Tivoli NetView for OS/390 Release 3: Enterprise Control of e-business Complexity

Overview

Tivoli NetView® for OS/390® addresses the challenges of network and systems management by focusing on operator productivity through the use of graphical displays and embedded automation capability. Tivoli NetView for OS/390 continues its leadership in SNA management and is addressing the management of mixed network architecture environments.

Tivoli NetView for OS/390 V1R3 focuses on management of IP networks and SNMP-based devices, management of IP clients accessing mainframe applications, and integration with third-party network and element management vendors.

TCP/IP management can be accomplished through the use of native OS/390 TCP/IP management or in cooperation with management applications on distributed platforms. This includes IP agents available for Tivoli NetView on AIX®, Sun Solaris, or Windows NT® and HP OpenView on Sun Solaris or HP-UX.

- An SNMP stack and MIB services (MIB compiler/loader, MIB browser) improve the management of TCP/IP resources and sessions. In addition, NetView can receive and process any SNMP V1 trap.
- Full function SNMP command support from the NMC, 3270 panels, or command procedures, support for logical groupings of MIB variables, remote Ping support, MIB polling and thresholding aid in resource monitoring and automation.
- Any socket connection can now be monitored for availability. If the socket is down, then automation can attempt to restart its associated application, job or task.

- TN3270 session management now includes support for the remote TN3270 server feature on both Cisco and IBM routers.
- NetView provides the ability to launch a web interface for any vendor application from the NetView Management Console (NMC).
- NMC improvements include view cycling, view and resource security and other ease-of-use enhancements. In addition, there are enhancements that integrate the NMC and NetView 3270 Management Console into a single console.
- NetView’s robust timer and automation table capabilities are expanded to assist in automation table management, and a new CHRON command with calendaring support.
- NetView now adapts dynamically to daylight savings time and other system time changes without requiring a recycle.

Key Prerequisites

OS/390 Version 1 Release 3 (5645-001) or OS/390 Version 2 Release 4 (5647-A01) or higher

For a detailed description of the hardware and software prerequisites, refer to the Technical Information section.

Planned Availability Dates

- U.S. English November 19, 1999
- Japanese February 25, 2000

At a Glance

Building on the already rich functionality of NetView for OS/390, Release 3 provides enhancements in these areas and more:

- You can issue any TCP/IP, SNMP, or UNIX® command from NetView either through a user-friendly panel interface or in Clists that you write to extend the functions NetView provides.
- SNMP services include a MIB compiler/loader and a MIB browser launched from the NMC. MIB polling and thresholding also aid in monitoring and automation.
- Graphical Network Management now includes IP agents available for:
  - Tivoli NetView on Sun Solaris or Windows NT
  - HP OpenView on Sun Solaris or HP-UX
  - Tivoli NetView on AIX
- NetView now provides the ability to convert SNMP traps to SNA alerts and SNA alerts to SNMP traps.
- You can launch web interfaces for third-party Web applications.
- Timer and automation capabilities are enhanced.

For ordering, contact:
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Reference: LE001

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

**IP Management**

NetView for OS/390 V1R3 provides the operator with the ability to monitor and control the enterprise-wide multiprotocol network from a single console. This includes the ability to view and manage the protocol-based network topologies, network devices and the interrelationships between them.

- Graphical Network Management now includes IP agents available on Tivoli NetView for Sun Solaris, Tivoli NetView for Windows NT, HP OpenView for Sun Solaris and HP OpenView for HP-UX. The agents enable collection of IP topology and status discovered by the distributed SNMP-based network managers and forwarded to NetView for OS/390 on a TCP/IP session. This enables you to manage IP networks from one central location. There is also a TCP/IP connection between the agent on Tivoli NetView for AIX and NetView for OS/390, as well as an LU6.2 connection.

- For topology updates and status changes, NetView for OS/390 now has the ability to receive SNMP traps about IP resources and convert them to alerts and status updates.

- Conversion of SNA alerts into SNMP traps allows OS/390 captured alerts to be forwarded to distributed SNMP management applications.

- A sample IP Layer 3 discovery engine that runs natively on OS/390 minimizes the need to define resources to be managed.

- Topology correlation has been enhanced to generate enterprise-specific views more easily. Critical resources can now be automatically linked to a hierarchy of topology resources, such as "Room 12, Warehouse 2, Hong Kong, Manufacturing." If business views are not found, they will be created. Topology correlation is now easier to invoke, through integration with BuildViews and Visual BuildViews.

- Continuing to build on end-to-end network management, NetView for OS/390 provides the ability to launch a web interface for any vendor application from the NetView Management Console. Uses of this function include CiscoWorks Blue and IBM Nways Manager Element Manager. This allows operators to manage the enterprise from one control console and seamlessly work with other management tools without changing management consoles.

- From the NMC, you can retrieve inventory data for IBM and Cisco network interconnect devices from the Tivoli Inventory database. The Tivoli Inventory database is populated by Tivoli Manager for CiscoWorks 2000 and Tivoli Manager for IBM NWAYS.

- Your operators can now issue SNMP GET, GETNEXT, SET, and WALK commands from NetView/390 in
Tivoli NetView has predefined MIB group definitions to extend previous support for managing TN3270 and ATM Channel Port Adapters (CPAs). The MIB services provide a MIB compiler/loader function which allows NetView to support any vendor-specific MIB described using the standard ASN.1 format. SNMP services provide an SNMP stack facility. Full SNMP command support is provided from NMC command pull-downs.

The Tivoli Management Region (TMR) agent is enhanced to collect topology and monitors for critical Tivoli Management Agents (TMAs).

The ATM topology agent supports new alerts for status changes for devices such as Cisco routers and CiscoWorks Blue. You can define which MIB variables to check at specified intervals and take action if a threshold is exceeded. There are user exits for MIB polling and MIB thresholding to provide you with the capability to do more extensive analysis or automation.

Extending previous support for managing TN3270 and FTP sessions, any socket connection can now be monitored for availability. You can display session status for any socket connection, including TN3270 sockets, FTP, SMTP, telnet, and web browser. If the socket is down, automation can attempt to restart its associated application, job, or task.

When running OS/390 V2R6 or later, multiple TN3270 sessions are supported.

Sessions being displayed by IPSTAT can be filtered. For example, you can set your filters to see only TN3270 sessions from subnet 146.48.*.*. If you need to monitor sessions between the TN3270 servers, Servers supported include IBM’s 2210 and 2216 and Cisco’s Channel Interface Processors (CIP) and Channel Port Adapters (CPAs).

Tivoli NetView has predefined MIB group definitions to collect SNMP data that is most meaningful to the operators. Additionally, you may define your own groups to present MIB data best suited for your SNMP environment.

An enhanced panel interface for viewing and creating automation enhancements include additional function and usability in the automation table, timers, and TCP/IP. This includes:

- Support of greater-than and less-than in the automation table
- Triggers off information in multiple lines of MLWTOs in the automation table
- Ability to use PIPE EDIT functionality in automation table conditions and actions.
- A tool for managing multiple automation tables
- An enhanced panel interface for viewing and creating timer-driven commands
- Support allowing NetView operators to send emails directly from NetView via a panel interface using SMTP.
- Greatly enhanced timer support through a new CHRON command which provides capabilities such as:
  - Ability to define enterprise-unique dates of importance such as holidays, vacations, and payroll days using a customizable calendar that can be dynamically reloaded
  - Very flexible specification of dates and times for timer execution including days of the week or days of the month; for example, you can specify that a

**Graphical Console**

The NetView Management Console (NMC) now has equivalent functionality to NGMF, plus several additional customer-requested capabilities. In addition, there are enhancements that integrate the NMC and NetView 3270 Management Console (formerly known as the 3270 Java Client) into a single console. Enhancements include:

- View cycling
- Resource session data from session monitor (including configuration data)
- Launching web interface for vendor applications such as CiscoWorks Blue and IBM Nways Manager Element Manager
- Sending messages to a specific console or broadcast to all consoles
- View and resource security
- Non-SNA command line (now called Service Point Command Line)
- Visual NETCONV status (to more clearly see when NETCONV is down)
- Single sign on for NMC and 3270 Management Console
- Ability to create a note associated with a flag (user status)
- Operator ID and timestamp stored whenever a flag is changed
- Console log freeze and thaw to prevent scrolling while you are trying to read a message
- Additional hot key support such as ctrl-H for help, ctrl-L for locate resource, and ctrl-F for find
- New menu item to quickly suspend/unsuspend resources from aggregation
- Closing a view and all descendents
- Selection of multiple resources (including selecting objects in a specified region of the view)
- Customized dynamic views displayed on business tree
- Finding objects in a view
- Ability to write a client application to send a command to NetView and receive a correlated response back for subsequent processing
- Built-in Java runtime environment eliminating the need for a separate installation and configuration of the Java Development Kit

**Automation**

Automation enhancements include additional function and usability in the automation table, timers, and TCP/IP. This includes:

- Support of greater-than and less-than in the automation table
- Triggers off information in multiple lines of MLWTOs in the automation table
- Ability to use PIPE EDIT functionality in automation table conditions and actions.
- A tool for managing multiple automation tables
- An enhanced panel interface for viewing and creating timer-driven commands
- Support allowing NetView operators to send emails directly from NetView via a panel interface using SMTP.
- Greatly enhanced timer support through a new CHRON command which provides capabilities such as:
  - Ability to define enterprise-unique dates of importance such as holidays, vacations, and payroll days using a customizable calendar that can be dynamically reloaded
  - Very flexible specification of dates and times for timer execution including days of the week or days of the month; for example, you can specify that a
certain command is to be executed at 10:00 every Monday that is not a holiday

- Ability to specify repeated timers that automatically compensate for daylight savings time or other system time changes

Other Customer Satisfaction Enhancements

Customer satisfaction enhancements include:

- Dynamic timer adjustment to allow NetView to remain up and running through daylight savings time changes or other system time changes.
- The ability to dynamically define NetView commands, removing one of the final reasons to recycle NetView. This, therefore, provides 24x7 operation of NetView since planned outages are no longer required except for application of maintenance between releases.
- The use of system symbolics for all components of NetView allowing easier configuration of multiple instances of NetView throughout your enterprise and benefits from running and restarting in a OS/390 sysplex configuration.
- Visual BLDVIEWS support to provide an easy-to-use graphical interface to create views and modify resource information.
- A new NetView SOCKET command to facilitate communication with other TCP/IP applications and devices from automation procedures or the NetView command line.
- Ability for an operator to log on with an active autotask of the same name or take over a task logged on elsewhere. In addition, the RMTCMD command can take over tasks already logged on or make use of tasks being used for other purposes.
- Conversion of initial clist to use REXX and pipes.
- Support for personal operator data sets to allow for operator customizations, including the ability to save and restore personalized PF key settings.
- Ability to use up to eight characters for the command prefix used to issue NetView commands from an MVS™ console.
- Support for Tivoli Software Distribution file packs to distribute and install workstation components where Tivoli Software Distribution is deployed, making software install easier on distributed platforms and extends centralized management into multiple environments and run commands there remotely.
- The ability to view session monitor configuration data from the NMC or from a Web browser.
- Customizable Title Line on the Command Facility Screen.
- Many improvements to NetView Pipes
- Upgrading of MEMSTORE and IDLEOFF from samples to supported commands
- BROWSE NETLOG support for the HDRMTYPE field
- Enhanced ability to locate Network Node Servers in APPN® environments and run commands there remotely
- Security enhancements include
  - Enhanced security for DB2® access,
  - Disk read security for %INCLUDE members, and
  - Security for VTAM® commands prefixed with "MVS"
- Checking an operator’s READSEC or WRITESEC authorization before reading from or writing to a data set member when EXECIO is done in a NetView command list.
- More granularity in submitting jobs via NetView's SUBMIT command.
- Resource Monitor enhancements to help determine which task is queuing too many messages and to provide more flexibility in logging usage statistics in SMF
- Several customer-requested enhancements to the NetView 3270 Management Console (previously known as the 3270 Java client) such as remappable colors and keyboard, an editable session list, and an option to hide the PF keys palette.
- Access to NetView via a web browser includes these enhancements:
  - An operator who sends a LOGOFF command to NetView from a web browser can be prompted for their operator ID and password the next time they send a command to NetView from the browser. Previously, the operator had to close the browser.
  - Set an idle time limit for web-connected operator tasks after which the operator will be prompted again for an ID and password.
  - Ability to specify which operators are authorized to access NetView from a web browser.
  - Ability to differentiate commands entered from the web from commands entered from traditional NetView tasks.
  - Support for frames and support for JavaScript (.js) as a valid file type.

Year 2000

This product is Year 2000 ready. When used in accordance with its associated documentation, it is capable of correctly processing, providing, and/or receiving date data within and between the twentieth and twenty-first centuries, provided that all products (for example, hardware, software, and firmware) used with the product properly exchange accurate date data with it.

Euro Currency

This program is not impacted by euro currency.

Product Positioning

Tivoli NetView for OS/390 Version 1 Release 3 is an integral part of the Tivoli environment that provides a comprehensive set of tools for maintaining complex, multivendor, multiprotocol networks and systems from a single point of control.

With its open application programming interfaces (APIs), NetView for OS/390 can be an integration point for other S/390® vendors to the Tivoli distributed environment.

NetView for OS/390 is a program for managing networks and systems through graphical display and automation. It reduces manual resource definition and complex automation set-up through production-ready automation and extends centralized management into multiple non-SNA network environments. NetView for OS/390 can be used in an enterprise as a centralized manager, a mid-level manager, or a S/390 management endpoint.
Note: Tivoli NetView for OS/390 Version 1 Release 3 is the last release that will support the OS/2®-based NetView Graphical Monitor Facility (NGMF). Subsequent to Release 3, only the NetView Management Console (NMC) will be supported for graphical topology and status display.

This information is being provided for customer awareness and is based on IBM’s best technical judgement at this time. IBM makes no guarantees that this information will not change based on future business decisions.

Hardware and Software Support Services

SmoothStart™ /Installation Services

Tivoli Services (TS) provides fee-based Enterprise Management services to support Tivoli NetView for OS/390. These services focus on a rapid installation and introduction of Tivoli NetView for OS/390 Version 1 Release 3 into a customer’s information technology environment. Services are also available to help existing customers migrate to the new version of Tivoli NetView for OS/390 Version 1 Release 3. TS can provide services in the areas of planning, product migration, new installations, product customization as well as exploiting the latest technologies employed by Tivoli NetView for OS/390 Version 1 Release 3.

For current information on services available from Tivoli Services, contact 800-2Tivoli (284-8654). Outside the U.S., contact your local Tivoli sales office.

Reference Information

Refer to:

Software Announcement 297-083, dated March 25, 1997
Software Announcement 298-194, dated June 9, 1998

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Education Support

The appropriate curriculum will be updated, as necessary, to include the enhancements in this announcement.

Training is offered through Tivoli Systems and our authorized training partners.

For current information on Tivoli Systems education, call 800-2Tivoli (284-8654) (512-794-9070 for outside U.S.), send e-mail to training@tivoli.com, or visit:

http://www.training.ibm.com

on the internet and “choose a country” and search for “NetView®”.

Hardware Requirements

Tivoli NetView for OS/390® Version 1 Release 3
Tivoli NetView for OS/390 Version 1 Release 3 runs in a virtual storage environment on any IBM system configuration with sufficient storage that supports OS/390.

NetView Management Console

Topology Server

Any hardware that supports:
- AIX® 4.2 (5765-655) or higher, or
- Windows NT™ 4.0 with service pack 3 or higher
- Windows™ 2000
- OS/2® Warp 4 Service Pack 9 or higher
- 233 MHz CPU
- 128 MB of memory

Topology Console

Any hardware that runs:
- One of the following
  - AIX 4.2 (5765-655) or higher
  - OS/2 Warp 4.0 Service Pack 5 or higher
  - Windows NT 4.0 or higher
  - HP-UX 10.2 or higher
  - Sun Solaris 2.6 or higher
  - Windows 95 or 98
- 233 MHz CPU
- 128 MB of memory
- Color display (1024 x 768, 256 colors)
- Maximum color palette is 16-bit high color (32-bit True Color is not supported)

NetView Graphic Monitor Facility

The NetView Graphic Monitor Facility workstation code executes on any IBM Personal Computer with a 386 or higher processor or any IBM Industrial Computer that compatibly supports the IBM Operating System/2® Version 4 (WARP) defined in the Software Requirements section that follows. The Japanese translation feature requires a double-byte character set (DBCS)-capable terminal.

The following are the minimum requirements beyond those required for OS/2 and other concurrently running programs:
- Any hardware that runs the supported levels of IBM OS/2 Version 4 (WARP) or later
- 3.0 MB of additional memory (combined client/server, with a 200 resource network and one view active)
- 15 MB of additional fixed disk space
- Color display (SVGA, 1024 x 768, recommended)
- Mouse
- Communications Server Version 4 (5765-652) and Personal Communications for OS/2 Version 4 Release 1 (PCOMM; 39H3929) with PCOMM CSD2; or later

The selection of personal computer model size, DASD, and memory depends on performance factors.

NetView 3270 Management Console

OS/2, Windows 95, 98, Windows NT
- 166 MHz CPU
- 32 MB memory (64 MB recommended)
- 15 MB fixed disk space
- HPFS partition for long file names for OS/2
- Color display (1024 x 768, 256 colors)

AIX
- AIX 4.2 or higher
- IBM RS/6000® or PowerPC with 133 MHz CPU
- 64 MB memory (128 MB recommended)
- 15 MB fixed disk space
- Color display (1024 x 768, 256 colors)

Sun Solaris

Any Sparc workstation that runs:
- Sun Solaris 2.5.1 or higher
- 133 MHz CPU
- 128 MB memory
- 15 MB fixed disk space
- Color display (1024 x 768, 256 colors)

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.
HP-UX
- HP-UX 10.2 or higher
- 133 MHz CPU
- 128 MB memory
- 15 MB fixed disk space
- Color display (1024 x 768, 256 colors)

NetView for OS/390 MultiSystem Manager Component

MultiSystem Manager NetWare Support Requirements:
Any IBM Personal Computer or compatible computer as required for NetWare Server 3.12 or later will support the topology agent for NetWare. The topology agent for NetWare is shipped with NetView for OS/390 on the workstation CD-ROM.

MultiSystem Manager LAN Network Manager Support Requirements:
Any IBM Personal Computer or compatible computer as required for Operating System/2 and LAN Network Manager Version 2 will support the topology agent for LAN Network Manager. The topology agent for LAN Network Manager is part of the LAN Network Manager product.

MultiSystem Manager Internet Protocol Support Requirements:
The MultiSystem Manager for Internet Protocol agent for Tivoli NetView for OS/390 runs in many different environments. The hardware required is any hardware that supports one of the environments listed 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 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

NT
The MultiSystem Manager IP agent for Tivoli Netview for NT requires:
- Windows NT Version 4

SOLARIS
Tivoli NetView for NT Version 5 Release 1

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

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 higher

MultiSystem Manager NetFinity Support Requirements:
Any IBM Personal Computer or compatible computer as required for Netfinity Manager™ Version 5.0 will support the topology agent for NetFinity. The topology agent for NetFinity is part of the NetFinity product.

MultiSystem Manager Asynchronous Transfer Mode (ATM) Support Requirements:
Any RS/6000 POWERstation, POWERserver®, or compatible computer as required for AIX Version 4.1 or later, NetView for AIX Version 4, and Nways® Campus Manager ATM for AIX. The topology agent for ATM is shipped with NetView for OS/390 and runs as an application on NetView for AIX.

MultiSystem Manager Tivoli Management Region (TMR) Support Requirements:
One of the following:
- AIX 4.2 or 4.3 or higher
- Windows NT 4.0
- Sun Solaris 2.5.1 or higher
- HP-UX 10.2 or higher

NetView for OS/390 Automated Operations Network Component

Automated Operations Network Component Requirements:
- 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.

Automated Operations Network LAN Automation has these additional requirements:
Software Requirements

Tivoli NetView for OS/390 Version 1 Release 3

Required for All Packaging Options

This section defines the minimum programming requirements for Tivoli NetView for OS/390 Version 1 Release 3 and its operating environments. Specific functions of NetView for OS/390 may require additional products or higher levels of the products as noted below.

NetView for OS/390 is executed as an application on the OS/390 operating system, with VTAM®. NetView for OS/390 support is provided at the listed levels or subsequent levels that are upward-compatible, unless otherwise stated. Upward compatibility means that functions provided by the earlier releases are still supported.

Software Requirements

NetView for OS/390 is executed as a subsystem in the following S/390® environment:

- OS/390 Version 1 Release 3 (5645-001) or OS/390 Version 2 (5647-A01)
- All functions related to the ACF/NCP program require:
  - ACF/NCP Version 4 (5668-854) or later

NetView-to-NetView Communication

In a multiple-domain network or across multiple SNA networks, the NetView program can communicate with another NetView program, regardless of the operating system. Tivoli NetView for OS/390 Version 1 Release 3 can communicate with the following, at the listed system’s level of capabilities:

- NetView Version 2 Release 3 for VM/ESA®, and VSE/ESA®
- NetView Version 2 Release 4 for MVS/ESA™
- NetView Version 3 Release 1 for MVS/ESA
- TME 10™ NetView for OS/390 Version 1 Release 1
- TME 10 NetView for OS/390 Version 1 Release 2
- Tivoli NetView for OS/390 Version 1 Release 3

Function Compatibility

Except as noted, the functions of the following versions and releases are upwardly compatible with Tivoli NetView for OS/390 Version 1 Release 3:

- NetView Version 2 Release 3 for VM/ESA, and VSE/ESA
- NetView Version 2 Release 4 for MVS/ESA
- NetView Version 3 Release 1 for MVS/ESA
- TME 10 NetView for OS/390 Version 1 Release 1
- TME 10 NetView for OS/390 Version 1 Release 2

Note: Upward compatibility means that functions provided by the earlier releases are still supported.

The NetView Graphic Monitor Facility workstation code provided with NetView Version 2 is not upwardly compatible. Tivoli NetView for OS/390 workstation code must be used in conjunction with the Tivoli NetView for OS/390 host code.

A Tivoli NetView for OS/390 setting allows operators to use a NetView Version 3 Release 1 Graphic Data Server workstation to communicate with the Tivoli NetView for OS/390 programs during your migration to Tivoli NetView for OS/390.

Note: The NetView Installation and Administration Facility/2 (NIAF/2), The Automated Operations Network (AON) Reporting Facility, and the AON LAN RTAP functions have been dropped from Tivoli NetView for OS/390 Version 1 Release 3 and are no longer supported.

System Definition Compatibility

For equivalent, non-system dependent functions, Tivoli NetView for OS/390 Version 1 Release 3 will operate with the definition statements and the command lists of the following:

- NetView Version 2 Release 3 for VM/ESA, and VSE/ESA
- NetView Version 2 Release 4 for MVS/ESA
- NetView Version 3 Release 1 for MVS/ESA

For equivalent non-system dependent functions, NetView for OS/390 will operate with the REXX procedures of NetView Version 2, and Version 3.

The NetView constants module DSICTMOD should be updated and reassembled as part of the installation of NetView for OS/390.

User applications, written for these NetView releases in accordance with NetView customization publications and using NetView customization services, will be source compatible. A re-assembly or re-compile using NetView for OS/390 macro libraries is required.

If user customization code is being migrated from one operating system release to another, user code that contains system-dependent functions may not run and may require conversion.

Enhanced Function Support

The following NetView for OS/390 functions and features require the specified program levels or subsequent upward-compatible levels unless stated otherwise.

NetView Management Console

Topology Server

- AIX 4.2 (5765-655) or higher
- Windows 2000
- Windows NT 4.0 with service pack 3 or higher
• OS/2 Warp 4.0 with fixpack 9 or higher

**Topology Console**

• TCP/IP Communications
• One of the following
  - AIX 4.2 (5765-655) or higher
  - OS/2 Warp 4.0 with fixpack 5 or higher
  - Windows NT 4.0 or higher
  - Sun Solaris 2.6 or higher
  - HP-UX 10.2 or higher
  - Windows 95 or 98

**Server Communications with NetView for OS/390**

• For IP connections one of the following:
  - IBM TCP/IP Version 3 Release 2 for MVS/ESA (5655-HAL) or any functionally equivalent product
  - OS/390 Release 5 (5647-A01) IP Services or later

• For LU 6.2 connections one of the following:
  - AIX SNA Server 2.1 or higher, or
  - AIX SNA Communication Server 3.1.2 or higher
  - or Communications Server for AIX, Version 4 (5765-652)

**Windows NT**
- Communications Server for Windows NT 5.0

**OS/2**
- Communications Server for OS/2 Warp 4.0 with fix pack 4

**SNMP MIB Browser**

• Java™ for OS/390 at the Java Development Kit (JDK) 1.1.6 level
• IBM TCP/IP Version 3 Release 2 for MVS/ESA (5655-HAL) or OS/390 Version 2 Release 5 (5647-A01) IP Services

**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 5 (5647-A01) IP Services or later
• The Java-based Tivoli SNMP stack (JSNMP) supplied with Tivoli NetView for OS/390 which requires:
  - Java for OS/390 at the Java Development Kit (JDK) 1.1.6 level
  - IBM TCP/IP Version 3 Release 2 for MVS/ESA (5655-HAL) or OS/390 Version 2 Release 5 (5647-A01) IP Services or later

**NMC Retrieval of Tivoli Inventory Management Data**

To retrieve Tivoli Inventory Management data for network interconnect devices the following are required:

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

**Event/Automation Service to and from the Tivoli Enterprise Console**

• Tivoli Enterprise Console 3.6.1 (5697-EAS)
• IBM TCP/IP Version 3 Release 2 for MVS/ESA (5655-HAL) or OS/390 Version 2 Release 5 (5647-A01) IP Services or later
  Using secure framework communication also requires:
  • Tivoli Management Framework for OS/390 3.6.1 (5697-D10)

**Instrumentation Events to Tivoli Global Enterprise Manager**

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

**NetView Graphic Monitor Facility (NGMF)**

• OS/2 as applicable
  - OS/2 Warp 4.0
  - Communications Server Version 4 (5765-652) and Personal Communications AS/400® and 3270 Version 4 Release 1 for OS/2 (PCOMM; 39H3929) with PCOMM CSD2 or For Japanese version, Communications Manager/2 1.1 J, or later

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

• Transaction Control Protocol/Internet Protocol (TCP/IP) Version 2.0 for OS/2 (55G1220)

**NGMF Communications Manager Configuration Utility**

• NGMF requirements

**RODM Administration and NGMF Problem and Inventory Functions**

• NGMF requirements plus
  • NetView Bridge requirements (LE/370)

**SNA Topology Manager**

• Generalized Trace Facility

**SNA Topology Manager Resource Filtering**

• OS/390 Version 2 Release 5 (5647-A01) SNA Services

**Discovery of TCP/IP Resources from OS/390**

• Java for OS/390 at the Java Development Kit (JDK) 1.1.6 level
• IBM TCP/IP Version 3 Release 2 for MVS/ESA (5655-HAL) or OS/390 Version 2 Release 5 (5647-A01) IP Services

**APPN® Accounting Manager**

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

**NetView Graphic Monitor Facility Installation**

The applicable file transfer program for the communication subsystem

**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 (PCOMM; 39H3929) with PCOMM CSD2
NetView Bridge — Support for INFO Access

- Information/Management Version 6 Release 3 (5695-171) or later or Tivoli Service Desk for OS/390 (5648-142)

NetView 3270 Management Console

- IBM TCP/IP Version 3 Release 2 for MVS/ESA (5655-HAL) or OS/390 Version 2 Release 5 (5647-A01) IP Services

OS/2

- OS/2 Warp Version 4 or higher
- IBM TCP/IP Version 2 for OS/2 (with UN64092) or later

Windows 95, 98

Windows NT

- Windows NT 4.0

AIX

- AIX 4.2.0 or higher

Sun Solaris

- Sun Solaris 2.5.1 or higher

HP-UX

- HP-UX 10.2 or higher

Web Browser Access to Tivoli NetView for OS/390

- IBM TCP/IP Version 3 Release 2 for MVS/ESA (5655-HAL) or OS/390 V2 R5 IP Services or any functionally equivalent product
- Any browser that supports HTTP 1.0

NetView SOCKET Command

- IBM TCP/IP Version 3 Release 2 for MVS/ESA (5655-HAL) or OS/390 V2 R5 IP Services or later

Beeper/Pager Support

- IBM NetFinity for OS/2 V5.0 or later (if using the IBM supplied sample for beeper/pager requests)

Issuing OS/390 UNIX® Services Commands from Tivoli NetView for OS/390

- REXX alternate run-time (same as for MSM Component)

Support for IBM LAN Network Manager Enhanced Command Interface

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

Session Monitor Support of APPN Display and Problem Determination

- ACF/NCP Version 6 Release 2 (5688-231)

Session Monitor Support of DLUR/DLUS

- Communications Manager/2 1.11 or higher for local support
- Communications Manager/2 1.2 or higher for cross network support

Management of Frame Relay (DTE) and Ethernet

- ACF/NCP Version 6 (5688-231)

NetView Parallel Transmission Group Support

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

NetView Network Asset Management

This 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 MVS (5668-738) or later for the 3720 or 3745

NetView Performance Monitor (NPM) Alerts

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

SAF Security Checking

OS/390 Version 1 Release 3 (5645-001) 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

MultiSystem Manager Component

Topology Feature for Tivoli Management Region (TMR) Requirements:

- Tivoli Enterprise Console 3.1 (5697-EAS)
- IBM TCP/IP Version 3 Release 2 for MVS/ESA (5655-HAL) or OS/390 V2R5 IP Services or later
- Tivoli Management Framework 3.2 or later (5697-FRA)
- Tivoli Distributed Monitoring 3.5 or later (5697-EMN)

Commands from Tivoli NetView for OS/390 to TEC Requirements:

- MSM Topology feature for Tivoli Management Region

Topology Feature for NetWare Requirements:

- Netware Server 3.12 or later (Netware Server 3.12 also requires NetWare IP V1.1)
- IBM TCP/IP Version 3 Release 2 for MVS/ESA (5655-HAL) or later
- DOS 5.0 or later — for installation facility

The Topology Feature for LAN Network Manager Requirements:

- IBM LAN Network Manager 2.0 (03H3519, 03H3523, or 03H3527) with NetView connectivity
- Communications Manager/2 Version 1 Release 1 (79G025B or 79G0257) or higher configured with:
  - Service Point Application Router (SPAR)
The Topology IP Network Feature

The MultiSystem Manager for Internet Protocol agent for Tivoli NetView for OS/390 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 with the IP agent and Tivoli NetView for OS/390, the MultiSystem Manager IP agent for Tivoli NetView for AIX requires:
  - 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

- **NT**

  The MultiSystem Manager IP network feature for Windows 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 Windows NT requires:
  - Windows NT Version 4
  - Tivoli NetView for Windows NT Version 5 Release 1

- **Solaris**

  The MultiSystem Manager IP network feature 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
  - 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 higher

The Topology Feature for NetFinity Requirements:

- NetFinity Manager Version 5.0 running on OS/2 or Windows NT. The topology agent for NetFinity is part of the NetFinity product.

- Windows NT:
  - IBM TCP/IP Version 3 Release 2 for MVS/ESA (5655-HAL) or OS/390 Version 2 Release 5 IP Services or later

- 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

The Topology Feature for ATM Requirements:

- AIX Version 4 Release 1.4 (5765-393) or later

- AIX NetView Service Point Version 1 Release 2.2 (5621-107) and SNA Server/6000 Version 3 Release 1.0.1 (5765-582) or later

- Nways Campus Manager ATM for AIX Version 1.13 (31H7063 or 31H7064) or later

- NetView for AIX Version 4 (5765-527 feature number 5608) or later

Automated Operations Network Component

SNA Automation Requirements:

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

LAN Automation Requirements:

- IBM LAN Network Manager Version 2.0
- Operating System/2 (OS/2), as required by LAN Manager

TCP/IP for AIX Automation Requirements:

TCP/IP for AIX Automation uses SNA communication 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
- Communication Server for AIX Version 4 (5765-652)

TCP/IP for OS/390 Automation Requirements:

TCP/IP for OS/390 Automation provides you with proactive monitoring of IP resources, management functions for socket connections, and the ability to issue any IP command from NetView. To use those functions you need:
Compatibility

User Group Requirements: This announcement satisfies or partially satisfies 42 requirements from users, or one or more of the worldwide user-group communities, which include Australasian SHARE/GUIDE (ASG), COMMON, COMMON Europe, GUIDE International, G.U.I.D.E. Europe, Japan GUIDE/SHARE (JGS), Guide Latin American (LAG), SHARE EUROPE, and SHARE Incorporated. Requirements satisfied include:

- REQ00035398 Allow More Comparisons In Message Table Logic
- REQ00049726 PASS VARIABLES TO AUTOMATION TABLE FUNCTIONS (ATF)
- REQ00056384 Add option to run missed AFTER timers anyway
- REQ00059954 NetView Span Security checking also work for MVS cmds.
- REQ00060822 DOM MACRO of MVS/ESA
- REQ00060878 Document non-operator commands in Online Help
- REQ00061729 NGMF auto-logon operators needs enhancements
- REQ00063427 Automation table length specification
- REQ00064284 Day Light Saving Standard Time Sysplex Automation
- REQ00064357 DSICMD REFRESH new entry
- REQ0006473 DISPLAY TOPO using NetView REXX CLIST
- REQ00066553 TME-10 NetView for OS/390 AON DDF to support &doamin
- REQ00067359 STATMON and the REMOTE NCP
- REQ00069013 Provide TCP/IP commands as line commands as well
- REQ00069056 Provide TCP/IP port information in displays
- REQ00069059 Dynamic definition of commands.
- REQ00069067 Create the link between objects created by BLDVIEWS
- REQ00069072 TME10 Timer usability
- REQ00069457 CNMPP (STATMON) does not support system symbolic
- REQ00069670 Netview — Modification of Messages Text from Auto Tale
- REQ00069731 Support of MVS symbols
- REQ00070053 Handle ‘unhandled’ messages in the automation table
- REQ00070267 NMC HOT KEYS Required to use the product
- REQ00070458 NMC — Aggregate Object Color
- REQ00070456 NMC — Console Log Window Font size
- REQ00070471 RMTCMD should re-use an autotask that is logged
- REQ00070479 Set Length of truncated labels
- REQ00070480 NMC — flyover box color
- REQ00070482 NMC — Auto Rearrange of Views
- REQ00070483 NMC — Find Command
- REQ00070947 NMC — Cycle Option
- REQ00071669 TSOSERV function NetView to TSO needs to run as tasks
- REQ00071816 NETVIEW DOES NOT REGISTER WITH MVS’S CPF
- REQ00072981 Beep from Rexx or View Panel
- REQ00073001 Catch up timers
- REQ00073280 CNMETSQ Batch TSO Timeout DSIPHONE PPI Receiver

Planning Information

Customer Responsibilities: To learn about NetView for OS/390 new functions, tools, samples, demos, and other product information online using the Internet World Wide Web, see the NetView for OS/390 homepage at:

http://www.tivoli.com/nv390

Packaging: Packaging for Tivoli NetView for OS/390 Version 1 Release 3 remains unaffected by this announcement.

Security, Auditability, and Control

The security, auditability, and control features remain unaffected by this announcement. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Ordering Information

Current Licensees

Current licensees of Tivoli NetView for OS/390 will be sent a program reorder form that can be returned directly to IBM Software Delivery and Fulfillment. Reorder forms are scheduled to be mailed by December 3, 1999. Reorder forms returned to IBM Software Delivery and Fulfillment will be processed within 10 workdays of receipt. When release 3 is available, release 2 will no longer be available.

New Licensees

Orders for new licenses can be placed now. Shipment will begin on the planned availability date.

New users of Tivoli NetView for OS/390 Version 1 Release 3 should specify:

<table>
<thead>
<tr>
<th>Type</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>5697</td>
<td>B82</td>
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</tbody>
</table>

For ordering information on the base program, Tivoli NetView for OS/390, refer to:

- Software Announcement 297-083, dated March 25, 1997
- Software Announcement 298-194, dated June 9, 1998
- Software Announcement 299-052, dated February 22, 1999 (PSLC Level D/E/F/ Price Introduction)
**Software Announcement 998-294**, dated September 29, 1998 (OTC/GOTC Withdrawal)

Software Announcement 299-269, dated September 20, 1999 (Growth Opportunity License Charge for S/390 Software)

**Basic License**

**Basic Machine Readable Material**

**Withdrawal from Marketing:** Effective immediately, the following basic machine-readable material are withdrawn from marketing.

<table>
<thead>
<tr>
<th>Description</th>
<th>Environment</th>
<th>Feature Number</th>
<th>Distribution Medium</th>
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</thead>
<tbody>
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<td>5801</td>
<td>9/6250 magnetic tape</td>
</tr>
<tr>
<td>Procedural Option for LE/370</td>
<td>U.S. English</td>
<td>5802</td>
<td>3480 tape cartridge</td>
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<tr>
<td>Unattended Option for LE/370</td>
<td>U.S. English</td>
<td>5500</td>
<td>4-mm magnetic tape</td>
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<tr>
<td>Graphical Enterprise Option</td>
<td>U.S. English</td>
<td>5803</td>
<td>9/6250 magnetic tape</td>
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<td>Procedural Option for C/370™</td>
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<td>9/6250 magnetic tape</td>
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<td>3480 tape cartridge</td>
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<td>Japanese</td>
<td>5085</td>
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<td>5093</td>
<td>3480 tape cartridge</td>
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</table>

*Unlicensed Documentation:* A Memo to Users (GI10-4806), a program directory (GI10-4801), in English or a program directory in Japanese (GI10-48) and a CD-ROM containing all Tivoli NetVi/390 Version 1 Release 3 publications are supplied automatically with the basic machine-readable material. Additionally, one hardcopy of each of the following unlicensed publications is also supplied automatically with the basic machine-readable material.

**Titles of Publications That Ship Automatically**

<table>
<thead>
<tr>
<th>Planning and General Information</th>
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<tr>
<td>Tivoli NetView for OS/390</td>
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<td>Version 1 Release 3:</td>
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<tr>
<td>Planning Guide</td>
<td>GC31-8226</td>
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<tr>
<td>Licensed Program Specifications (LPS)</td>
<td></td>
</tr>
<tr>
<td>Tutorial</td>
<td>SK2T-6097</td>
</tr>
</tbody>
</table>

**Installation and Administration**

| Tivoli NetView for OS/390                 |               |
| Version 1 Release 3:                      |               |
| Installation and Administration Guide     | SC31-8236     |
| Administration Reference                  | SC31-8222     |
| Security Reference                        | SC31-8806     |
| APPN Topology and                        | SC31-8224     |
| Accounting Agent Guide                    |               |

**End-Use**

| Tivoli NetView for OS/390 Version 1 Release 3: |               |
| User’s Guide                                 | GC31-8241     |
| MultiSystem Manager                         | GC31-8607     |
| User’s Guide ¹                             | GC31-8865     |
| NetView Management Console                  |               |
| NGMF User’s Guide ¹                         | GC31-8234     |

¹ Shipped with the Enterprise Option only.

**Programming**

| Tivoli NetView for OS/390 Version 1 Release 3: |               |
| Application Programmer’s Guide              | SC31-8223     |
| Automation Guide                            | SC31-8225     |
| Automation Operations Network               | GC31-8861     |
| User’s Guide ²                              |               |
| Automation Operations Network               | SC31-8862     |
| Customization Guide                         | SC31-8228     |
| Customization: Using Assembler              | SC31-8229     |
| Customization: Using PL/I and C             | SC31-8230     |
| Customization: Using REXX and the NetView Command List Language | SC31-8231 |
| Customization: Using Pipes                  | SC31-8248     |

² Shipped with the Enterprise Option and the Procedural Option.

**Diagnosis and Tuning**

| Tivoli NetView for OS/390 Version 1 Release 3: |               |
| Messages and Codes                           | SC31-8237     |
| Tuning Guide                                 | SC31-8240     |
Additional copies of unlicensed publications will be available for a fee after availability. These copies can be ordered from your IBM representative, by direct order or via the Publication Notification System (PNS) Web site at:


All of the above unlicensed publications can be ordered using the bill of forms number indicated below.

### Displayable Softcopy Publications

Tivoli NetView for OS/390 Version 1 Release 3 manuals are offered in displayable softcopy form. All manuals are included. The files are shipped on CD-ROM.

The first copy of the following softcopy material is available at no charge to licensees of basic material and supplied automatically with the basic machine-readable material.

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