Abstract

NetView for OS/390 is a key component of Tivoli's network and systems management solutions. Using NetView for OS/390, you can centrally, easily, and reliably manage your systems and networks that are in complex, distributed environments on multiple platforms. Release 4 provides significant enhancements with new technologies, expanded end-user support, and enriched functionality.

Specified Operating Environment

Tivoli NetView for OS/390 Release 4 runs in a virtual storage environment on any IBM system configuration with sufficient storage that supports OS/390 or z/OS.

NetView Management Console, NetView 3270 Management Console

Topology Server
• Any hardware that supports one of the following operating systems:
  – AIX 4.2.1 (5765-655)
  – Windows NT 4.0
  – Windows 2000
  – OS/2 WARP 4.0
  – OS/2 WARP Server for e-business
  – Processor: minimum 350 MHz
  – Memory: minimum 128 MB, 256 MB recommended

Topology Console
• Any hardware that supports one of the following operating systems:
  – AIX 4.3.3.10 (5765-C34) or later with TCP/IP installed.
  – OS/2 WARP 4.0
  – Windows NT 4.0
  – HP-UX 11 or later with TCP/IP installed
  – Solaris 2.8 or later with TCP/IP installed.
  – Windows 95 or 98 or 2000
• Processor: minimum 350 MHz
• Memory: 256 MB
• Color display (1024 x 768, 256 colors)
• Maximum color palette is 16-bit high color; 256-color palette recommended (32-bit true color is not supported)

NetView for OS/390 Multisystem Manager Component

Multisystem Manager Netware Support

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

Any IBM Personal Computer, or compatible computer, as required for Operating System/2(R) 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 TCP/IP Protocol Support

The MultiSystem Manager TCP/IP 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. The topology agent for TCP/IP is shipped with NetView for OS/390 on the workstation CD-ROM.
**AIX:** When the MultiSystem Manager TCP/IP agent is installed on Tivoli NetView for AIX, the agent can communicate with Tivoli NetView for OS/390 via SNA or TCP/IP. If you are using TCP/IP to communicate between the agent and Tivoli NetView for OS/390, hardware that supports the following is required:

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

If you are using SNA to communicate between the MultiSystem Manager TCP/IP agent and Tivoli NetView for OS/390, hardware that supports the following is 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)
- IBM Communication Server for AIX Version 4 (5765-652)

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

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

**Windows NT:** The MultiSystem Manager TCP/IP network feature for Windows NT uses TCP/IP to communicate between the MultiSystem Manager TCP/IP agent and Tivoli NetView for OS/390. The MultiSystem Manager TCP/IP agent for Tivoli NetView for NT requires hardware that supports the following:

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

**SOLARIS:** The agent can be installed on Tivoli NetView for Solaris or Hewlett Packard Network Node Manager. The MultiSystem Manager TCP/IP network feature for Solaris uses TCP/IP to communicate between the MultiSystem Manager TCP/IP agent and Tivoli NetView for OS/390.

- The MultiSystem Manager TCP/IP feature for Tivoli NetView for Solaris requires hardware that supports the following:
  - Solaris Version 2 Release 5 or Version 2 Release 6
  - Tivoli NetView for Solaris Version 5 Release 1 or later

- The MultiSystem Manager TCP/IP agent for OpenView for Solaris requires hardware that supports the following:
  - Solaris Version 2 Release 5 or Version 2 Release 6
  - Hewlett Packard Network Node Manager (HP OpenView) Version 5 Release 1 or later

**Multisystem Manager Netfinity Support**

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**

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 on the workstation CD-ROM and runs as an application on NetView for AIX.

**Multisystem Manager Tivoli Management Region (TMR) Support**

The topology agent for TMR is shipped with NetView for OS/390 on the workstation CD-ROM. Any hardware that supports one of the following is required:

- AIX 4.2 or 4.3 or later
- Windows NT 4.0
- Solaris 2.5.1 or later
- HP-UX 10.2 or later

NetView for OS/390 Automated Operations Network Component

- Dynamic Display Facility (DDF) requires either a 3x79 terminal with extended attribute support 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 (SNBU) 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:
  - Any IBM Personal Computer, or compatible computer, as required for Operating System/2(R) and LAN Network Manager Version 2.
  - 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 uses SNA communication between Tivoli NetView for AIX and Tivoli NetView for OS/390, and requires hardware that supports:
  - 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)

- IBM Communication Server for AIX Version 4 (5765-652)

Software Requirements

Required For All Packaging Options:

This section defines the minimum programming requirements for Tivoli NetView for OS/390 Release 4 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 or z/OS operating system. 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.

Programming Requirements

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

- OS/390 Version 2 Release 8 (5647-A01), or later, or z/OS (5694-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 Release 4 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 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
- Tivoli NetView for OS/390 Version 1 Release 4
Function Compatibility

Except as noted, the functions of the following versions and releases are upwardly compatible with Tivoli NetView for OS/390 Release 4:

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

Withdrawn Functions

The following functions were withdrawn beginning with Tivoli NetView for OS/390 Version 1 Release 3, and are no longer supported:

- NetView Installation and Administration Facility/2 (NIAF/2)
- Automated Operations Network (AON) Reporting Facility
- Automated Operations Network (AON) LAN RTAP

The following functions are withdrawn beginning with Tivoli NetView for OS/390 Version 1 Release 4, and are no longer supported:

- NetView Graphic Monitor Facility (NGMF)
- MultiSystem Manager LAN Management Utilities (LMU) agent

Notice Of Planned Withdrawal

Tivoli NetView for OS/390 Version 1 Release 4 is the last release that will support the following functions. These functions will continue to be available and supported on other platforms where they are currently available.

- OS/2
  - NetView Management Console (NMC) server and console
  - NetView 3270 Management Console (NMC3270)
  - Event/Automation Service (E/AS)
  - Visual BLDVIEWS (VBV)
  - APPN Topology and Accounting Agent (APPNTAA)
- Windows 95
  - NMC console
  - NMC3270
  - E/AS
- Windows 98
  - NMC console
  - NMC3270
  - E/AS
- MultiSystem Manager ATM Support
- MultiSystem Manager LAN Network Manager support
- MultiSystem Manager NetWare support
- Automated Operations Network LAN Automation
- NetView Management Console Command Profile Editor GUI (the NMC CPE Batch Utility will remain)
- APPN Accounting Manager

System Definition Compatibility

For equivalent, non-system dependent functions, Tivoli NetView for OS/390 Release 4 will operate with most definition statements and command lists of the following:


- NetView Version 2 Release 3 for VM/ESA, and VSE/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 DS ICTMOD 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 reassembly or recompile 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, NetView 3270 Management Console**

- **Topology Server**
  - One of the following:
    - AIX 4.2.1 (5765-655), or later with PTF IX68451, or later
      Additional prerequisites to run on AIX:
      - C Set++ for AIX Applications x1C.rte 3.6.6.0, or later
      - IBM class libraries ibmcxx.ioc.rte 3.6.6.0, or later and ibmcxx.rte 3.6.6.0, or later
      - Information Presentation Facility ipfx.rte 2.2.0.0, or later
    - Windows 2000
    - Windows NT 4.0 with Service Pack 5, or later
    - OS/2 WARP 4.0 with Fixpack 12, or later
      Additional prerequisites to run on OS/2 WARP 4:
      - TCP/IP 4.0 with at least MPTS fix WR08423, or later level of TCP/IP
    - OS/2 WARP Server for e-business
  
- **Topology Console**
  - TCP/IP Communications
    - OS/2
      - TCP/IP 4.3
      - For other platforms, TCP/IP that comes with the operating system is sufficient.
    - One of the following:
      - AIX 4.3.3.10 (5765-C34), or later with TCP/IP installed
  
The following PTFs are required: U470006, U470966, U471143, U470973, U470980, and U471092. In addition, AIX Developer Kit, Java2 Technology Edition, Version 1.3.0 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, U471838.

- OS/2 WARP 4.0 with Fixpack 12, or later, and with TCP/IP 4.3 installed.

- Windows NT 4.0 with Service Pack 5, or later

- Solaris 2.8, or later with TCP/IP installed. Patch 108940-05, or later is also required.

- HP-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
  and the following dependencies of PHKL_18543:
  - PHCO_22453
  - PHCO_21187
  - PHKL_20016
  - PHKL_22432
  - PHKL_22440
  - PHKL_22589
  and the following dependencies of PHSS_22320:
  - PHNE_22086
  - PHSS_20863
  - PHSS_21959
Because NMC Topology Console uses Java, these patches are needed to support Java's Runtime Environment. This list is current at the time of announcement. Check the following HP web site for the latest list:


- Windows 95, or 98, or 2000
- Server Communications with NetView for OS/390
  - For TCP/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, one of the following:
    - AIX
      - AIX SNA Server 2.1, or later, or
      - AIX SNA Communication Server 3.1.2, or later, or
      - 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

SNMP MIB Browser, Real-Time Poller/Grapher
- Java for OS/390 at the Java Development Kit (JDK) 1.3 level
- OS/390 Version 2 Release 8 (5647-A01) TCP/IP Services, or later, or z/OS (5694-A01) TCP/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 8 (5647-A01) TCP/IP Services, or later, or z/OS (5694-A01) TCP/IP Services
- The Java-based Tivoli SNMP stack (JSNMP) supplied with Tivoli NetView for OS/390 which requires:
  - Java for OS/390 at the JDK 1.3 level
  - OS/390 Version 2 Release 8 (5647-A01) IP Services, or later, or z/OS (5694-A01) IP Services

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, or later (5697-FRA, 5698-FRA)
- Tivoli Inventory Management 3.6.1, or later (5697-INV, 5698-INV)
- Tivoli Manager for Network Hardware (5697-NHW, 5698-NHW)

Event/Automation Service to and from the Tivoli Enterprise Console
- Tivoli Enterprise Console 3.6.1 (5697-EAS, 5698-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, 5698-FRA)

Instrumentation Events to Tivoli Global Enterprise Manager
- Tivoli Global Enterprise Manager 2.1, or later

Commands from TEC to S/390 Environment
- NetView Management Console Topology Server or Tivoli Management Framework for OS/390 3.6.1 (5697-D10, 5698-FRA)

ASCII Console Support In GMFHS
ASCII Console Support in Graphic Monitor Facility Host Subsystem requires
- TCP/IP Version 2.0 for OS/2 (65G1220)

SNA Topology Manager
- Generalized Trace Facility
- SNA Topology Manager Resource Filtering
- OS/390 Version 2 Release 8 (5647-A01) SNA Services, or later, or z/OS (5694-A01) SNA Services

- SNA Topology Manager Support for VTAM CMIP Agent Enhancements:
  - OS/390 Version 2 Release 10 (5647-A01) Communications Server, or later, or z/OS
- 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

- OS/390 TCP/IP Stack Management and Telnet 3270 Management
  - Optional: In order to be able to dynamically add to the set of resources monitored and displayed at NMC, DB2 for OS/390 Version 5 Release 1 (5655-DB2), or later, is required.

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

- 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 (PCCOMM; 39H3929) with PCCOMM CSD2

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

- NetView Resource Manager
  - Optional (if TCP/IP is used for communication between NetViews): OS/390 Version 2 Release 8 (5647-A01) IP Services, or later, or z/OS (5694-A01) IP Services

- Web Browser Access to Tivoli NetView for OS/390
  - 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

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

- 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 Outboard APPN Route Support
  - OS/390 Version 2 Release 10 (5647-A01) SNA Services or z/OS (5694-A01)

- 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 2 Release 8 (5647-A01) Security Server, or later, or z/OS (5694-A01) Security Server, 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

Multisystem Manager Component

System Considerations for using the REXX Alternate Library: Before using the REXX Alternate Library with NetView for OS/390 R4, you must first apply the following PTF’s.
- UN78518
- UN78525
- UN84251
- UN86020
- UN88434
- UN90776
- UN93567
- UN93568
- UN96368
- UQ02796
- UQ04867
- UQ06343
- UQ06344
- UQ06830
- UQ10660
- UQ12616
- UQ17096
- UQ18015

Topology Feature for Tivoli Management Region (TMR):
- Tivoli Enterprise Console 3.6.2 (5697-EAS, 5698-EAS)
- 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, or later (5697-FRA, 5698-FRA)
- Tivoli Distributed Monitoring 3.6.2, or later (5697-EMN, 5698-EMN)

Commands from Tivoli NetView for OS/390 to TEC:
- MSM Topology feature for Tivoli Management Region

Topology Feature for NetWare:
- Netware Server 3.12, or later (NetWare Server 3.12 also requires NetWare TCP/IP V1.1)
- OS/390 Version 2 Release 8 (5647-A01) IP Services, or later, or z/OS (5694-A01) IP Services
- DOS 5.0, or later - for installation facility

Topology Feature for LAN Network Manager:
- IBM LAN Network Manager 2.0 (03H3519, 03H3523, or 03H3527) with NetView connectivity
- Communications Manager/2 Version 1 Release 1 (79G0258 or 79G0257), or later configured with:
  – Service Point Application Router (SPAR)

Topology TCP/IP Network Feature: The Multisystem Manager TCP/IP 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 TCP/IP agent is installed on Tivoli NetView for AIX, the agent can communicate with Tivoli NetView for OS/390 via SNA or TCP/IP. If you are using TCP/IP to communicate between the agent and Tivoli NetView for OS/390, the following are required:
If you are using SNA to communicate between the Multisystem Manager TCP/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 TCP/IP network feature for HP-UX uses TCP/IP to communicate between the Multisystem Manager TCP/IP agent and Tivoli NetView for OS/390. The Multisystem Manager TCP/IP agent for HP OpenView running on HP-UX requires:

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

**Windows NT**

The Multisystem Manager TCP/IP network feature for Windows NT uses TCP/IP to communicate between the Multisystem Manager TCP/IP agent and Tivoli NetView for OS/390. The Multisystem Manager TCP/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 TCP/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 TCP/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 TCP/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

**Topology Feature for Netfinity**

- 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:
  - OS/390 Version 2 Release 8 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

**Topology Feature for ATM**

- 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**

- To use the SNBU automation
  - 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:
- IBM LAN Network Manager Version 2.0 with CSD UR44997 or later
- Operating System/2 (R) (OS/2), as required by LAN Manager
- Communications Server Version 4 (5765-652) or later
- 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:  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
- IBM Communication Server for AIX Version 4 (5765-652)

TCP/IP for OS/390 Automation:  TCP/IP for OS/390 Automation provides you with proactive monitoring of TCP/IP resources, management functions for socket connections, and the ability to issue any TCP/IP command from NetView. To use those functions you need:
- OS/390 Version 2 Release 8 IP Services, or later, to support SNMP and TCP/IP functions through the UNIX System Services interface

Compatibility

Tivoli NetView for OS/390 Release 4 provides National Language Support (NLS). Menus and messages for the NetView and Multisystem Manager components are translated into Japanese. The AON component's 3270 screens are not enabled. The AON English component runs with all NLS components in NetView for OS/390.

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- Workstation Feature: Two months apply to the first order of a workstation feature.

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- Yes

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