded from an Internet Web browser by pointing to the Tivoli NetView for OS/390 Version 1 Release 4 Tools Download page at:  
[http://www.tivoli.com/nv390\\_tools](http://www.tivoli.com/nv390_tools)  
and then selecting downloads from the MSMT00LK package.
- The following documentation and tools will help you create workstation-based MultiSystem Manager topology agents:
  - *Tivoli NetView for OS/390 MultiSystem Manager: Topology Agents Developer's Toolkit*
  - *Tivoli NetView for OS/390 MultiSystem Manager: Topology Agents Developer's Guide*
  - *Tivoli NetView for OS/390 MultiSystem Manager: Sample Topology Agent*
  - *Tivoli NetView for OS/390 MultiSystem Manager: Topology Application Developer's Flowchart*
  - *Tivoli NetView for OS/390 MultiSystem Manager: Sample OS/390 Topology Manager*



- Tools and selected patches for MultiSystem Manager agents can be downloaded from an FTP site. Use the ANONYMOUS password at:  
ftp://ftp.tivoli.com/  
and look in the following directory:  
ftp://ftp.tivoli.com/support/netview390/msm/  
Files can also be uploaded from this FTP site by pointing your Web browser at:  
ftp://ftp.tivoli.com/support/netview390/msm/  
opening a file and saving it to disk.  
MultiSystem Manager agents can also be downloaded from the following Web site:  
http://www.tivoli.com/nv390\_supported

The Tivoli NetView for OS/390 Version 1 Release 4 Program Directory, along with other Tivoli Program Directories can be found at the following Web site:  
https://www.tivoli.com/secure/support/documents/s390/program\_directories

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## 2.5 Program Source Materials

No program source materials or viewable program listings are provided for Tivoli NetView for OS/390 Version 1 Release 4.

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## 2.6 Publications Useful During Installation

<i>Figure 7. Publications Useful During Installation</i>	
<b>Publication Title</b>	<b>Form Number</b>
<i>OS/390 SMP/E: Messages and Codes</i>	SC28-1738
<i>OS/390 SMP/E Reference</i>	SC28-1806
<i>OS/390 SMP/E User's Guide</i>	SC28-1740
<i>OS/390 SMP/E Commands</i>	SC28-1805
<i>OS/390 UNIX System Services Command Reference</i>	SC28-1892
<i>OS/390 UNIX System Services Messages and Codes</i>	SC28-1908
<i>IBM Communications Manager Configuration Guide</i>	S04G-1002
<i>MVS Custom-Built Offering Planning and Installation</i>	SC23-0352

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## 3.0 Program Support

This section describes the Tivoli support available for Tivoli NetView for OS/390 Version 1 Release 4.

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### 3.1 Program Services

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

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### 3.2 Preventive Service Planning

Before installing Tivoli NetView for OS/390 Version 1 Release 4, you should review the current Preventive Service Planning (PSP) information. If you obtained Tivoli NetView for OS/390 Version 1 Release 4 as part of a CBPDO, there is HOLDDATA and PSP information included on the CBPDO tape.

If you obtained Tivoli NetView for OS/390 Version 1 Release 4 on a product tape, or if the CBPDO is more than two weeks old when you install it, you should contact the Tivoli Support Center or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

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 OS/390 Version 1 Release 4 are:

*Figure 8 (Page 1 of 2). PSP Upgrade and Subset ID*

UPGRADE	SUBSET	Description
TIVNETV140	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517	Unattended Option
TIVNETV140	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517 JPZ8520 JPZ8524	Procedural Option

Figure 8 (Page 2 of 2). PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
TIVNETV140	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517 JPZ8520 JPZ8524 JPZ8540	Graphical Enterprise Option

### 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 9 identifies the component IDs (COMPID) for Tivoli NetView for OS/390 Version 1 Release 4.

Figure 9. Component IDs

FMID	COMPID	Component Name	RETAIN Release
HPZ8500	5697B8200	NetView System Services Base	500
JPZ8504	5697B8200	NetView System Services US English	504
JPZ8510	5697B8200	NetView Unattended Base	510
JPZ8514	5697B8200	NetView Unattended US English	514
JPZ8517	5697B8200	NetView Base OE US English	517
JPZ8520	5697B8200	NetView Procedural Base	520
JPZ8524	5697B8200	NetView Procedural US English	524
JPZ8540	5697B8200	NetView Graphical Enterprise Base	540

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## **4.0 Program and Service Level Information**

This section identifies the program and any relevant service levels of Tivoli NetView for OS/390 Version 1 Release 4. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs integrated.

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### **4.1 Program Level Information**

Appendix A, "Program Level Information" on page 73 lists the APAR fixes for previous releases of NetView that have been incorporated into Tivoli NetView for OS/390 Version 1 Release 4.

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### **4.2 Service Level Information**

No PTFs against this release of Tivoli NetView for OS/390 Version 1 Release 4 have been incorporated into the product tape.

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## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating Tivoli NetView for OS/390 Version 1 Release 4. 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.

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### 5.1 Driving System Requirements

This section describes the environment of the driving system required to install Tivoli NetView for OS/390 Version 1 Release 4.

#### 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 10. Driving System Software Requirements*

<b>Program Number</b>	<b>Product Name and Minimum VRM/Service Level</b>
5647-A01	OS/390 Release 8 or later

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## 5.2 Target System Requirements

This section describes the environment of the target system required to install and use Tivoli NetView for OS/390 Version 1 Release 4.

Tivoli NetView for OS/390 Version 1 Release 4 installs in the MVS (Z038) SREL.

### 5.2.1 Machine Requirements

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

### 5.2.2 Programming Requirements

#### 5.2.2.1 Mandatory Requisites

A mandatory requisite is defined as a product that is required without exception; this product either **will not install** or **will not function** unless this requisite is met. This includes products that are specified as REQs or PREs.

*Figure 11. Mandatory Requisites*

Program Number	Product Name and Minimum VRM/Service Level
5647-A01	OS/390 Release 8 or later

#### 5.2.2.2 Functional Requisites

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

*Figure 12 (Page 1 of 2). Functional Requisites*

Program Number	Product Name and Minimum VRM/Service Level	Function
5695-014	IBM Compiler for SAA* REXX/370 Release 3	Compiling REXX Clists or Programs (See notes 1 & 2 below)

Figure 12 (Page 2 of 2). Functional Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
5695-014	IBM Library for SAA* REXX/370 Release 3 (FMID HWJ9130) - or - REXX Alternate Library (FMID HWJ9133) US English shipped with Tivoli NetView for OS/390	Running Compiled REXX Clists or Programs (See notes 1 & 2 below)
-	Tivoli NetView for OS/390 Functions	(See note 3)
-	Tivoli NetView for OS/390 Automated Operations Network (AON) Component	(See note 4)
-	Tivoli NetView for OS/390 MultiSystem Manager Component	(See note 5)
5697-D10	Tivoli Management Framework for OS/390 Version 3.6.1	Installation of Graphical Enterprise Workstation Components from OS/390 using Tivoli Software Installation Service (SIS)

**Notes:**

1. If you compile AON REXX Command Lists, the IBM Compiler for SAA REXX/370 R3(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 OS/390 UNIX System Services for NetView's OS/390 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.

**Note:** Your OS/390 environment must be modified so that the REXX data set you are using (either SEAGLMD or SEAGALT) is APF-authorized. Edit your APF member in SYS1.PARMLIB and add the REXX data set (SEAGLMD or SEAGALT) if it is not already there. Re-IPL OS/390 if necessary. If your system is set up to use dynamic APF services, you can avoid re-IPLing OS/390 by using the

SETPROG command to dynamically update the APF list. Refer to the Initialization and Tuning Reference for your OS/390 system for more information on authorizing data sets.

**Note:** 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.

3. For additional functional requisite information regarding specific Tivoli NetView for OS/390 functions refer to 5.4, "Special Considerations" on page 35.
4. For additional functional requisite information regarding the Automated Operations Network component refer to 5.4.27, "Considerations for Tivoli NetView for OS/390 Version 1 Release 4 Automated Operations Network Component" on page 42.
5. For additional functional requisite information regarding the MultiSystem Manager component(s) refer to 5.4.28, "Special Considerations for Tivoli NetView for OS/390 Version 1 Release 4 MultiSystem Manager Component" on page 43.

### 5.2.2.3 Toleration/Coexistence Requisites

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

Tivoli NetView for OS/390 Version 1 Release 4 has no toleration/coexistence requisites.

### 5.2.2.4 Incompatibility (Negative) Requisites

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

Tivoli NetView for OS/390 Version 1 Release 4 has no negative requisites.

## 5.2.3 DASD Storage Requirements

Tivoli NetView for OS/390 Version 1 Release 4 libraries can reside on 3390 DASD.

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

Library Type	Total Space Required
Target	4156 Tracks of 3390
Distribution	8628 Tracks of 3390



Figure 13 (Page 2 of 2). Total DASD Space Required by Tivoli NetView for OS/390 Version 1 Release 4

Library Type	Total Space Required
HFS Unattended or Procedural	345 Tracks of 3390
HFS Graphical Enterprise	4230 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. In order to determine the correct storage needed for this data set, this table provides all required information; no other tables (or program directories) need to be referenced for the data set size.
- S** Shared data set, allocated by this product and used by this product and others. In order to determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.
- E** Existing shared data set, used by this product and others. This data set is NOT allocated by this product. In order to determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). This existing data set must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old one and reclaim the space used by the old release and any service that had been installed. You can determine whether or not these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information on the names and sizes of the required data sets, please refer to 6.1.8, "Allocate SMP/E Target and Distribution Libraries and Paths" on page 56.

3. Abbreviations used for the HFS Path type are:

- N** New path, created by this product.
- P** Previously existing path, created by another product.

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

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

5. All target libraries listed have the following attributes:

- The data set may be SMS managed
- It is not required for the data set to be SMS managed
- 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
- 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.

Figure 14 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.

<i>Figure 14. Storage Requirements for SMPCSI Data Sets for SMP/E for Tivoli NetView for OS/390 Version 1 Release 4 Unattended</i>		
<b>DASD</b>	<b>Tracks Required for SMPCSI Data</b>	<b>Tracks Required for SMPCSI Index</b>
3390	1230	61

<i>Figure 15. Storage Requirements for SMP/E Work Data Sets</i>						
<b>Library DDNAME</b>	<b>T Y P E</b>	<b>O R G</b>	<b>R E C F M</b>	<b>L R E C L</b>	<b>No. of 3390 Trks</b>	<b>No. of DIR Blks</b>
SMPWRK1	S	PDS	FB	80	3	15
SMPWRK2	S	PDS	FB	80	5	15
SMPWRK3	S	PDS	FB	80	5	90
SMPWRK4	S	PDS	FB	80	8	15
SMPWRK6	S	PDS	FB	80	25	350
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 OS/390 Version 1 Release 4. The estimates must be added to those of any other programs and service being installed to determine the total additional storage requirements.

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

*Figure 16. Storage Requirements for SMP/E Data Sets*

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SMPLTS	S	PDS	U	0	40	50
SMPMTS	S	PDS	FB	80	1	25
SMPPTS	S	PDS	FB	80	4	25
SMPSCDS	S	PDS	FB	80	3	200
SMPSTS	S	PDS	FB	80	1	25

The following figures describe the target and distribution libraries and HFS paths required to install Tivoli NetView for OS/390 Version 1 Release 4. The storage requirements of Tivoli NetView for OS/390 Version 1 Release 4 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.

### 5.2.3.1 Target Libraries for Tivoli NetView for OS/390 Version 1 Release 4 Unattended Option

*Figure 17 (Page 1 of 3). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 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
BNJPNL1	LMOD	ANY	U	PO	FB	80	17	2
BNJPNL2	LMOD	ANY	U	PO	FB	80	2	1
BNJSRC1	LMOD	ANY	U	PO	FB	80	12	3

Figure 17 (Page 2 of 3). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 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
CNMCLST	LMOD	ANY	U	PO	FB	80	173	18
CNMINST	LMOD	ANY	U	PO	FB	80	10	2
CNMLINK	LMOD	ANY	U	PO	U	0	358	162
CNMPNL1	LMOD	ANY	U	PO	FB	80	525	119
CNMSAMP	LMOD	ANY	U	PO	FB	80	97	18
DSIPARM	LMOD	ANY	U	PO	FB	80	24	5
DSIPRF	LMOD	ANY	U	PO	FB	80	1	1
SDSIOPEN	LMOD	ANY	U	PO	FB	80	2	1
SEKGMOD1	LMOD	ANY	U	PO	U	0	43	7
SEKGMOD2	LMOD	ANY	U	PO	U	0	14	3
SEKGLNK1	LMOD	ANY	U	PO	U	0	2	1
SEKGLUTB	LMOD	ANY	U	PO	FB	80	1	1
SEKGCAS1	LMOD	ANY	U	PO	FB	80	1	1
SEKGLANG	LMOD	ANY	U	PO	FB	125	1	1
SEKGSMP1	LMOD	ANY	U	PO	FB	80	56	7
SEKGPLN1	LMOD	ANY	U	PO	FB	80	3	2
SCNMMAC1	LMOD	ANY	U	PO	FB	80	124	13
NVULIB	LMOD	ANY	U	PO	U	0	4	6
SCNMLNK1	LMOD	ANY	U	PO	U	0	1	1
SCNMLPA1	LMOD	ANY	U	PO	U	0	1	2
SDSIMSG1	LMOD	ANY	U	PO	FB	80	1	1
SDUIMSG1	LMOD	ANY	U	PO	FB	80	2	1
SEZLCLST	LMOD	ANY	U	PO	FB	80	2	1
SEZLPNLU	LMOD	ANY	U	PO	FB	80	3	1
SEZLSAMP	LMOD	ANY	U	PO	FB	80	1	1
SEZLINST	LMOD	ANY	U	PO	FB	80	1	1
SEZLLINK	LMOD	ANY	U	PO	U	0	1	1
SFLBDAT1	LMOD	ANY	U	PO	VB	1028	1	1
SCNMUXLK	LMOD	ANY	U	PO	U	0	61	2

Figure 17 (Page 3 of 3). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 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
SCNMUXCL	LMOD	ANY	U	PO	VB	516	6	1
SCNMUXMS	LMOD	ANY	U	PO	FB	80	4	1

### 5.2.3.2 HFS Paths for Tivoli NetView for OS/390 Version 1 Release 4 Unattended Option

Figure 18. Tivoli NetView for OS/390 Version 1 Release 4 HFS Paths

DDNAME	T Y P E	Path Name
SCNMUX00	N	/usr/lpp/netview/bin/IBM/
SCNMUX01	N	/usr/lpp/netview/samples/IBM/
SCNMUX02	N	/usr/lpp/netview/lib/IBM/
SCNMUX03	N	/usr/lpp/netview/mibs/IBM/
SCNMUX05	N	/usr/lpp/netview/doc/IBM/
SCNMUX06	N	/usr/lpp/netview/man/C/cat1/IBM/
SCNMUX07	N	/usr/lpp/netview/samples/properties/IBM
SCNMUX08	N	/usr/lpp/netview/samples/properties/startup/IBM

### 5.2.3.3 Distribution Libraries for Tivoli NetView for OS/390 Version 1 Release 4 Unattended Option

Figure 19 (Page 1 of 2). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
ABNJPNL1	U	PO	FB	80	18	2
ABNJPNL2	U	PO	FB	80	2	1

Figure 19 (Page 2 of 2). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 Distribution Libraries

<b>Library DDNAME</b>	<b>T Y P E</b>	<b>O R G</b>	<b>R E C F M</b>	<b>L R E C L</b>	<b>No. of 3390 Trks</b>	<b>No. of DIR Blks</b>
ABNJSRC1	U	PO	FB	80	12	3
ACNMCLST	U	PO	FB	80	173	18
ACNMINST	U	PO	FB	80	10	2
ACNMLINK	U	PO	U	0	632	570
ACNMPNL1	U	PO	FB	80	525	119
ACNMSAMP	U	PO	FB	80	97	18
ADSIPARM	U	PO	FB	80	24	5
ADSIPRF	U	PO	FB	80	1	1
ADSIOPEN	U	PO	FB	80	2	1
ADSIMSG1	U	PO	FB	80	1	1
ADUIMSG1	U	PO	FB	80	2	1
AEKGMOD1	U	PO	U	0	81	59
AEKGLUTB	U	PO	FB	80	1	1
AEKGCAS1	U	PO	FB	80	1	1
AEKGLANG	U	PO	FB	125	1	1
AEKGSMP1	U	PO	FB	80	56	7
AEKGPNL1	U	PO	FB	80	3	2
ACNMMAC1	U	PO	FB	80	124	13
ANVULIB	U	PO	U	0	4	6
AEZLCLST	U	PO	FB	80	2	1
AEZLPNLU	U	PO	FB	80	3	1
AEZLSAMP	U	PO	FB	80	1	1
AEZLINST	U	PO	FB	80	1	1
AEZLLINK	U	PO	U	0	1	1
AFLBDAT1	U	PO	VB	1028	1	1
ACNMUXLK	U	PO	U	0	66	2
ACNMUXCL	U	PO	VB	516	416	3
ACNMUXMS	U	PO	FB	80	6	1

### 5.2.3.4 Target Libraries for Tivoli NetView for OS/390 Version 1 Release 4 Procedural Option

Figure 20 (Page 1 of 2). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 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
BNJPNL1	LMOD	ANY	U	PO	FB	80	378	233
BNJPNL2	LMOD	ANY	U	PO	FB	80	8	5
BNJSRC1	LMOD	ANY	U	PO	FB	80	12	3
CNMCLST	LMOD	ANY	U	PO	FB	80	178	19
CNMINST	LMOD	ANY	U	PO	FB	80	10	2
CNMLINK	LMOD	ANY	U	PO	U	0	359	162
CNMPNL1	LMOD	ANY	U	PO	FB	80	566	133
CNMSAMP	LMOD	ANY	U	PO	FB	80	126	18
DSIPARM	LMOD	ANY	U	PO	FB	80	60	11
DSIPRF	LMOD	ANY	U	PO	FB	80	2	1
SDSIOPEN	LMOD	ANY	U	PO	FB	80	2	1
SEKGMOD1	LMOD	ANY	U	PO	U	0	43	7
SEKGMOD2	LMOD	ANY	U	PO	U	0	14	3
SEKGLNK1	LMOD	ANY	U	PO	U	0	2	1
SEKGLUTB	LMOD	ANY	U	PO	FB	80	1	1
SEKGCAS1	LMOD	ANY	U	PO	FB	80	1	1
SEKGLANG	LMOD	ANY	U	PO	FB	125	1	1
SEKGSMP1	LMOD	ANY	U	PO	FB	80	56	7
SEKGPNL1	LMOD	ANY	U	PO	FB	80	3	2
SCNMMAC1	LMOD	ANY	U	PO	FB	80	124	13
NVULIB	LMOD	ANY	U	PO	U	0	4	6
SCNMLNK1	LMOD	ANY	U	PO	U	0	1	1
SCNMLPA1	LMOD	ANY	U	PO	U	0	1	2
SDSIMSG1	LMOD	ANY	U	PO	FB	80	1	1
SDUIMSG1	LMOD	ANY	U	PO	FB	80	2	1
SEZLCLST	LMOD	ANY	U	PO	FB	80	661	35

Figure 20 (Page 2 of 2). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 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
SEZLPNLU	LMOD	ANY	U	PO	FB	80	134	71
SEZLSAMP	LMOD	ANY	U	PO	FB	80	8	1
SEZLINST	LMOD	ANY	U	PO	FB	80	2	1
SEZLLINK	LMOD	ANY	U	PO	U	0	17	7
SFLBDAT1	LMOD	ANY	U	PO	VB	1028	1	1
SCNMUXLK	LMOD	ANY	U	PO	U	0	61	2
SCNMUXCL	LMOD	ANY	U	PO	VB	516	6	1
SCNMUXMS	LMOD	ANY	U	PO	FB	80	4	1

### 5.2.3.5 HFS Paths for Tivoli NetView for OS/390 Version 1 Release 4 Procedural Option

Figure 21. Tivoli NetView for OS/390 Version 1 Release 4 HFS Paths

DDNAME	T Y P E	Path Name
SCNMUX00	N	/usr/lpp/netview/bin/IBM/
SCNMUX01	N	/usr/lpp/netview/samples/IBM/
SCNMUX02	N	/usr/lpp/netview/lib/IBM/
SCNMUX03	N	/usr/lpp/netview/mibs/IBM/
SCNMUX05	N	/usr/lpp/netview/doc/IBM/
SCNMUX06	N	/usr/lpp/netview/man/C/cat1/IBM/
SCNMUX07	N	/usr/lpp/netview/samples/properties/IBM
SCNMUX08	N	/usr/lpp/netview/samples/properties/startup/IBM

### 5.2.3.6 Distribution Libraries for Tivoli NetView for OS/390 Version 1 Release 4 Procedural Option



Figure 22 (Page 1 of 2). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 Distribution Libraries

<b>Library DDNAME</b>	<b>T Y P E</b>	<b>O R G</b>	<b>R E C F M</b>	<b>L R E C L</b>	<b>No. of 3390 Trks</b>	<b>No. of DIR Blks</b>
ABNJPNL1	U	PO	FB	80	379	233
ABNJPNL2	U	PO	FB	80	8	5
ABNJSRC1	U	PO	FB	80	12	3
ACNMCLST	U	PO	FB	80	178	19
ACNMINST	U	PO	FB	80	10	2
ACNMLINK	U	PO	U	0	633	571
ACNMPNL1	U	PO	FB	80	566	133
ACNMSAMP	U	PO	FB	80	126	18
ADSIPARM	U	PO	FB	80	60	11
ADSIPRF	U	PO	FB	80	2	1
ADSIOPEN	U	PO	FB	80	2	1
ADSIMSG1	U	PO	FB	80	1	1
ADUIMSG1	U	PO	FB	80	2	1
AEKGMOD1	U	PO	U	0	81	59
AEKGLUTB	U	PO	FB	80	1	1
AEKGCAS1	U	PO	FB	80	1	1
AEKGLANG	U	PO	FB	125	1	1
AEKGSMP1	U	PO	FB	80	56	7
AEKGPNL1	U	PO	FB	80	3	2
ACNMMAC1	U	PO	FB	80	124	13
ANVULIB	U	PO	U	0	4	6
AEZLCLST	U	PO	FB	80	661	35
AEZLPNLU	U	PO	FB	80	134	71
AEZLSAMP	U	PO	FB	80	8	1
AEZLINST	U	PO	FB	80	2	1
AEZLLINK	U	PO	U	0	17	12
AFLBDAT1	U	PO	VB	1028	1	1
ACNMUXLK	U	PO	U	0	66	2
ACNMUXCL	U	PO	VB	516	416	3

Figure 22 (Page 2 of 2). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
ACNMUXMS	U	PO	FB	80	6	1

### 5.2.3.7 Target Libraries for Tivoli NetView for OS/390 Version 1 Release 4 Graphical Enterprise Option

Figure 23 (Page 1 of 2). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 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
BNJPNL1	LMOD	ANY	U	PO	FB	80	378	233
BNJPNL2	LMOD	ANY	U	PO	FB	80	8	5
BNJSRC1	LMOD	ANY	U	PO	FB	80	12	3
CNMCLST	LMOD	ANY	U	PO	FB	80	255	24
CNMINST	LMOD	ANY	U	PO	FB	80	10	2
CNMLINK	LMOD	ANY	U	PO	U	0	485	166
CNMPNL1	LMOD	ANY	U	PO	FB	80	566	133
CNMSAMP	LMOD	ANY	U	PO	FB	80	266	25
DSIPARM	LMOD	ANY	U	PO	FB	80	71	13
DSIPRF	LMOD	ANY	U	PO	FB	80	2	1
SDSIOPEN	LMOD	ANY	U	PO	FB	80	2	1
SEKGMOD1	LMOD	ANY	U	PO	U	0	43	7
SEKGMOD2	LMOD	ANY	U	PO	U	0	66	19
SEKGLNK1	LMOD	ANY	U	PO	U	0	2	1
SEKGLUTB	LMOD	ANY	U	PO	FB	80	1	1
SEKGCAS1	LMOD	ANY	U	PO	FB	80	1	1
SEKGLANG	LMOD	ANY	U	PO	FB	125	3	1
SEKGSMP1	LMOD	ANY	U	PO	FB	80	56	7
SEKGPNL1	LMOD	ANY	U	PO	FB	80	3	2

Figure 23 (Page 2 of 2). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 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
SCNMMAC1	LMOD	ANY	U	PO	FB	80	128	13
NVULIB	LMOD	ANY	U	PO	U	0	4	6
SCNMLNK1	LMOD	ANY	U	PO	U	0	1	1
SCNMLPA1	LMOD	ANY	U	PO	U	0	1	2
SDSIMSG1	LMOD	ANY	U	PO	FB	80	1	1
SDUIMSG1	LMOD	ANY	U	PO	FB	80	2	1
SEZLCLST	LMOD	ANY	U	PO	FB	80	661	35
SEZLPNLU	LMOD	ANY	U	PO	FB	80	134	71
SEZLSAMP	LMOD	ANY	U	PO	FB	80	8	1
SEZLINST	LMOD	ANY	U	PO	FB	80	2	1
SEZLLINK	LMOD	ANY	U	PO	U	0	17	7
SFLBDAT1	LMOD	ANY	U	PO	VB	1028	4	1
SCNMUXLK	LMOD	ANY	U	PO	U	0	61	2
SCNMUXCL	LMOD	ANY	U	PO	VB	516	6	1
SCNMUXMS	LMOD	ANY	U	PO	FB	80	4	1

### 5.2.3.8 HFS Paths for Tivoli NetView for OS/390 Version 1 Release 4 Graphical Enterprise Option

Figure 24 (Page 1 of 2). Tivoli NetView for OS/390 Version 1 Release 4 HFS Paths

DDNAME	T Y P E	Path Name
SCNMUX00	N	/usr/lpp/netview/bin/IBM/
SCNMUX01	N	/usr/lpp/netview/samples/IBM/
SCNMUX02	N	/usr/lpp/netview/lib/IBM/
SCNMUX03	N	/usr/lpp/netview/mibs/IBM/
SCNMUX05	N	/usr/lpp/netview/doc/IBM/
SCNMUX06	N	/usr/lpp/netview/man/C/cat1/IBM/

Figure 24 (Page 2 of 2). Tivoli NetView for OS/390 Version 1 Release 4 HFS Paths

DDNAME	T Y P E	Path Name
SCNMUX07	N	/usr/lpp/netview/samples/properties/IBM
SCNMUX08	N	/usr/lpp/netview/samples/properties/startup/IBM

### 5.2.3.9 Distribution Libraries for Tivoli NetView for OS/390 Version 1 Release 4 Graphical Enterprise Option

Figure 25 (Page 1 of 2). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
ABNJPNL1	U	PO	FB	80	379	233
ABNJPNL2	U	PO	FB	80	8	5
ABNJSRC1	U	PO	FB	80	12	3
ACNMCLST	U	PO	FB	80	255	24
ACNMINST	U	PO	FB	80	10	2
ACNMLINK	U	PO	U	0	774	586
ACNMPNL1	U	PO	FB	80	566	133
ACNMSAMP	U	PO	FB	80	266	25
ADSIPARM	U	PO	FB	80	71	13
ADSIPRF	U	PO	FB	80	2	1
ADSIOPEN	U	PO	FB	80	2	1
ADSIMSG1	U	PO	FB	80	1	1
ADUIMSG1	U	PO	FB	80	2	1
AEKGMOD1	U	PO	U	0	121	82
AEKGLUTB	U	PO	FB	80	1	1
AEKGCAS1	U	PO	FB	80	1	1
AEKGLANG	U	PO	FB	125	1	1
AEKGSMP1	U	PO	FB	80	56	7
AEKGPNL1	U	PO	FB	80	3	2

Figure 25 (Page 2 of 2). Storage Requirements for Tivoli NetView for OS/390 Version 1 Release 4 Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
ACNMMAC1	U	PO	FB	80	128	13
ANVULIB	U	PO	U	0	4	6
AEZLCLST	U	PO	FB	80	661	35
AEZLPNLU	U	PO	FB	80	134	71
AEZLSAMP	U	PO	FB	80	8	1
AEZLINST	U	PO	FB	80	2	1
AEZLLINK	U	PO	U	0	17	12
AFLBDAT1	U	PO	VB	1028	4	1
ACNMUXLK	U	PO	U	0	66	2
ACNMUXCL	U	PO	VB	516	416	3
ACNMUXMS	U	PO	FB	80	6	1

### 5.3 FMIDs Deleted

Installing Tivoli NetView for OS/390 Version 1 Release 4 may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS.

If you do not wish to delete these FMIDs at this time, you must install Tivoli NetView for OS/390 Version 1 Release 4 into separate SMP/E target and distribution zones.

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

### 5.4 Special Considerations

The following table identifies README file names and installation methods associated with the noted Tivoli NetView for OS/390 Version 1 Release 4 components.

Figure 26. README file names and installation methods for Tivoli NetView for OS/390 Version 1 Release 4 Components.

Component Name	Web Page (1)	CD (2)	README
NMC Topology Console	x	x	EGVREAD1.ME
NMC Topology Server	x	x	EGVREAD2.ME
NetView Resource Specific Command Sets	x	x	FLCREAD1.ME
NetView 3270 Management Console	x	x	FLBREAD1.ME
NMC Inventory Server		x	IHSREAD3.ME
Event Automation Service(EAS)		x	IHSREAD1.ME
APPN* Topology and Accounting Agent(APPNTAA)	x	x	BNTREAD1.ME
(1) URL: <a href="http://www.tivoli.com/nv390_supported">http://www.tivoli.com/nv390_supported</a>			
(2) The readme documentation on the Tivoli NetView for OS/390 Version 1 Release 4 CDROM is located in the README\ENU directory.			

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

### 5.4.1 Tivoli NetView Management Console, NetView 3270 Management Console

- Topology Server
  - Any Hardware that supports any of the following operating systems
    - AIX 4.2.1 (5765-655) with PTF IX68451 or later with
      - C Set++ for AIX Applications xIC.rte 3.6.6.0 or later
      - IBM class libraries ibmcxx.ioc.rte 3.6.6.0 for later and ibmcxx.rte 3.6.6.0 or later
      - Information Presentation Facility ipfx.rte.2.2.0.0 or later
    - Windows NT 4.0 with service pack 5 or later
    - Windows 2000
    - OS/2 Warp 4.0 with Service Pack 12 or later. For TCP/IP communication TCP/IP 4.0 with at least MPTS fix WR08423 or later level of TCP/IP.
  - Processor speed of at least 350MHz
  - Minimum memory of 128MB, 256 recommended
- Topology Console
  - Any Hardware that supports any of the following operating systems

- AIX 4.3.3.10 (5765-C34) or later with TCP/IP installed and
  - PTF's U470006, U470966, U471143, U470973, U470980 and U471092
  - IBM AIX Developer Kit, Java 2 Technology Edition, Version 1.3 requires that the following APARS be applied to your AIX system if you are using these optional filesets and already have the base level filesets installed. U471872, U471060, U466991, U471076, U471118, U471015, and U471838.
- OS/2 WARP 4.0 with Service Pack 12 or later
- Windows NT 4.0 with Service Pack 5 or later
- H-UX 11 or later with TCP/IP installed. The following patches are required
  - PHCO\_19666
  - PHCO\_22314
  - PHKL\_18543
  - PHKL\_20202
  - PHSS\_17535
  - PHSS\_21814
  - PHSS\_22320
  - PHSS\_21906
  - PHCO\_22453
  - PHCO\_21187
  - PHKL\_20016
  - PHKL\_22432
  - PHKL\_22440
  - PHKL\_22589
  - PHNE\_22086
  - PHSS\_20863
  - PHSS\_21959
- Solaris 2.8 or later with TCP/IP installed and patch 108940-05 or later
- Windows 95 or 98 or 2000
- 256MB of memory
- A color display with 1024 x 768, and 256 colors
- Maximum color palette is 16-bit high color. 256-color palette recommended. 32-bit true color is not supported
- Server communications with NetView for OS/390

- For IP connections, OS/390 Version 2 Release 8 (5647-A01) IP Services, or later, or z/OS (5694-A01) IP Services
  - For LU 6.2 connections
    - For AIX, one of the following
      - AIX SNA Server 2.1 or later
      - AIX SNA Communication 3.1.2 or later
      - IBM Communications Server for AIX, Version 4 (5765-652)
  - Windows NT and Windows 2000
    - IBM Communications Server for Windows NT 6.1.1
  - OS/2
    - IBM eNetwork Communications Server for OS/2 Warp 4.0
- For additional information on installing the NetView 3270 Management Console, refer to the readme file identified in Figure 26 on page 35.

## 5.4.2 Considerations for NetView Web Server

Web Browser access to Tivoli NetView for OS/390 Version 1 Release 4 requires the following:

- OS/390 Version 2 Release 8 (5647-A01) IP Services or later, or z/OS (5694-A01) IP Services
- Any browser that supports HTTP 1.0

## 5.4.3 Considerations for SNMP MIB Browser, Real-time Poller

- Java for OS/390 at the Java Development Kit (JDK) 1.3 level
- OS/390 Version 2 Release 8 (5647-A01) IP Services or later, or z/OS (5694-A01) IP Services
- Real-time Poller help requires an Internet browser

## 5.4.4 Issuing SNMP Commands from NetView

To issue SNMP commands from NetView using the NVSNMP command requires one of the following:

- The SNMP stack (OSNMP) that comes with OS/390 Version 2 Release 8 (5647-A01) IP Services or later or z/OS (5694-A01) IP Services
- The Java Tivoli SNMP stack (JSNMP) supplied with Tivoli NetView for OS/390 Version 1 Release 4 which requires:
  - Java for OS/390 at the Java Development Kit (JDK) 1.3 level
  - OS/390 Version 2 Release 8 (5647-A01) IP Services or later, or z/OS (5694-A01) IP Services



### **5.4.5 NMC Retrieval of Tivoli Inventory Data for Network Interconnect Devices**

- Tivoli Management Framework 3.6.1 (5697-FRA)
- Tivoli Inventory Management 3.6.1 (5697-INV)
- Tivoli Manager for Network Hardware (5697-NHW)

### **5.4.6 Considerations for Event Automation Service to and from the Tivoli Enterprise Console (TEC)**

- The Event Automation Service requires the following:
  - Tivoli Enterprise Console (TEC) 3.6.1 (5697-EAS)
  - OS/390 Version 2 Release 8 (5647-A01) IP Services or later, or z/OS (5694-A01) IP Services

Using secure framework communication also requires:

- Tivoli Management Framework for OS/390 3.6.1 (5697-D10)
- For additional information on installing Event Automation Service workstation component, refer to the readme file identified in Figure 26 on page 35.

### **5.4.7 Considerations for Sending Instrumentation Events to Tivoli Global Enterprise Manager**

- TME 10 Global Enterprise Manager 2.1 or higher

### **5.4.8 Considerations for issuing Commands from Tivoli Enterprise Console to the OS/390 Environment**

- NetView Management Console Topology Server or Tivoli Management Framework for OS/390 3.6.1 (5697-D10)

### **5.4.9 Considerations for Issuing OS/390 UNIX System Services Commands from Tivoli NetView for OS/390 Version 1 Release 4**

- REXX alternate run-time (same as for Tivoli NetView for OS/390 Version 1 Release 4 MultiSystem Manager Component)

### **5.4.10 Considerations for Discovery of TCP/IP Resources from OS/390**

- Java for OS/390 at the Java Development Kit (JDK) 1.3 level
- OS/390 Version 2 Release 8 (5647-A01) IP Services or later, or z/OS (5694-A01) IP Services
- For additional information about the IP Discovery function refer to the IpDReadMe.html readme file located in the OS/390 UNIX System Services HFS <PathPrefix>/usr/lpp/netview/docs directory, or in the README\ENU directory on the CDROM.

### **5.4.11 Considerations for the NetView SOCKET Command**

- OS/390 Version 2 Release 8 (5647-A01) IP Services or later, or z/OS (5694-A01) IP Services

### **5.4.12 ASCII Console Support in Graphic Monitor Facility Host Subsystem**

- Transaction Control Protocol/Internet Protocol (TCP/IP) Version 2.0 for OS/2 (65G1220)

### **5.4.13 Considerations for Beeper/Pager Support**

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

### **5.4.14 SNA Topology Manager**

- Generalized Trace Facility

### **5.4.15 SNA Topology Manager Resource Filtering**

- OS/390 Version 2 Release 8 (5647-A01) SNA Services or later, or z/OS (5694-A01) SNA Services

### **5.4.16 SNA Topology Manager Support for VTAM CMIP Agent Enhancements**

- OS/390 Version 2 Release 10 (5647-A01) Communications Server, or later, or z/OS (5694-A01)

### **5.4.17 APPN Accounting Manager**

- Generalized Trace Facility
- System Management Facility or an equivalent external logging facility

### **5.4.18 APPN Topology and Accounting Agent**

- OS/2 4.0 or later
- Communications Server Version 4 (5765-652) and Personal Communications AS/400 and 3270 Version 4 Release 1 for OS/2 with PCOMM CSD2

### **5.4.19 NetView Bridge -- Support for INFO Access**

- Tivoli Service Desk for OS/390 (5648-142)
- Application Programming Interface (API) requirements as applicable

## **5.4.20 Support for IBM LAN Network Manager Enhanced Command Interface**

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

## **5.4.21 Session Monitor Outboard APPN Route Support**

- OS/390 Version 2 Release 10 (5647-A01) SNA Services or later, or z/OS (5694-A01) SNA Services

## **5.4.22 Management of Frame Relay (DTE) and Ethernet**

- ACF/NCP Version 6 (5688-231)

## **5.4.23 NetView Parallel Transmission Group Support**

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

## **5.4.24 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 2 (5668-854) for the 3720 or 3725 communication controllers

In addition to device support, the following releases of ACF/NCP provide vital product information for the communication controller:

- 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

## **5.4.25 NetView Performance Monitor (NPM) Alerts**

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

## **5.4.26 Considerations for SAF Security Checking**

OS/390 Version 2 Release 8 (5647-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

### 5.4.27 Considerations for Tivoli NetView for OS/390 Version 1 Release 4 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.
- AON LAN Automation has these additional requirements:
  - LAN Network Manager Version 2.0 with CSD UR44997 or later
  - OS/2 as required by LAN Network Manager
  - Communications Server Version 4 (5765-652) or later
  - A host-attached IBM Token-Ring network or Communications Manager functioning as an SDLC-attached host gateway for the LAN Manager
  - If you are running AON LAN Automation feature with LNM 2.0 with MultiPort Bridges in your network, your MultiPort Bridges must be running RouteXpander V2.0.4 (or later) with MultiPort Program Support CSD IP20407.
- TCP/IP for AIX Automation has these additional requirements:
 

TCP/IP for AIX automation uses SNA to communicate between Tivoli NetView for AIX and Tivoli NetView for OS/390, and requires:

  - AIX Version 4 Release 1 (5765-393) or later
  - Tivoli NetView for AIX Version 4 (5765-527 feature number 5608) or later
  - AIX NetView Service Point Version 1 Release 2.2 (5621-107)
    - PTF U440307
  - IBM Communication Server for AIX Version 4 (5765-652)

## 5.4.28 Special Considerations for Tivoli NetView for OS/390 Version 1 Release 4 MultiSystem Manager Component

The MultiSystem Manager component of Tivoli NetView for OS/390 Version 1 Release 4 requires one of the following:

- IBM Library for SAA REXX/370 Release 3.0 (5695-014)
- REXX Alternate Library (Release 3.0 level) shipped with Tivoli NetView for OS/390
  - FMID HWJ9133 US English

The following table identifies README file names and installation methods associated with the Tivoli NetView for OS/390 Version 1 Release 4 MultiSystem Manager features.

<i>Figure 27. README file names and installation methods for Tivoli NetView for OS/390 Version 1 Release 4 MultiSystem Manager features.</i>			
<b>MultiSystem Manager Agent Name</b>	<b>Web Page <sup>(1)</sup></b>	<b>CD <sup>(2)</sup></b>	<b>README</b>
ATM	x	x	MSMATM.ME
IP	x	x	MSMIP.ME
LAN Network Manager	x	x	(3) & (4)
NetFinity	x	x	MSMNF.ME <sup>(3)</sup>
NetWare	x	x	MSMNW.ME
Open	x	x	(5)
TMR	x	x	FLCTMR1.HTML
(1) URL: <a href="http://www.tivoli.com/nv390_supported">http://www.tivoli.com/nv390_supported</a>			
(2) The readme documentation on the Tivoli NetView for OS/390 Version 1 Release 4 CDROM is located in the README\ENU directory.			
(3) The MultiSystem Manager topology agent for the LAN Network Manager and the NetFinity features are included with the LAN Network Manager and NetFinity products.			
(4) For additional information on installing the MultiSystem Manager LAN Network Manager feature, refer to the <i>Tivoli NetView for OS/390 Installation: Getting Started, SC31-8767</i> .			
(5) For a vendor-supplied topology agent, refer to the documentation provided with the agent.			

### 5.4.28.1 System Considerations for the MultiSystem Manager LAN Network Manager Feature

The MultiSystem Manager LAN Network Manager feature of Tivoli NetView for OS/390 Version 1 Release 4 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 higher configured with Service Point Application Router (SPAR)

### 5.4.28.2 System Considerations for the MultiSystem Manager Novell NetWare Network Feature

The Novell NetWare Networks component of Tivoli NetView for OS/390 Version 1 Release 4 requires the following environment to function:

- OS/390 Version 2 Release 8 (5647-A01) or higher, or z/OS (5694-A01) IP services
- Each **managed server** must be running Novell NetWare 3.12 or later (NetWare Server 3.12 also requires NetWare IP V1.1)
- DOS 5.0 or later - for installation facility

In the list above, a **managed server** is one that is fully supported by Tivoli NetView for OS/390 Version 1 Release 4. Other servers in the network will still show up in the discovered topology but have a simple UP/DOWN status. Unmanaged servers will also respond to QUERY STATION and COMTEST commands but detailed status is not available, nor are the majority of the MultiSystem Manager commands.

### 5.4.28.3 System Considerations for the MultiSystem Manager NetFinity Network Feature

The MultiSystem Manager NetFinity Networks feature of Tivoli NetView for OS/390 Version 1 Release 4 requires:

- Any IBM Personal Computer or compatible computer as required for NetFinity will support the topology agent for NetFinity. The topology agent for NetFinity is shipped with the NetFinity product.
- NetFinity Manager Version 5.0 or later running on OS/2 or Windows NT
- Windows NT:
  - OS/390 Version 2 Release 8 (5647-A01) IP Services for later, or z/OS (5694-A01) IP Services
- OS/2:
  - Communications Server for OS/2, Personal Communications for OS/2 or Communications Manager as per the requirements for NetFinity Manager V5.0 SNA communication

### 5.4.28.4 System Considerations for the MultiSystem Manager TMR Feature

The MultiSystem Manager Tivoli Management Region (TMR) feature of Tivoli NetView for OS/390 Version 1 Release 4 requires:

- OS/390 Version 2 Release 8 (5647-A01) IP Services, or later, or z/OS (5694-A01) IP Services
- Tivoli Management Framework 3.6.2 (5697-FRA) or later
- Tivoli Distributed Monitoring 3.6.2 (5697-EMN) or later

- Tivoli Enterprise Console (TEC) (5697-EAS) Version 3.6.2 or later
- Any of the following Operating Systems:
  - Windows NT 4.0
  - AIX 4.2 or AIX 4.3 or higher
  - Sun Solaris 2.5.1 or higher
  - HP UX 10.2 or higher

#### **5.4.28.5 Considerations for Sending Commands from Tivoli NetView for OS/390 Version 1 Release 4 to TEC**

Sending commands from Tivoli NetView for OS/390 Version 1 Release 4 to TEC requires:

- The MultiSystem Manager Tivoli Management Region (TMR) Feature

#### **5.4.28.6 System Considerations for the MultiSystem Manager IP Network Feature**

The MultiSystem Manager Internet Protocol feature requires the Event Automation Service (EAS) component of Tivoli NetView for OS/390.

The MultiSystem Manager Internet Protocol feature of Tivoli NetView for OS/390 Version 1 Release 4 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 Tivoli NetView for OS/390 via SNA or TCP/IP. If you are using TCP/IP to communicate between the IP agent and Tivoli NetView for OS/390, the following are required:

- AIX Version 4 Release 3 (5765-C34) or higher
- Tivoli NetView for AIX Version 5 Release 1

If you are using SNA to communicate between the MultiSystem Manager IP agent and Tivoli NetView for OS/390, the following are required:

- AIX Version 4 Release 1 (5765-393) or later
- Tivoli NetView for AIX Version 4 (5765-527 feature number 5608) or later
- AIX NetView Service Point Version 1 Release 2.2 (5621-107)
  - PTF U440307
- IBM Communication Server for AIX Version 4 (5765-652)

- **HP-UX**

The MultiSystem Manager IP network feature for HP-UX uses TCP/IP to communicate between the MultiSystem Manager IP agent and Tivoli NetView for OS/390. The MultiSystem Manager IP agent for HP OpenView running on HP-UX requires:

- HP-UX Version 10 Release 20 or higher
- Hewlett Packard Network Node Manager (HP OpenView) Version 5 Release 1, or later

- **NT**

The MultiSystem Manager IP network feature for NT uses TCP/IP to communicate between the MultiSystem Manager IP agent and Tivoli NetView for OS/390. The MultiSystem Manager IP agent for Tivoli Netview for NT requires:

- Windows NT Version 4
- Tivoli NetView for NT Version 5 Release 1, or later

- **Solaris**

The MultiSystem Manager IP network agent for Solaris uses TCP/IP to communicate between the MultiSystem Manager IP agent and Tivoli NetView for OS/390. 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 Version 2 Release 5 or Version 2 Release 6
  - Tivoli NetView for Solaris Version 5 Release 1, or later
- The MultiSystem Manager IP agent for OpenView for Solaris requires:
  - Solaris Version 2 Release 5 or Version 2 Release 6
  - Hewlett Packard Network Node Manager (HP OpenView) Version 5 Release 1 or later

#### **5.4.28.7 System Considerations for the MultiSystem Manager ATM Networks Feature**

The MultiSystem Manager topology agent for ATM is shipped with Tivoli NetView for OS/390 Version 1 Release 4 and runs as an application on Tivoli NetView for AIX. The MultiSystem Manager ATM Networks feature of Tivoli NetView for OS/390 Version 1 Release 4 requires:

Any IBM RISC System/6000\* POWERstation, POWERserver, or compatible computer as required to support the following:

- AIX Version 4 Release 1.4 (5765-393) or later
- NetView for AIX Version 4 (5765-527 feature number 5608) or later
- AIX NetView Service Point Version 1 Release 2.2 (5621-107) or later
- SNA Server/6000 Version 3 Release 1.0.1 (5765-582) or later
- IBM Communication Server for AIX Version 4 (5765-652)
- Nways Campus Manager ATM for AIX Version 2/Version 2.2 (5697-B08)
  - or -
  - Nways Campus Manager Suite Version 3 for AIX (5697-B06)
  - or -



Nways Manager for AIX Version 1/Version 1.2 (5801-AAR)

NOTE: NCMA 1.3 is shown as N-ways Campus Manager 2.2.1.0 in SMIT.

#### **5.4.28.8 System Considerations for using the REXX Alternate Library** (FMID HWJ9133)

Before using the REXX Alternate Library with Tivoli NetView for OS/390 Version 1 Release 4 you must first apply the following PTFs.

- UN78518
- UN78525
- UN84251
- UN86020
- UN88434
- UN90776
- UN93567
- UN93568
- UN96368
- UQ02796
- UQ04867
- UQ06343
- UQ06344
- UQ06830
- UQ10660
- UQ12616
- UQ17096
- UQ18015

You are now aware of all of the installation requirements for Tivoli NetView for OS/390 Version 1 Release 4 Graphical Enterprise Option. Proceed to 6.0, "Installation Instructions" on page 48 to begin your product installation.

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## 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 OS/390 Version 1 Release 4.

If you obtained Tivoli NetView for OS/390 Version 1 Release 4 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 OS/390 Version 1 Release 4 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 OS/390 Release 8 SMP/E or later 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 OS/390 that are required to run Tivoli NetView for OS/390 Version 1 Release 4. The OS/390 changes required to run Tivoli NetView for OS/390 Version 1 Release 4 are discussed in the *Tivoli NetView for OS/390 Installation: Getting Started, SC31-8767*.

Please note the following:

- If you want to install Tivoli NetView for OS/390 Version 1 Release 4 into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.
- Sample jobs have been provided to help perform some or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries required for SMP/E execution have been defined in the appropriate zones.
- The SMP/E dialogs may be used instead of the sample jobs to accomplish the SMP/E installation steps.
- If you will be installing the IBM SAA REXX/370 Alternate Library (5695-014) for use with Tivoli NetView for OS/390 Version 1 Release 4 then you should refer to its Program Directory for instructions on how to perform the installation.
- If you have installed z/OS R2 or higher then you already have the two base Tivoli NetView for OS/390 Version 1 Release 4 FMIDs installed. These FMIDs, HPZ8500 and JPZ8504, come with the z/OS system and are known as NetView System Services, or NVSS. Because the z/OS system you received via Serverpac is optimized for space, the datasets that contain the NVSS files are not large enough to hold all of the Tivoli NetView for OS/390 Version 1 Release 4 files. For this reason, if you wish to install your Tivoli NetView for OS/390 Version 1 Release 4 on top of the NVSS files you will have to divert from the normal installation instructions to perform some extra or alternate steps. These steps will copy your current NVSS datasets to new, larger datasets, delete your current NVSS datasets, then rename the new datasets so that they have the same names of your original NVSS datasets. As a final step, you will run a job that replaces your current DDDEF statements for the Tivoli

NetView for OS/390 Version 1 Release 4 datasets with updated DDDEF statements which will point to the new datasets. Each of these steps will be pointed out in the appropriate section of the installation instructions. They will be labelled with the phrase When installing over NVSS. You do not have to install Tivoli NetView for OS/390 Version 1 Release 4 on top of the NVSS datasets, but can install the entire Tivoli NetView for OS/390 Version 1 Release 4 product in a separate zone, allowing you to have an NVSS NetView for Sysplex Automation, and a separate NetView for your normal NetView requirements. Be aware that if you do this it will mean that you will have HPZ8500 and JPZ8504 installed in two separate CSI's and will have to apply service for these FMIDs in each zone.

The two basic choices for installing Tivoli NetView for OS/390 Version 1 Release 4 are:

1. **Install into new target and distribution zones. This is the recommended method for Tivoli NetView for OS/390 Version 1 Release 4 for users who will continue to use a prior version of NetView after Tivoli NetView for OS/390 Version 1 Release 4 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 OS/390 Version 1 Release 4, 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 6.1.14.2, "APPLYing Tivoli NetView for OS/390 Version 1 Release 4 on a System Having NCCF or NetView Already Installed" on page 63. The *Tivoli NetView for OS/390 Installation: Configuring Additional Components, SC31-8770* 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 OS/390 Version 1 Release 4 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 OS/390 Version 1 Release 4 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 6.1.14.2, "APPLYing Tivoli NetView for OS/390 Version 1 Release 4 on a System Having NCCF or NetView Already Installed" on page 63.

**Note:** When installing over NVSS you must use choice 2 and install into the existing zones, with the exceptions noted in the instructions.

If you are installing Tivoli NetView for OS/390 Version 1 Release 4 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 OS/390 Version 1 Release 4. If a SYSGEN is performed after the installation of Tivoli NetView for OS/390 Version 1 Release 4 is complete, the GENERATE facility of SMP/E can be used to re-install Tivoli NetView for OS/390 Version 1 Release 4.

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## 6.1 Installing Tivoli NetView for OS/390 Version 1 Release 4

The samples provided with Tivoli NetView for OS/390 Version 1 Release 4 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 OS/390 Version 1 Release 4

This release of Tivoli NetView for OS/390 Version 1 Release 4 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 OS/390 Version 1 Release 4. After the RECEIVE step has been completed, the sample jobs can be found in SMPTLIB: **IBM.JPZ8504.F2**. Make a copy of these jobs in your own library and modify them to use during the installation of Tivoli NetView for OS/390 Version 1 Release 4. Or you can use the UNLOAD job provided in the program directory to copy the install JCL from the tape. See 6.1.5, "Unload the Sample JCL from the Product Tape" on page 51.

In the sample SMP/E jobs provided, the name of the SMP/E CSI is GLOBAL. The global zone name in the SMP/E CSI is GLOBAL. The distribution zone name is dzone. The target zone name is tzone. The sample jobs should be updated to reflect the CSI and zone names used at your installation.

### 6.1.3 SMP/E Options Subentry Values

The recommended values for some SMP/E CSI subentries are shown in Figure 28. 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.

<i>Figure 28. SMP/E Options Subentry Values</i>		
<b>SUB-ENTRY</b>	<b>Value</b>	<b>Comment</b>
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 OS/390 Version 1 Release 4 uses the CALLLIBS function provided in SMP/E to resolve external references during installation. When Tivoli NetView for OS/390 Version 1 Release 4 is installed, ensure that DDDEFs exist for the following libraries:

- CSSLIB
- SCEELKED
- SEZADPIL
- SEZACMTX

**Note:** The DDDEFs above are used only to resolve the link-edit for Tivoli NetView for OS/390 Version 1 Release 4 using CALLLIBS. These data sets are not updated during the installation of Tivoli NetView for OS/390 Version 1 Release 4.

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 OS/390 Version 1 Release 4, 627 tracks of 3390 DASD space is adequate for the SMPLTS.

## 6.1.5 Unload the Sample JCL from the Product Tape

The following sample installation jobs are provided on the distribution tape to help you install Tivoli NetView for OS/390 Version 1 Release 4:

<i>Figure 29 (Page 1 of 2). Sample Installation Jobs</i>			
<b>Job Name</b>	<b>Job Type</b>	<b>Description</b>	<b>RELFILE</b>
CNMJSMPE	ALLOCATE	Sample job to allocate SMP/E datasets	IBM.JPZ8504.F2
CNMJCSIE	SMPZONE	Sample job to allocate global, target and dlib zones, define the globalzone and default options to SMP/E	IBM.JPZ8504.F2
CNMJUCLE	SMPZONE	Sample job to update DSSPACE and/or PEMAX if using existing zones	IBM.JPZ8504.F2
CNMJRC04	RECEIVE	RECEIVE job for System Services Base	IBM.JPZ8504.F2
CNMJRC14	RECEIVE	RECEIVE job for Unattended Option	IBM.JPZ8504.F2
CNMJRC24	RECEIVE	RECEIVE job for Procedural Option	IBM.JPZ8504.F2

Figure 29 (Page 2 of 2). Sample Installation Jobs

<b>Job Name</b>	<b>Job Type</b>	<b>Description</b>	<b>RELFILE</b>
CNMJRC44	RECEIVE	RECEIVE job for Graphical Enterprise Option	IBM.JPZ8504.F2
CNMJALEE	ALLOCATE	Allocate job for target and distribution libraries for Tivoli NetView for OS/390 Version 1 Release 4 host.	IBM.JPZ8504.F2
CNMJALTE	ALLOCATE	Allocate job for target and distribution libraries for Tivoli NetView for OS/390 Version 1 Release 4 host. When installing over NVSS	IBM.JPZ8504.F2
CNMJCPYE	COPY	Copy NVSS datasets to larger datasets for Tivoli NetView for OS/390 Version 1 Release 4. When installing over NVSS	IBM.JPZ8504.F2
CNMJDELE	DELETE	Delete original NVSS datasets for Tivoli NetView for OS/390 Version 1 Release 4. When installing over NVSS	IBM.JPZ8504.F2
CNMJALXE	ALLOCATE	Allocate job for target and distribution libraries for OS/390 UNIX System Services	IBM.JPZ8504.F2
CNMJMKDE	MKDIR	Sample exec to create HFS directories for OS/390 UNIX System Services related components HFS paths	IBM.JPZ8504.F2
CNMJMKPE	MKDIR	Sample job to create HFS mount point directory of target HFS data set was allocated HFS paths	IBM.JPZ8504.F2
CNMJMKME	MKDIR	Rexx exec invoked by CNMJMKPE to create the HFS mount point directory of the target HFS data set HFS paths	IBM.JPZ8504.F2
CNMJMKXE	MKDIR	Sample job to execute the exec that creates HFS directories for OS/390 UNIX System Services related components HFS paths	IBM.JPZ8504.F2
CNMJDDNE	DDDEF	Sample job to define SMP/E DDDEFs for host NetView	IBM.JPZ8504.F2
CNMJDDFE	DDDEF	Redefine SMP/E DDDEFs for host NetView. When installing over NVSS	IBM.JPZ8504.F2
CNMJDDXE	DDDEF	Sample job to define SMP/E DDDEFs for workstation NetView	IBM.JPZ8504.F2
CNMJAP04	APPLY	APPLY job for System Services Base	IBM.JPZ8504.F2
CNMJAP14	APPLY	APPLY job for Unattended Option	IBM.JPZ8504.F2
CNMJAP24	APPLY	APPLY job for Procedural Option	IBM.JPZ8504.F2
CNMJAP44	APPLY	IBM.JPZ8504.F2	
CNMJAC04	ACCEPT	ACCEPT job for System Services Base	IBM.JPZ8504.F2
CNMJAC14	ACCEPT	ACCEPT job for Unattended Option	IBM.JPZ8504.F2
CNMJAC24	ACCEPT	ACCEPT job for Procedural Option	IBM.JPZ8504.F2
CNMJAC44	ACCEPT	ACCEPT job for Graphical Enterprise Option	IBM.JPZ8504.F2
CNMJUMCS	PRINT	Sample job to print out SMPMCS	IBM.JPZ8504.F2

You may copy the jobs from the tape by submitting the job below. Add a job card and modify the parameters in boldface to uppercase values to meet your site's requirements before submitting.

```

//UNLOAD EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//INTAPE DD DSN=IBM.JPZ8504.F2,DISP=OLD,
// UNIT=tape,
// VOL=SER=PZ8500,LABEL=(9,SL)
//OUTDISK DD DSN=NETVIEW.V1R4M0.INSTALL,
// UNIT=SYSALLDA,
// DISP=(NEW,CATLG,DELETE),
// VOL=SER=dvol,
// DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=8800),
// SPACE=(8800,(100,10,25))
//SYSIN DD *
COPY INDD=INTAPE,OUTDD=OUTDISK
/*
//

```

where **tape** is the unit value matching the product tape or cartridge and **dvol** is the DASD volume serial number of the DASD where the files will be loaded.

You can also access the sample installation jobs by performing an SMP/E RECEIVE for FMID JPZ8504, which will also receive FMID HPZ8500, and then copy the jobs from data set **IBM.JPZ8504.F2** to a work dataset for editing and submission.

## 6.1.6 Establish the Correct SMP/E Environment for Tivoli NetView for OS/390 Version 1 Release 4

### NLS note

To install both NetView US English feature and NetView Japanese feature on the same CPU, they must be installed into separate target and distribution zones with maintenance applied to each independently. A separate SMPLTS is needed for each target zone. If you try to install both the NetView US English feature and the NetView Japanese feature into the same target and distribution zones, some features will not install correctly.

**Note:** When installing over NVSS go to 6.1.7, "Perform SMP/E RECEIVE" on page 55 at this time.

### 6.1.6.1 SMP/E Data Sets for Tivoli NetView for OS/390 Version 1 Release 4

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 global zone. Sample CNMJSMPPE is provided in NETVIEW.V1R4M0.INSTALL for that purpose. It is important that the data set names match between sample job CNMJSMPPE and those that are specified in all of the installation jobs supplied with Tivoli NetView for OS/390 Version 1 Release 4. CNMJSMPPE 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 CNMJSMPPE job is considered successful if return code zero is received.

### 6.1.6.2 SMP/E CSI for Tivoli NetView for OS/390 Version 1 Release 4

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 CNMJCSIE supplied in NETVIEW.V1R4M0.INSTALL. CNMJCSIE 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 CNMJCSIE sample, you should Review the SMP/E options defined in CNMJCSIE. 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 CNMJCSIE 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 CNMJCSIE job is considered successful if return code zero is received. If this is the first time you have run this job, and there are no existing CSIs to delete, then you will get a return code of 8 for the delete step.

### 6.1.6.3 OS/390 Release 8 SMP/E or later access to Tivoli NetView for OS/390 Version 1 Release 4 Data Sets

Tivoli NetView for OS/390 Version 1 Release 4 now has it's own MACLIB and AMACLIB data sets instead of using the system data sets. They are SCNMMAC1 and ACNMMAC1.

To establish the correct SMP/E access to Tivoli NetView for OS/390 Version 1 Release 4 data sets, complete the following steps:

- Ensure that the SMP/E space requirements outlined in Figure 15 on page 24 and Figure 16 on page 25 are met by the SMP/E environment that will be used to install Tivoli NetView for OS/390 Version 1 Release 4. If you choose to use samples CNMJSMPPE and CNMJCSIE to create your SMP/E environment, these requirements are met and you may continue to 6.1.7, "Perform SMP/E RECEIVE" on page 55. If you are not using CNMJSMPPE and CNMJCSIE to create your SMP/E environment, read the following items.
  - Storage requirements for the SMPCSI data sets are found in Figure 14 on page 24.
  - CNMJUCLE, found in NETVIEW.V1R4M0.INSTALL, can be used to set DSSPACE and PEMAX to the values shown in Figure 28 on page 50. CNMJUCLE should only be used if the values in your current OPTIONS entry are less than the values shown in Figure 28 on page 50.



- Run CNMJUCLE, if necessary, before proceeding to 6.1.7, “Perform SMP/E RECEIVE” on page 55 .

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

## 6.1.7 Perform SMP/E RECEIVE

Edit and submit sample receive job to perform the SMP/E RECEIVE for Tivoli NetView for OS/390 Version 1 Release 4. Consult the instructions in the sample job for more information. Following is a table for each receive job which will receive one or more FMIDs. Depending on which system (Unattended, Procedural or Graphical Enterprise) you are installing, you will need to run different RECEIVE jobs. Figure 30 will show you which RECEIVE jobs to run, and which FMIDs they will RECEIVE.

**Note:** If you obtained Tivoli NetView for OS/390 Version 1 Release 4 as part of a CBPDO, you can use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the Tivoli NetView for OS/390 Version 1 Release 4 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.

**Note:** When installing over NVSS you do not need to do a RECEIVE for HPZ8500 and JPZ8504, as they have already been received, applied and accepted on your system. This means that you do not need to run job CNMJRC04. If you do try to run this job you should see a message telling you that these FMIDs have already been received. If you wish to download the relfiles for these FMIDs you will have to do this with your own job. You could create a job similar to the unload job that is shown in 6.1.5, “Unload the Sample JCL from the Product Tape” on page 51.

*Figure 30. Which Receive Jobs to Run*

System ordered	RECEIVE jobs to run	FMIDs received
Unattended	CNMJRC04 CNMJRC14	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517
Procedural	CNMJRC04 CNMJRC14 CNMJRC24	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517 JPZ8520 JPZ8524
Graphical Enterprise	CNMJRC04 CNMJRC14 CNMJRC24 CNMJRC44	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517 JPZ8520 JPZ8524 JPZ8540

After choosing which jobs you should run, make the changes as indicated in the JCL comments (as well as any other changes required by your site) and submit the jobs.

- **CNMJRC04:**

The JCL contained in the sample job CNMJRC04 should be run for Unattended, Procedural, and Graphical Enterprise. When installing over NVSS this job should not be run.

**Expected Return Codes and Messages:** The CNMJRC04 job is considered successful if return code zero is received.

- **CNMJRC14:**

The JCL contained in the sample job CNMJRC14 should be run for Unattended, Procedural, and Graphical Enterprise.

**Expected Return Codes and Messages:** The CNMJRC14 job is considered successful if return code zero is received.

- **CNMJRC24:**

The JCL contained in the sample job CNMJRC24 should be run for Procedural and Graphical Enterprise.

**Expected Return Codes and Messages:** The CNMJRC24 job is considered successful if return code zero is received.

- **CNMJRC44:**

The JCL contained in the sample CNMJRC44 should be run for Graphical Enterprise.

**Expected Return Codes and Messages:** The CNMJRC44 job is considered successful if return code zero is received.

## 6.1.8 Allocate SMP/E Target and Distribution Libraries and Paths

### 6.1.8.1 Allocate SMP/E Target and Distribution Libraries

Ensure that the Tivoli NetView for OS/390 Version 1 Release 4 target and distribution libraries have sufficient space. If you are installing an Unattended system refer to Figure 19 on page 27 and Figure 17 on page 25 for proper sizes. If you are installing a Procedural system refer to Figure 22 on page 30 and Figure 20 on page 29 for proper sizes, and if you are installing a Graphical Enterprise system refer to Figure 25 on page 34 and Figure 23 on page 32. To allow for maintenance, the space allocations in allocation samples are larger than the actual minimum space required.

Remember, if you first install an Unattended system, and then, at a later time, decide to migrate to a Procedural system, you may need to enlarge some datasets (for example, the panel datasets). If you used the allocation jobs that are shipped this will be done automatically, as the allocation for each dataset contains enough extents to accomplish this.

Remember, if you first install an Unattended or Procedural system, and then, at a later time, decide to migrate to a Graphical Enterprise system, you may need to enlarge your datasets. To find out how much larger your datasets must be for a Graphical Enterprise system you should use the charts listed in section 5.2.3, "DASD Storage Requirements" on page 22. If you used the shipped allocation jobs, then any datasets you have already created will be the correct size since the allocation for each dataset contains enough extents to accomplish this. In some cases you will need to create new datasets, as there are some datasets that are only used in the Graphical Enterprise system.

If you are installing the NetView program for the first time, the allocation samples, (CNMJALEE and CNMJALXE), can be used to create the target and distribution libraries which are used exclusively by Tivoli NetView for OS/390 Version 1 Release 4.

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 libraries CNMLINK, SEKGMOD1 and SEKGMOD2 must also be cataloged in the master catalog if they are to be added to the linklist via the LNKLSTxx member of SYS1.PARMLIB. The LPALIB and LINKLIST concatenations are discussed further in the *Tivoli NetView for OS/390 Installation: Getting Started, SC31-8767*.

### 6.1.8.2 Tivoli NetView for OS/390 Version 1 Release 4 host components

If you are allocating new Tivoli NetView for OS/390 Version 1 Release 4 libraries run CNMJALEE. After running CNMJALEE you should proceed to 6.1.13, "Create DDDEF Entries" on page 60, unless you are installing the optional FMID JPZ8517. If you are installing FMID JPZ8517 proceed to 6.1.9, "Tivoli NetView for OS/390 Version 1 Release 4 OS/390 UNIX System Services Related Components" on page 58.

- **CNMJALEE:**

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

### 6.1.8.3 Tivoli NetView for OS/390 Version 1 Release 4 host components when installing over NVSS.

When installing over NVSS you will not run CNMJALEE. Instead you will run four alternate jobs. These jobs will allocate new, larger datasets for Tivoli NetView for OS/390 Version 1 Release 4, copy your existing NetView files into those datasets, delete the old datasets, and then update the DDDEF statements in SMP/E to point to your new datasets. It is strongly recommended that you make a backup copy of all of your current NetView datasets before proceeding. You can determine which datasets to backup by looking in CNMJALTE, where each dataset is listed.

- **CNMJALTE**

The JCL contained in job CNMJALTE will allocate NetView datasets large enough to hold the entire product. You should note that the second level qualifier (SLQ) for these datasets is "TEMP". This is to distinguish them from the current NetView datasets on your system. You should not change this SLQ, as it is used in the subsequent CNMJCPYE job, and if you change it here you will have to change every occurrence of it in CNMJCPYE.

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

- **CNMJCPYE**

The JCL contained in job CNMJCPYE will copy the contents of your current NetView datasets that came with your z/OS system into the new, larger datasets that you created with CNMJALTE. Note that you must use the same HLQ and SLQ in CNMJCPYE that you used in CNMJALTE.

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

- **CNMJDELE**

The JCL contained in job CNMJDELE has two steps. The first step will SCRATCH the current NetView datasets. **If you have not already made a backup of these datasets, do so now.** The second step will rename the datasets that were created by CNMJALTE, and populated by CNMJCPYE, to be the same names as the original NetView datasets. This will leave you with essentially the same NetView datasets that you had before running this job, except that the datasets will now be large enough to hold all of the NetView files, and they will probably be on a different volume than the original datasets.

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

- **CNMJDDFE**

The JCL contained in job CNMJDDFE will replace the current DDDEF statements in SMP/E with updated ones which will reflect the locations of your new datasets. The only difference should be the volume on which the datasets reside.

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

After running CNMJDDFE you should proceed to 6.1.13, "Create DDDEF Entries" on page 60, unless you are installing the optional FMID JPZ8517. If you are installing FMID JPZ8517 proceed to 6.1.9, "Tivoli NetView for OS/390 Version 1 Release 4 OS/390 UNIX System Services Related Components."

## **6.1.9 Tivoli NetView for OS/390 Version 1 Release 4 OS/390 UNIX System Services Related Components**

JPZ8517 is an optional FMID that will install parts into HFS directories in your OS/390 UNIX System Services environment. JPZ8517 is only required if you plan to use a NetView function that requires the data installed by this FMID.

**JPZ8517** is required for the following NetView functions:

- UNIX for OS/390 Command Server
- NetView IP Discovery
- NMC MIB Browser
- Java SNMP Command Line Interface
- AON SNMP Support

Run CNMJALXE if you are allocating new Tivoli NetView for OS/390 Version 1 Release 4 libraries or target HFS data set, before proceeding to 6.1.10, "Create Hierarchical File System Mount Point Directory" on page 59. CNMJALXE allocates target and distribution libraries for OS/390 UNIX System Services Related Components and the Graphical Enterprise Workstation Components contained in FMID JPZ8517. Optionally, CNMJALXE also allocates your target HFS data set, 'hhhhh.NETVIEW.HFS', that will be used to install FMID JPZ8517.

**Note:** You are not required to allocate a target HFS data set to install FMID JPZ8517; however, it is recommended. If you do not wish to allocate a target HFS data set for NetView, you can still install FMID JPZ8517 into either your root HFS data set or into another HFS data set. Currently, CNMJALXE will not allocate a target HFS data set. If you wish to edit one you must uncomment the ALLOC2 step before running the CNMJALXE sample job. After you have successfully run CNMJALXE, proceed to 6.1.12, “Create Hierarchical File System Directories” on page 60.

- **CNMJALXE:**

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

## 6.1.10 Create Hierarchical File System Mount Point Directory

If you did not allocate a target HFS data set, skip this step and proceed to 6.1.12, “Create Hierarchical File System Directories” on page 60.

For Tivoli NetView for OS/390 Version 1 Release 4, edit and submit sample CNMJMKPE if you are installing FMID JPZ8517.

CNMJMKPE creates the HFS mount point directory, <PathPrefix>/usr/lpp/netview/, which will be used to mount your target HFS data set that was allocated by CNMJALXE. CNMJMKPE must be run by a userid that has superuser authority (for example, ROOT), and the UNIX System Services component of OS/390 must be active.

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

**Note:** When editing sample CNMJMKPE, be sure that you use the same <PathPrefix> value when you edit sample CNMJDDXE. The default value that is shipped with Tivoli NetView for OS/390 Version 1 Release 4 is null. Remember that pathnames in OS/390 UNIX System Services are case sensitive.

- **CNMJMKPE:**

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

## 6.1.11 Mount The Target Hierarchical File System Dataset

If you did not allocate a target HFS data set, skip this step and proceed to 6.1.12, “Create Hierarchical File System Directories” on page 60.

Use the following TSO/E command to mount the target HFS dataset that was allocated by sample CNMJALXE at the mount point directory:

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

'hhhhh.NETVIEW.HFS' is the name of your target HFS dataset and <PathPrefix> is the high-level directory name that will be used in sample CNMJDDXE. 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 superuser authority (for example, ROOT), and the UNIX System Services component of OS/390 must be active.

**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 *Tivoli NetView for OS/390 Installation: Getting Started, SC31-8767*.

## 6.1.12 Create Hierarchical File System Directories

For Tivoli NetView for OS/390 Version 1 Release 4, edit and submit sample CNMJMKXE if you are installing FMID JPZ8517.

CNMJMKXE creates HFS directories for OS/390 UNIX System Services Related Components contained in FMID JPZ8517. CNMJMKXE must be run by a userid that has superuser authority (for example, ROOT), and the UNIX System Services component of OS/390 must be active.

**Note:** When editing sample CNMJMKXE, be sure that you use the same <PathPrefix> value in sample CNMJDDXE.

- **CNMJMKXE:**

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

## 6.1.13 Create DDDEF Entries

**Note:** When installing over NVSS you should not run CNMJDDNE, because you have already run CNMJDDFE, which has created the proper DDDEF entries for your system. If you are going to install Tivoli NetView for OS/390 Version 1 Release 4 FMID JPZ8517 OS/390 UNIX System Services Related Components, you need to modify and run CNMJDDXE.

Add the DDDEFs for Tivoli NetView for OS/390 Version 1 Release 4 target libraries and distribution libraries (for RESTORE processing) to the target zone into which Tivoli NetView for OS/390 Version 1 Release 4 will be APPLIED. Also add the DDDEFs for distribution libraries to the distribution zone into which Tivoli NetView for OS/390 Version 1 Release 4 will be ACCEPTED.

Run CNMJDDNE before proceeding. See the following table for which DDDEF jobs you should run for the associated components noted in the 'Description' column. You must make some modifications to each of the following jobs before running them.

Figure 31. Which DDDEF Jobs to Run

Installation Option	DDDEF jobs to run	Description
ALL (except when installing over NVSS)	CNMJDDNE	DDDEFs for all types of systems
JPZ8517 FMID	CNMJDDXE	DDDEFs for OS/390 UNIX System Services Related Components.

- **CNMJDDNE:**

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

If you are going to install Tivoli NetView for OS/390 Version 1 Release 4 FMID JPZ8517 OS/390 UNIX System Services Related Components, you need to modify and run CNMJDDXE. FMID JPZ8517 contains parts that will install into HFS directories in OS/390 UNIX System Services. This FMID is optional. See the instructions in the sample job for more information. Because pathnames in OS/390 UNIX System Services are case sensitive, be sure when you change <PathPrefix> in the DDDEFUX3 step not to change the case of any characters in the HFS pathname.

- **CNMJDDXE:**

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

## 6.1.14 Perform SMP/E APPLY

**Note:** When installing over NVSS you should not run CNMJAP04. This apply has already been done for you when your z/OS system was built.

Edit and submit the sample jobs for your installation, as shown in Figure 32 on page 62, to perform an SMP/E APPLY CHECK for Tivoli NetView for OS/390 Version 1 Release 4. Consult the instructions in the sample jobs for more information.

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

Once you have taken any actions indicated by the APPLY CHECK, remove the CHECK operand and run the jobs 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 or NCCF into target libraries that you will continue to use with Tivoli NetView for OS/390 Version 1 Release 4, you will need to let SMP/E remove the old NetView or NCCF from those target libraries at APPLY time. See section 6.1.14.2, “APPLYing Tivoli NetView for

OS/390 Version 1 Release 4 on a System Having NCCF or NetView Already Installed” on page 63 for more information.

Each APPLY job supplied in NETVIEW.V1R4M0.INSTALL will apply one or more FMIDs. Depending on which system (Unattended, Procedural or Graphical Enterprise) you are installing, you will need to run different APPLY jobs. Figure 32 will show you which APPLY jobs to run, and which FMIDs they will apply.

**Note:** It is **strongly** recommended that you APPLY the NetView components in the order listed for your system in Figure 32. This is because Tivoli NetView for OS/390 Version 1 Release 4 has many dependencies between components. These dependencies will cause unresolved external reference messages to be generated during the APPLY. The list shown in Figure 35 on page 67 was compiled based on applying the FMIDs in this order. If you choose to apply the FMIDs in a different order your APPLY output will not match the list shown. This may make it difficult for you to determine if there are any unexpected unresolved external references which would affect the Tivoli NetView for OS/390 Version 1 Release 4

<i>Figure 32. Which APPLY Jobs to Run</i>		
<b>System ordered</b>	<b>APPLY jobs to run</b>	<b>FMIDs applied</b>
Unattended	CNMJAP04 CNMJAP14	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517
Procedural	CNMJAP04 CNMJAP14 CNMJAP24	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517 JPZ8520 JPZ8524
Graphical Enterprise	CNMJAP04 CNMJAP14 CNMJAP24 CNMJAP44	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517 JPZ8520 JPZ8524 JPZ8540
<b>Note: If you are installing FMID JPZ8517 then the CNMJAP04 job must be run by a userid that has superuser authority (for example, ROOT), and the UNIX System Services component of OS/390 must be active.</b>		

**Note:** For each component, you must apply the base FMID before you apply any other FMID in that component. For example, you must apply FMID HPZ8500 before applying JPZ8504 or JPZ8517.

After choosing which jobs you should run, make the changes as indicated in the JCL comments contained in the samples (as well as any other changes required by your site) and submit the jobs. Remember, you must comment out any FMIDs that you will not be applying.

**Warning:** Because Tivoli NetView for OS/390 Version 1 Release 4 has been divided into several 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 to set the return code for specific utilities such as IEWL, the linkage editor.



- **CNMJAP04:**

**Expected Return Codes and Messages from APPLY CHECK:** The job is considered successful if return code zero is received. For additional information refer to Figure 35 on page 67.

**Expected Return Codes and Messages from APPLY:** The job is considered successful if return code four(04) is received. For additional information refer to Figure 35 on page 67.

- **CNMJAP14:**

If you are installing FMID JPZ8517, the CNMJAP14 APPLY job must be run by a userid that has superuser authority(for example, ROOT), and the UNIX System Services component of OS/390 must be active.

**Expected Return Codes and Messages from APPLY CHECK:** The job is considered successful if return code zero is received. For additional information refer to Figure 35 on page 67.

**Expected Return Codes and Messages from APPLY:** The job is considered successful if return code zero is received. For additional information refer to Figure 35 on page 67.

- **CNMJAP24:**

**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.

- **CNMJAP44:**

**Expected Return Codes and Messages:** The CNMJAP44 job is considered successful if return code zero is received.

#### **6.1.14.1 Subdividing the APPLY of Tivoli NetView for OS/390 Version 1 Release 4**

Because of the number of FMIDs in Tivoli NetView for OS/390 Version 1 Release 4 it is recommended that you do not try to run the entire APPLY as one job. Each sample job will do the apply for one component. In most cases you will not be APPLYing every FMID for each component.

You may also APPLY NetView one FMID at a time. If you elect to do this you must ensure that you apply the base FMID for each component before you apply any other FMIDs. The base component FMID always ends with the digit 0, such as HPZ8500 or JPZ8520.

#### **6.1.14.2 APPLYing Tivoli NetView for OS/390 Version 1 Release 4 on a System Having NCCF or NetView Already Installed**

You should do either 6.1.14.2.1, "Deleting a Previous Release of NCCF or NetView" or 6.1.14.2.2, "Running with a Previous Release of NCCF or NetView" on page 64, but not both.

**6.1.14.2.1 Deleting a Previous Release of NCCF or NetView:** If you have previously installed NetView or NCCF into system libraries and you will use those libraries again with Tivoli NetView for OS/390 Version 1 Release 4, but you do not want to continue using this release after your Tivoli NetView for

OS/390 Version 1 Release 4 install, you will need to use SMP/E to remove the old NetView or NCCF from those libraries when SMP/E installs Tivoli NetView for OS/390 Version 1 Release 4.

This is particularly important when the prior release of NetView or NCCF was installed into SYS1.LINKLIB and/or SYS1.LPALIB. If you do not remove the previous release of NetView or NCCF from SYS1.LINKLIB and SYS1.LPALIB, the newly installed system will be executing the previous NetView or NCCF modules instead of Tivoli NetView for OS/390 Version 1 Release 4 modules.

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

- You will have to run your APPLY job using your old NetView or NCCF 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 (CNMJDDNE and CNMJDDXE). 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 *Tivoli NetView for OS/390 Installation: Getting Started, SC31-8767*).

**Warning:** If an IPL is performed with the CLPA option before SCNMLPA1 is concatenated to SYS1.LPALIB, the target system will not IPL.

To lessen the exposure to this situation, you might want to add SCNMLPA1 to the LPALSTxx member (refer to *Tivoli NetView for OS/390 Installation: Getting Started, SC31-8767*) before actually APPLYing Tivoli NetView for OS/390 Version 1 Release 4.

**6.1.14.2.2 Running with a Previous Release of NCCF or NetView:** If you have previously installed NetView or NCCF and you plan to continue using this release after your Tivoli NetView for OS/390 Version 1 Release 4 install, you **MUST** use separate SMP/E target zones for your Tivoli NetView for OS/390 Version 1 Release 4 install. After your period of testing Tivoli NetView for OS/390 Version 1 Release 4 is finished, you should delete the previous release of NetView or NCCF. If the previous level of NetView is earlier than Version 2 Release 1 (or NetView Version 1 Release 3 MVS/ESA) then you must manually delete the old modules from SYS1.LPALIB and SYS1.LINKLIB since the new release uses modules which are placed in SCNMLPA1 rather than LPALIB and CNMLINK instead of LINKLIB. These modules in SCNMLPA1 are downward compatible with previous releases and the most recent version should be used.

When your migration is complete and you wish to delete your previous release of NCCF or 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 OS/390 Version 1 Release 4 in a separate CSI(s) or zone(s) from the previous release. Examples of how this can be done are provided in samples CNMJDLT1 and CNMJDLT2. The symbol *fmid2del* contained in these samples would be replaced by the base FMID of the actual release you have installed. Figure 33 lists the releases prior to Tivoli NetView for OS/390 Version 1 Release 4. The symbol *nvdelet* is the dummy FMID used for the delete processing. You could use NVDELETE as the FMID or you can supply another FMID if you prefer.

**Expected Return Codes and Messages:** The CNMJDLT1 and CNMJDLT2 jobs are considered successful if return code zero is received.

Figure 33 (Page 1 of 2). NetView FMIDs to delete by Version/Release

Version/Release	MVS/370	MVS/XA	MVS/ESA
NetView V1R1	HNV1102	HNV1103	N/A <sup>1</sup>
NetView V1R2	HNV1202	HNV1203	N/A <sup>1</sup>
NetView V1R3	N/A <sup>2</sup>	HNV1303	HVNW140
NetView V2R1	N/A <sup>2</sup>	HVWW101	HXYZ101
NetView V2R2	N/A <sup>2</sup>	HVWW200	HXYZ200
NetView V2R3	N/A <sup>2</sup>	HVWW300	HXYZ300
NetView V2R4	N/A <sup>2</sup>	N/A <sup>3</sup>	HXYZ400
NetView V3R1	N/A <sup>2</sup>	N/A <sup>3</sup>	HPZ8100, HPZ8130
TME 10 NetView V1R1	N/A <sup>2</sup>	N/A <sup>3</sup>	HPZ8200
TME 10 NetView V1R2	N/A <sup>2</sup>	N/A <sup>3</sup>	HPZ8300
TME 10 NetView V1R3	N/A <sup>2</sup>	N/A <sup>3</sup>	HPZ8400
MultiSystem Manager V1R1	N/A <sup>4</sup>	N/A <sup>5</sup>	HFLC100
MultiSystem Manager V1R2	N/A <sup>4</sup>	N/A <sup>5</sup>	HFLC200
MultiSystem Manager V2R1	N/A <sup>4</sup>	N/A <sup>5</sup>	HFLC300
MultiSystem Manager V2R2	N/A <sup>4</sup>	N/A <sup>5</sup>	HFLC400

Figure 33 (Page 2 of 2). NetView FMIDs to delete by Version/Release

Version/Release	MVS/370	MVS/XA	MVS/ESA
AON/ANO FMIDs	N/A <sup>6</sup>	N/A <sup>7</sup>	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 fmid2d1) /* Delete the FMIDs from the */
                          /* GLOBALZONE entry.        */
    
```

Figure 34. Additional delete logic

### 6.1.14.3 Running and Verifying the APPLY of Tivoli NetView for OS/390 Version 1 Release 4

Run the apply jobs for your system. They should all end with a return code of 4 or less. If the code is higher than 4, 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*.

Load module DSITCT will not be deleted during APPLY processing for customers who have the TCAM interface module, IEDQB1, installed with NCCF. This is not an error.

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 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 OS/390 releases. You will still need to run REPORT CALLLIBS if your PL/I or C/390 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 higher.

**Note:** Unresolved external references in load modules other than those listed here should be investigated whether or not RODM, GMFHS, or Language Environment for OS/390 Release 3 will be used with NetView.

**Note:** There are some load modules that will not have all their external references resolved by the APPLY. This is because they may need to be linked in with user code, because they are used by another FMID to build a larger load module, or because they need a part from an FMID that has not yet been applied. The ACTION column will indicate if and how the external references will be resolved. If the ACTION column says "NONE" then this module will never have its external references resolved. This is not a problem. It means that the load module is never executed by itself, but is used to build a larger load module in a different product.

For FMID HPZ8500, the load modules listed in Figure 35 will generate unresolved external reference messages during the SMP/E APPLY process. The unresolved external references appear in the output because these load modules are intended to be linked with user code at the customer site.

*Figure 35. Load Modules and Unresolved External References for HPZ8500*

Load Modules	Unresolved References	Action	Messages
DUIFEXPP	CNMNETV	None	IEW2454W IEW2646W IEW2651W
CNMNVLC	CEESTART, STRTOUL, CEIL, FLOOR, MEMMOVE, CEESG003	None	IEW2454W
CNMVLC	CEESTART, VSPRINTF, STRTOUL, CEIL, FLOOR, STRLEN, MEMMOVE, CEESG003	None	IEW2454W

Depending on the level of OS/390 used, you will receive additional warning and informational messages when you run the APPLY jobs. Most of these are not a problem. Figure 36 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.

Figure 36. Warning and Informational Messages Received during APPLY

Message Number	HPZ8500 JPZ8504	JPZ8510 JPZ8514 JPZ8517	JPZ8520 JPZ8524	JPZ8540
GIM23913I	4825	1014	124	1339
GIM23913W	3	0	0	0
GIM23914I	0	0	114	191
IEW2454W	33	175	16	230
IEW2646W	1	0	0	0
IEW2651W	1	0	0	0
IEW2650I	11	37	16	48

### 6.1.15 Perform SMP/E ACCEPT

**Note:** When installing over NVSS you should not run CNMJAC04. This accept has already been done for you when your z/OS system was built.

Edit and submit the sample jobs for your installation, as shown in Figure 37 on page 69, to perform an SMP/E APPLY CHECK for Tivoli NetView for OS/390 Version 1 Release 4. Consult the instructions in the sample jobs 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.

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.

Edit and submit sample accept jobs to perform an SMP/E ACCEPT for Tivoli NetView for OS/390 Version 1 Release 4. Consult the instructions in the sample job for more information.

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 added by executing a UCLIN ADD job. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

If you have previously installed NetView or NCCF into distribution libraries that you will continue to use with Tivoli NetView for OS/390 Version 1 Release 4, you will need to let SMP/E remove the old NetView or NCCF from those distribution libraries at ACCEPT time.

Each ACCEPT job supplied in NETVIEW.V1R4M0.INSTALL will accept one or more FMIDs. Depending on which system (Unattended, Procedural or Graphical Enterprise) you are installing, you will need to run different ACCEPT jobs. The chart below will show you which ACCEPT jobs to run, and which FMIDs they will accept. For each ACCEPT job, you will need to comment out the FMIDs that you did not RECEIVE and APPLY.

See Figure 37 to determine which jobs you should run.

<i>Figure 37. Which ACCEPT Jobs to Run</i>		
<b>System ordered</b>	<b>ACCEPT jobs to run</b>	<b>FMIDs accepted</b>
Unattended	CNMJAC04 CNMJAC14	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517
Procedural	CNMJAC04 CNMJAC14 CNMJAC24	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517 JPZ8520 JPZ8524
Graphical Enterprise	CNMJAC04 CNMJAC14 CNMJAC24 CNMJAC44	HPZ8500 JPZ8504 JPZ8510 JPZ8514 JPZ8517 JPZ8520 JPZ8524 JPZ8540

After choosing which jobs you should run, make the changes as indicated in the JCL comments contained in the samples provided (as well as any other changes required by your site) and submit the jobs. Remember, you must comment out any FMIDs that you will not be accepting. The analysis of ACCEPT reports is covered in detail in *SMP/E User's Guide*.

- **CNMJAC04:**

**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.

- **CNMJAC14:**

**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.

- **CNMJAC24:**

**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.

- **CNMJAC44:**

**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.

### **6.1.15.1 Subdividing the ACCEPT of Tivoli NetView for OS/390 Version 1 Release 4**

If you wish, you may ACCEPT Tivoli NetView for OS/390 Version 1 Release 4 FMIDs one at a time by successively running the ACCEPT job with only one FMID specified in the SELECT option. By ACCEPTing each FMID in a separate job, you will make each of the jobs run in a shorter period of time than if you ACCEPTed all the FMIDs together.

### **6.1.15.2 ACCEPTing Tivoli NetView for OS/390 Version 1 Release 4 on a System Having NCCF or**

NetView Already Installed You should do either 6.1.15.2.1, "Deleting a Previous Release of NCCF or NetView" or 6.1.15.2.2, "Running with a Previous Release of NCCF or NetView" on page 71, but not both.

**6.1.15.2.1 Deleting a Previous Release of NCCF or NetView:** If you have previously installed NetView or NCCF into system libraries and you will reuse those libraries with Tivoli NetView for OS/390 Version 1 Release 4, but you do NOT want to continue using this release after your Tivoli NetView for OS/390 Version 1 Release 4 install you will need to let SMP/E remove the old NetView or NCCF from those libraries when SMP/E installs Tivoli NetView for OS/390 Version 1 Release 4.

To allow SMP/E to remove the old NetView or NCCF 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 or NCCF 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.



**6.1.15.2.2 Running with a Previous Release of NCCF or NetView:** If you have previously installed NetView or NCCF and you plan to continue using this release after your Tivoli NetView for OS/390 Version 1 Release 4 install, you MUST use separate SMP/E distribution zones for your Tivoli NetView for OS/390 Version 1 Release 4 install.

When your migration is complete and you wish to delete your previous release of NCCF or 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 OS/390 Version 1 Release 4 in a separate CSI from the previous release. This process is described in 6.1.14.2.2, "Running with a Previous Release of NCCF or NetView" on page 64 and the jobs provided perform the receive, apply, and accept steps.

## 6.1.16 Installing the PTFs for CUM Maintenance

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

APPLY and ACCEPT any CUM tape received with this product.

### 6.1.16.1 Publications Useful During Installation

The publications listed in Figure 38 may be useful during the installation of Tivoli NetView for OS/390 Version 1 Release 4. To order copies, contact your IBM or Tivoli representative.

<i>Figure 38. Publications Useful During Installation</i>	
<b>Publication Title</b>	<b>Form Number</b>
<i>Tivoli Management Framework for OS/390 Program Directory, Version 3.6.1</i>	GI10-8039
<i>Tivoli Management Framework for OS/390 Release Notes: Server, Gateway, and Endpoint, Version 3.6.1</i>	GI10-9186
<i>TME 10 Framework Release Notes, Version 3.6.1</i>	GI10-8014
<i>TME 10 Framework Release Notes, Version 3.6</i>	GI10-3028
<i>TME 10 Framework Planning and Installation Guide 3.6</i>	SC31-8432
<i>TME 10 Framework Reference 3.6</i>	SC31-8434
<i>TME 10 Framework User's Guide 3.6</i>	GC31-8433
<i>TME 10 Software Installation Service User's Guide 3.6</i>	GC31-5121
<i>TME 10 Software Installation Service Release Notes 3.6.1</i>	GI10-8015
<i>TME 10 Software Installation Service Release Notes 3.6</i>	GI10-0512

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## 6.2 Activating Tivoli NetView for OS/390 Version 1 Release 4

The publication *Tivoli NetView for OS/390 Installation: Getting Started, SC31-8767* contains the step-by-step procedures to activate the functions of Tivoli NetView for OS/390 Version 1 Release 4.

The publication *Tivoli NetView for OS/390 Installation: Getting Started, SC31-8767* contains procedures for activating functions of Tivoli NetView for OS/390 Version 1 Release 4. For additional information refer to the publications noted in Figure 5 on page 12.

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## Appendix A. Program Level Information

The following APAR fixes against previous releases of NetView have been incorporated into Tivoli NetView for OS/390 Version 1 Release 4:

OW18382	OW24559	OW25923	OW26447	OW27853
OW21096	OW24628	OW25927	OW26505	OW27903
OW21358	OW24628	OW25936	OW26642	OW27929
OW21663	OW24667	OW25942	OW26743	OW27943
OW21665	OW24714	OW25944	OW26754	OW27944
OW22271	OW24782	OW25968	OW26789	OW27992
OW22747	OW24783	OW26026	OW26789	OW27992
OW23540	OW24807	OW26048	OW26789	OW27996
OW23587	OW24809	OW26055	OW26789	OW28000
OW23650	OW24810	OW26056	OW26797	OW28005
OW23683	OW24853	OW26081	OW26798	OW28006
OW23739	OW24926	OW26083	OW26801	OW28018
OW23806	OW25007	OW26083	OW26803	OW28040
OW23869	OW25015	OW26083	OW26838	OW28128
OW23954	OW25021	OW26088	OW26868	OW28162
OW23986	OW25042	OW26117	OW26882	OW28186
OW24010	OW25072	OW26158	OW26932	OW28198
OW24049	OW25087	OW26158	OW26996	OW28222
OW24053	OW25101	OW26158	OW27075	OW28250
OW24085	OW25319	OW26158	OW27102	OW28273
OW24098	OW25319	OW26165	OW27158	OW28298
OW24129	OW25367	OW26168	OW27159	OW28359
OW24130	OW25444	OW26189	OW27222	OW28360
OW24161	OW25491	OW26197	OW27228	OW28402
OW24166	OW25504	OW26268	OW27288	OW28435
OW24323	OW25519	OW26272	OW27305	OW28453
OW24351	OW25591	OW26276	OW27381	OW28466
OW24356	OW25597	OW26282	OW27507	OW28487
OW24414	OW25607	OW26282	OW27509	OW28492
OW24451	OW25629	OW26294	OW27541	OW28499
OW24457	OW25630	OW26294	OW27542	OW28508
OW24520	OW25631	OW26310	OW27555	OW28530
OW24544	OW25639	OW26321	OW27555	OW28565
OW24544	OW25641	OW26332	OW27556	OW28565
OW24553	OW25680	OW26364	OW27634	OW28566
OW24555	OW25709	OW26388	OW27695	OW28575
OW24556	OW25760	OW26409	OW27755	OW28577
OW24557	OW25832	OW26420	OW27762	OW28607
OW24558	OW25852	OW26442	OW27810	OW28652

OW28744	OW29828	OW30829	OW31826	OW33139
OW28745	OW29851	OW30834	OW31866	OW33140
OW28747	OW29894	OW30848	OW31910	OW33163
OW28757	OW29898	OW30857	OW31997	OW33178
OW28758	OW29907	OW30911	OW32034	OW33201
OW28758	OW29943	OW30917	OW32096	OW33208
OW28771	OW29958	OW30944	OW32153	OW33217
OW28777	OW30085	OW30946	OW32167	OW33219
OW28777	OW30107	OW30982	OW32185	OW33222
OW28843	OW30165	OW30985	OW32186	OW33231
OW28958	OW30165	OW31005	OW32282	OW33318
OW28990	OW30185	OW31006	OW32284	OW33319
OW29020	OW30186	OW31019	OW32370	OW33320
OW29086	OW30187	OW31023	OW32428	OW33323
OW29094	OW30223	OW31070	OW32444	OW33331
OW29100	OW30231	OW31073	OW32483	OW33438
OW29120	OW30262	OW31092	OW32501	OW33475
OW29168	OW30270	OW31118	OW32502	OW33498
OW29197	OW30279	OW31141	OW32507	OW33503
OW29230	OW30286	OW31164	OW32552	OW33513
OW29270	OW30296	OW31165	OW32561	OW33563
OW29316	OW30297	OW31172	OW32562	OW33650
OW29365	OW30302	OW31182	OW32569	OW33666
OW29393	OW30331	OW31196	OW32575	OW33667
OW29454	OW30364	OW31219	OW32584	OW33683
OW29459	OW30374	OW31302	OW32602	OW33705
OW29481	OW30395	OW31304	OW32794	OW33728
OW29481	OW30429	OW31386	OW32818	OW33732
OW29489	OW30431	OW31414	OW32837	OW33804
OW29506	OW30438	OW31468	OW32842	OW33835
OW29571	OW30446	OW31504	OW32843	OW33836
OW29579	OW30448	OW31505	OW32855	OW33869
OW29621	OW30460	OW31530	OW32918	OW33870
OW29637	OW30462	OW31555	OW32945	OW33908
OW29679	OW30500	OW31574	OW32956	OW33953
OW29729	OW30509	OW31587	OW32957	OW33961
OW29754	OW30509	OW31603	OW32965	OW33978
OW29755	OW30526	OW31604	OW32974	OW34022
OW29780	OW30533	OW31736	OW32979	OW34084
OW29780	OW30538	OW31740	OW32986	OW34138
OW29801	OW30539	OW31741	OW32997	OW34139
OW29802	OW30542	OW31747	OW33013	OW34143
OW29803	OW30547	OW31763	OW33016	OW34153
OW29804	OW30577	OW31769	OW33081	OW34172
OW29809	OW30817	OW31801	OW33100	OW34188
				OW34272

OW34283	OW35268	OW35875	OW36578	OW37163
OW34296	OW35278	OW35891	OW36593	OW37196
OW34374	OW35279	OW35892	OW36606	OW37198
OW34375	OW35279	OW35898	OW36610	OW37222
OW34396	OW35280	OW35925	OW36639	OW37222
OW34444	OW35280	OW35942	OW36661	OW37222
OW34490	OW35281	OW35966	OW36680	OW37278
OW34496	OW35290	OW36036	OW36681	OW37287
OW34504	OW35306	OW36037	OW36711	OW37329
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OW46847	PN91938	PQ03200	PQ08751	PQ32282
OW46850	PN92148	PQ03200	PQ08905	



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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](mailto: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](mailto: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](mailto:pubs@tivoli.com)**.

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



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