

PRIMERGY ServerView Suite

ServerView Integration 2.0 in Tivoli NetView

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1 Preface

Strategies to implement centralized server administration are becoming more and more important due to the increasingly crucial role played by networks based on independent servers in information technology today.

This manual describes the functions and procedures for using the ServerView Integration in IBM Tivoli NetView. This Installation of the ServerView Integration for NetView enables the system management functions of IBM Tivoli NetView to be used with PRIMERGY ServerView. Using ServerView Integration for NetView, Fujitsu Siemens PRIMERGY servers can be managed across a multi-platform network. The ServerView Integration in NetView V2.0 supports Fujitsu Siemens ServerView MIBs up to V3.65.00.

1.1 Summary of Contents

This manual describes the installation and operation of the ServerView Integration in IBM Tivoli NetView.

This manual is part of the PRIMERGY ServerView Suite documentation and is organized in the following chapters:

- Chapter 2 contains a general description of the “ServerView Integration in NetView” product.
- Chapter 3 describes the installation of the integration package under Windows 2000, Windows 2003 and Windows XP.
- Chapter 4 introduces the components integrated in NetView.
- Chapter 5 explains the configuration and operation of the ServerView Integration.
- Chapter 6 provides a brief overview of the ServerView application.

1.2 Background Information

ServerView runs on heterogeneous networks using the network management protocol SNMP (Simple Network Management Protocol) and can be easily linked with other management systems (e.g. HP OpenView NNM, IBM Tivoli NetView, Microsoft SMS, Novell ManageWise) via standardized interfaces. ServerView enables a trouble-free integration of Fujitsu Siemens PRIMERGY servers in enterprise-wide network management systems such as Tivoli.

ServerView monitors important server components such as hard drives, fans and power supplies. If the values specified for these parameters are exceeded or an error occurs, appropriate messages are issued, and corrective measures are initiated if required.

All Fujitsu Siemens PRIMERGY servers on a network can be monitored from any standard PC running Windows 2000, Windows 2003 or Windows XP using the server management software ServerView.

Server management offers operators of large networks decisive advantages:

- Increased productivity due to more reliable servers
- Reduced costs due to automatic monitoring of the data processing infrastructure
- Flexible system expansion, since ServerView can be easily adapted to changing conditions
- Shorter downtimes due to simplified error analysis
- Shorter response times when errors occur
- Lower total operating costs (total cost of ownership) due to efficient utilization of network components and their resources
- Ease of use through software ergonomics: clear presentation of data, intelligent user interfaces and a help system for user support

1.3 Target Groups

This manual is intended for system administrators who use the ServerView Integration in NetView to manage Fujitsu Siemens Entry servers.

It is therefore assumed that you already have some experience in the following areas:

- operation and administration of Tivoli NetView,
- operation and administration of ServerView, e.g., the interpretation of ServerView SNMP traps.

1.4 Related Publications

This manual contains details that complement the information provided in the IBM Tivoli NetView User Guides. Consequently, in order to use the “ServerView Integration in NetView” effectively, you will need to be familiar with IBM Tivoli NetView.

A basic requirement is also the ServerView documentation that consists of the following components:

- The user guide, which describes the basic method of operation of ServerView
- The Installation Guide, which describes the installation of ServerView (Windows- and Web-based) and the Alarm Service on the Management Server, and the installation of the ServerView agents on the managed servers.
- The online help system, which offers detailed explanations of the individual menus and commands
- The online trap and threshold description

You will also find additional useful information on the subject of server administration:

- in the ServerView information files, especially the Readme file, which contains the latest information that could not be included in the manual. The ServerView information files can be called from the ServerView program group by clicking on the corresponding entry.
- in the operating system documentation
- in the technical manual for the system boards
- in the description “BIOS setup”

Further Information

For further information see

<http://www.fsc-pc.de>

1.5 Changes From the Previous Version

This edition is valid for ServerView Integration 2.0 in Tivoli NetView V1.7 and replaces the following online manual: “ServerView Integration in NetView Version 1.3”, edition February 2002.

The documentation has been revised to reflect the current status of the software in both technical and language terms. New screen copies for installation and deinstallation have been incorporated and described. Additions have been made to the table of ServerView traps integrated in NetView. Chapters 5 and 6 have been revised.

1.6 Notational Conventions

The following notational conventions are used in this manual:





 Warning	This symbol points out hazards that can lead to personal injury, loss of data or damage to equipment
	This symbol highlights important information and tips.
	This symbol indicates a step that you must perform in order to continue the procedure.
<i>italics</i>	Commands, menu items, button names, options, variables, file names and path names are printed in <i>italics</i> .
fixed font	System outputs are indicated using a fixed font.
semi-bold fixed font	Commands to be entered via the keyboard are indicated using a semi-bold fixed font.
Key symbols	Keys are presented according to their representation on the keyboard. If uppercase letters are to be entered explicitly, the Shift key is shown, e.g. [SHIFT] - [A] for A.

Table 1: Notational conventions

If two keys need to be pressed at the same time, then this is shown by placing a hyphen between the two key symbols.

References to other text locations or sections in this manual are shown with the corresponding chapter or section title and the page on which the chapter or section begins.

 Please note that the screenshots shown in this manual depend, among other things, on the system being used and could, in a few cases, be slightly different from what appears on your screen.

You may also note some system-dependent differences in the menu items available on PRIMERGY systems.

2 Introduction

ServerView is a software package that monitors all important server functions such as the hard disk, fans, power supply and temperature and reports the measured values on a central monitoring console.

You can run ServerView Integration in NetView on Windows 2000, Windows 2003 and Windows XP. ServerView Integration lets you use the functionality of ServerView and IBM Tivoli NetView at a central administration system.

2.1 Overview

The Fujitsu Siemens PRIMERGY servers are shown in the map of NetView. Following installation of ServerView Integration in NetView you can administer the PRIMERGY servers from the central management console:

- They appear as graphic symbols on the NetView map.
- Incoming traps are displayed in the Event Browser.
- Automatic reactions to traps can be configured and triggered.
- Values of MIB variables can be queried, saved, and analyzed periodically.

The integration of ServerView Integration in NetView offers the following benefits:

- Management investments already made are unaffected.
- All devices on the network are presented in a centrally managed map.
- The overall status of a device, which can be determined in the context of other managers, is shown.
- The same methods are used to display, monitor, and evaluate all managed devices in order to support rapid and, if required, automatic response to failures.
- Network components and their resources are used efficiently.
- Maximum performance and minimum failure times ensure an optimum cost/benefit ratio.

2.2 Definitions of Terms

Global directory names of NetView

NetView is installed in the folder `\usr\ov` on the drive stored in the environment variable `NV_DRIVE`.

The “ServerView Integration in NetView” product

The “ServerView Integration in NetView” product consists of an integration package that you can add on to an existing NetView installation.

ServerView application

ServerView is a server management software for all devices with ServerView agents. When integrated in NetView under Windows, it is used to graphically display the MIB variables of the corresponding MIBs and to configure the servers. You can install ServerView from the PRIMERGY ServerView Suite Software CD.

Map application

The Map application is part of the integration package. It is automatically started whenever the symbol for a PRIMERGY server is assigned to an object of a map in NetView. Such assignments can occur automatically via a call to the Poll application for all objects or can be made manually by the user at the NetView console.

Poll application

The Poll application is part of the integration package. It supports searching for devices with installed ServerView agents and is called by the user via the *Misc – Extended Discovery – Discover Fujitsu Siemens Server* menu.

Object

In the context of NetView, an object is the representation of a physical object in the NetView database. In this database, an object has a defined set of properties. An object may be displayed in the NetView map by one or more (possibly different) symbols.

Symbol

In NetView a symbol represents just one object in the NetView database in the NetView map. The status of a symbol can be determined from the following three sources:

- from the status of the associated object,
- from the status of all subordinate symbols (i.e. symbols in the submap of that symbol)
- from the symbol's own status (regardless of the object represented - this enables objects to be represented by symbols with different statuses, depending on the object context).

ServerView device

This manual uses the term ServerView device to refer to objects from the NetView database for which the properties *ServerViewObj* and *Node* are set and which are represented by at least one symbol of the type *Computer:FujitsuSiemens Primergy* in the NetView map.

The physical devices corresponding to these objects should be Fujitsu Siemens PRIMERGY servers with installed ServerView agents. ServerView is the manager for these devices.

ServerView component object or ServerView component symbol

This manual uses the term ServerView component object to refer to the component object of a ServerView device. A component object is used to represent a specific hardware, software or logical component of a device. The ServerView component objects are managed by the Map application. They are used to represent the ServerView status of the associated ServerView device from the viewpoint of ServerView. The capabilities *ServerViewObj* and *Software* are set for these objects.

The ServerView component symbol is the graphic representation of the ServerView component object in the NetView map. It reflects the current status of the device from the viewpoint of ServerView and has the symbol type *Software:FujitsuServerView*.

3 Installation

Before you start installing the “ServerView Integration in NetView” integration package, please make sure that you read all the installation requirements in this section.

If you want to install the integration package in a NetView client/server environment, proceed as follows:

1. ServerView Integration in NetView must be first installed on the NetView server.
2. If you need the functionality of the integration package on a NetView client, you can then install the package on that client.


3.1 Hardware Requirements for All Systems


On your system, at least 2 MB of free disk space must be available in the global directory structure of NetView.

3.2 Software Requirements for Windows NT

The software on the system must meet the following requirements:

- Windows 2000 (with Service Pack 1 or higher), Windows 2003 or Windows XP must be installed as the operating system.
- NetView V7.1 or higher must be installed in single, client or server mode.
- In NetView, two free contiguous event numbers in the range 1001 to 1999 must be available in the "NetView" enterprise.

 Note that the installation of the ServerView V3.x software must occur before the installation NetView V7.1 if both management programs are to be run on the same system.

 The installation and every call to the ServerView application activates the SNMP Trap Service on the system, which uses port 162. Since port 162 is also used by the NetView daemons, you should stop and disable the SNMP Trap Service manually (via the Services in the Control Panel) before starting the NetView daemon.

3.3 Installation under Windows

Make the CD with the integration products for Tivoli NetView available on the system and change to the NetView subdirectory.

Two installation methods can be selected via parameters on calling *SETUP.EXE*:

- An interactive installation that offers a user interface, dialogs and messages during the installation process
- A silent installation without the user interface, dialogs and messages



Both installation methods produce identical results if the installation completes successfully.

3.3.1 Interactive Installation

To install the “ServerView Integration in NetView” integration package in interactive mode, proceed as follows:

- ▶ Start the file *SETUP.EXE* from the installation medium on your system to display the Setup window of the integration package.

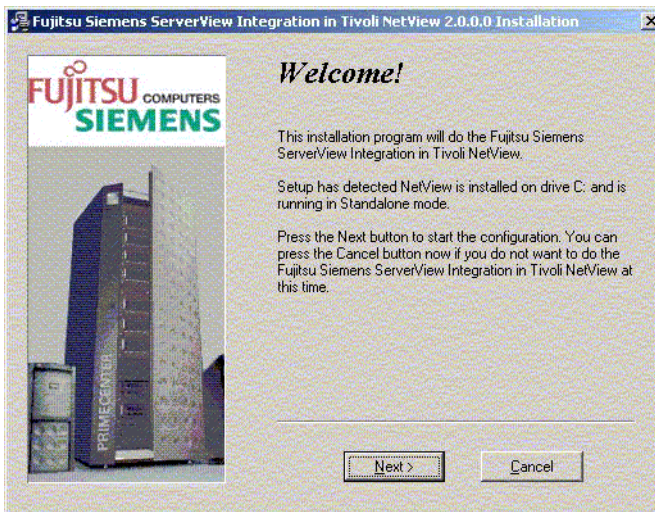


Figure 1: Installation: First Setup window

- ▶ Click *Next* to display dialog window with the “End User License Agreement”.

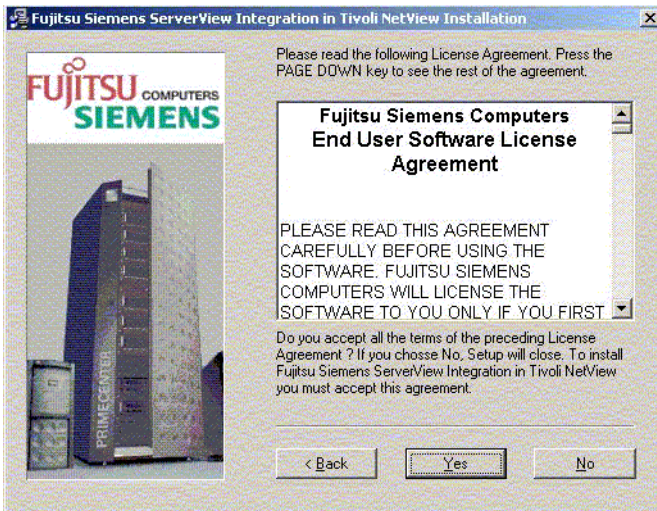


Figure 2: Installation: “End User License Agreement” dialog window

- ▶ Click *Next* to display the dialog window with general information on the integration package.



Figure 3: Installation: “General information” in the dialog window

- ▶ Click *Next*. The displayed dialog window will offer you the option of canceling the installation process without applying any changes to the system.



Figure 4: Installation: "Ready to install" dialog window

- ▶ Click *Next*. The installation process will now copy the files to your system and configure NetView. Following a successful installation, the dialog window *Installation Completed* appears.



Figure 5: Installation: "Installation Completed" dialog window

- ▶ Click *Finish* to complete the installation process.
- ▶ Start the NetView console.

3.3.2 Silent Installation

You can start the installation in silent mode by issuing the following call from the command line of a shell or from the Run dialog box on the Start menu:

```
<drive-letter>:\SETUP.EXE /S
```

where <drive-letter> is the letter of the drive associated with the installation medium.

The installation will now run in the background as a separate process and complete the entire installation procedure and configuration without any user interface, dialogs and messages. You can follow the progress of the process with the Task Manager of Windows.

On completing the installation process, you will need to restart the NetView console.

3.4 Deinstallation under Windows

To fully deinstall the integration package, you must perform the following actions manually in NetView before calling the deinstallation program:

- ▶ Select the menu item *Misc – Extended Discover – Reset all Fujitsu Siemens Server* in the NetView console to clear all installed Fujitsu Siemens PRIMERGY servers from all NetView maps.

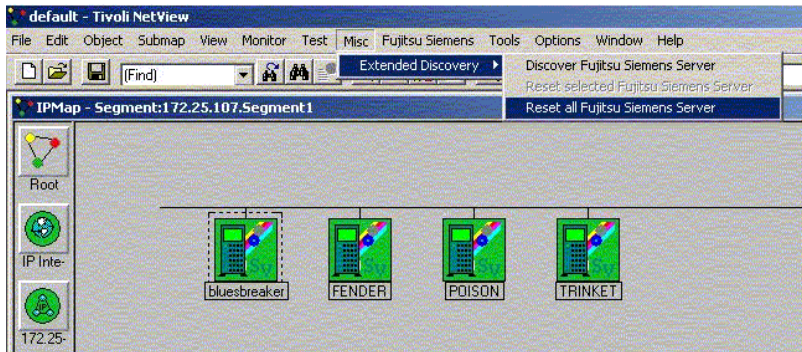


Figure 6: Deinstallation: Menu item selection in the NetView console

- ▶ Open the window *MIB Data Collector* (menu *Tool – MIB – Collect Data*). In this window delete the Data Collection with the label *SnlmvCondition* by clicking on *Delete*.

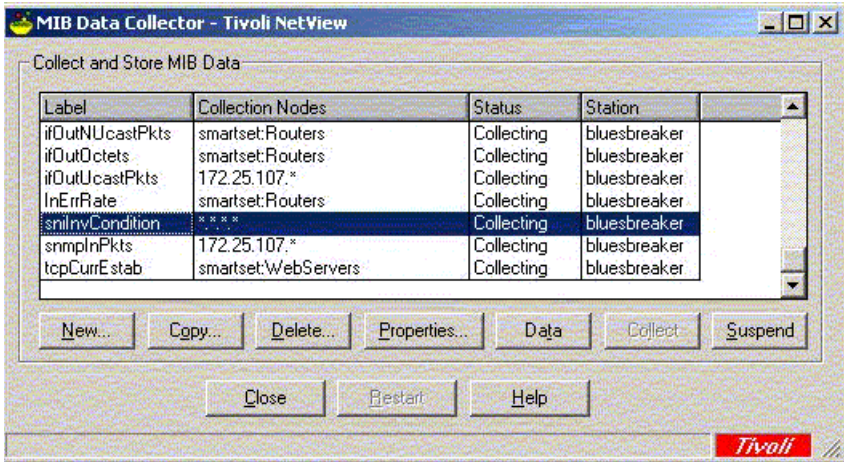


Figure 7: Deinstallation: Delete Data Collection

- ▶ Then open the *Trap Settings* window (menu *Options – Trap Settings*). Select NetView in the *Select an enterprise* group box. Delete the two traps Polling and Rearm of the ServerView status display. To do this, select *SVPollRearm* and *SVPollThresh* one after the other, and confirm each by clicking on *Delete*.

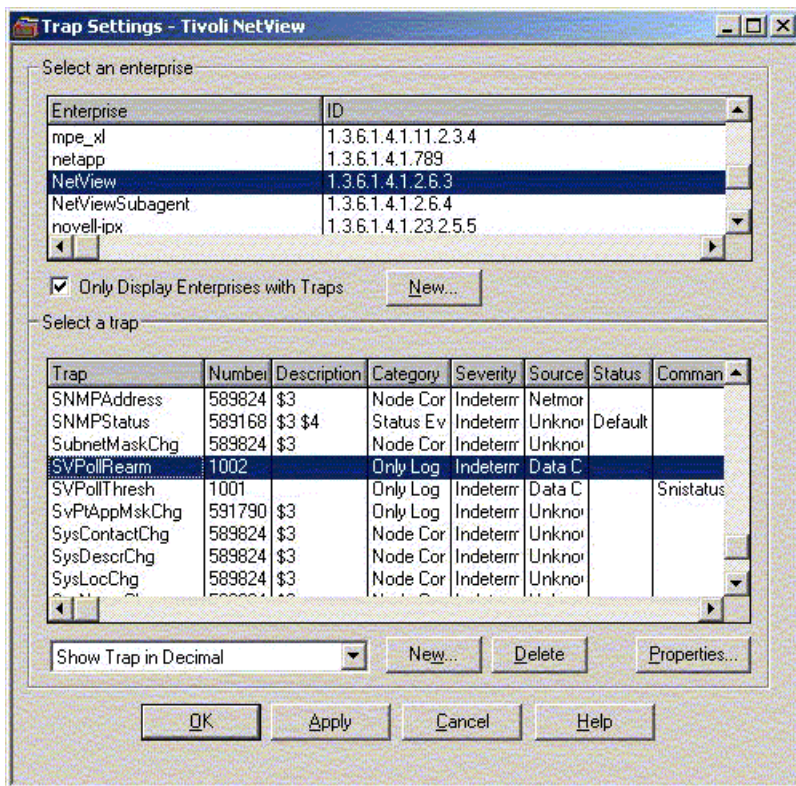


Figure 8: Deinstallation: Delete the Polling and Rearm traps

- ▶ Open the *Trap Settings* window (menu *Options – Trap Settings*). Delete all traps of the ServerView-specific enterprise systems. You will find a table with the traps that must be deleted in the chapter “Components of ServerView Integration in NetView” on page 29.

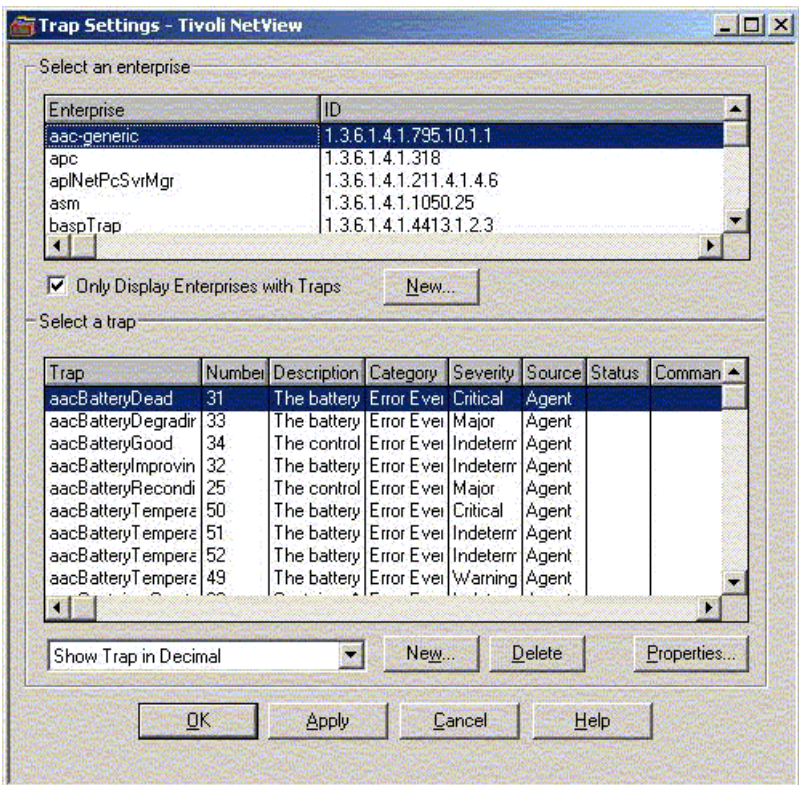


Figure 9: Deinstallation: Delete traps

- ▶ Start deinstallation in Control Panel/Software by selecting *Fujitsu Siemens ServerView Integration in Tivoli NetView* and clicking on *Change/Remove* button.

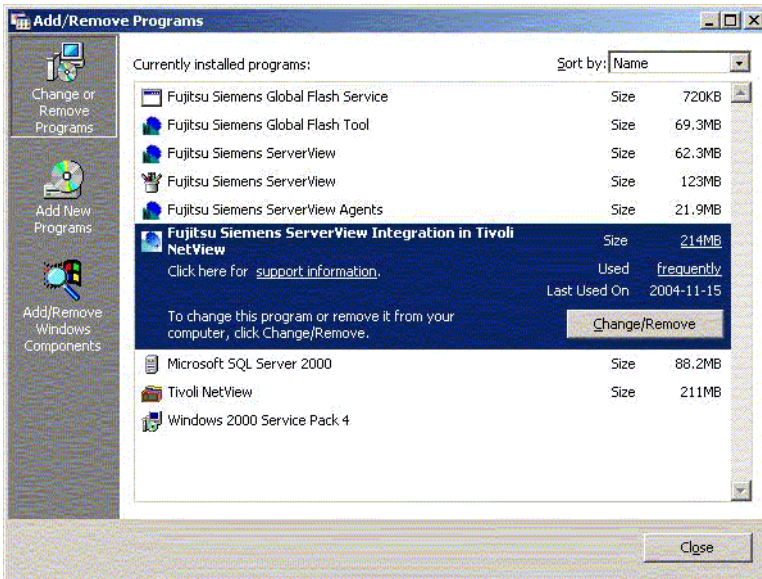


Figure 10: Deinstallation: Select Control Panel/Software

- ▶ Click on *Next* in the display deinstallation window to start deinstallation.



Figure 11: Deinstallation: First dialog window

- ▶ Following successful deinstallation the *Deinstallation Completed* window appears. Click on *Finish* to complete the deinstallation process.



Figure 12: Deinstallation: “Deinstallation Completed” window

3.5 Update Installation of ServerView Integration in NetView

You can update an existing installation for all systems by first deinstalling and then reinstalling the integration package as described above.

4 Components of ServerView Integration in NetView

This chapter describes all the components and configurations added to the NetView management program on installing the ServerView Integration in NetView.

You will find details on how to configure, start and run the components of the ServerView Integration in NetView in the chapter “Configuration and Operation” on page 33.

4.1 Objects in Maps

Object in maps are components which are graphically represented in NetView maps and for which specific capabilities and definitions have been stored in the NetView database.

4.1.1 Symbols

The following symbol subclasses are created:

1. The symbol class *Computer* includes the symbol subclass *FujitsuSiemens* to represent Fujitsu Siemens PRIMERGY servers.

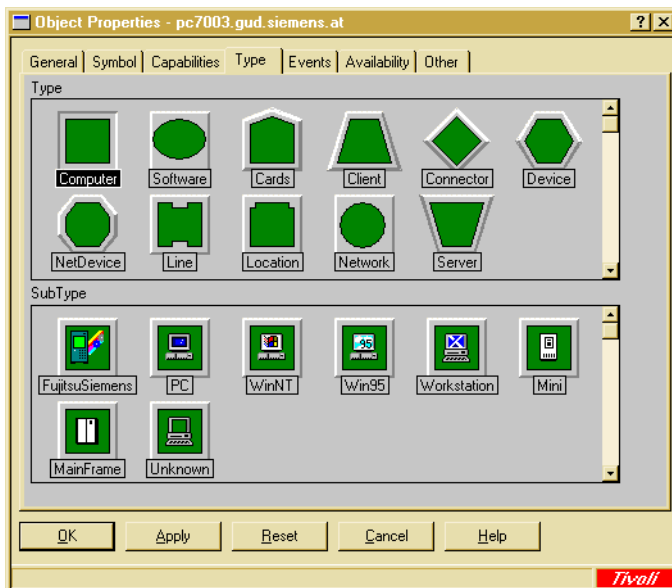


Figure 13: New symbol subclasses in the “Computer” symbol class

- The new symbol class *FujitsuSiemensServerView* is added to the *Software* symbol class.

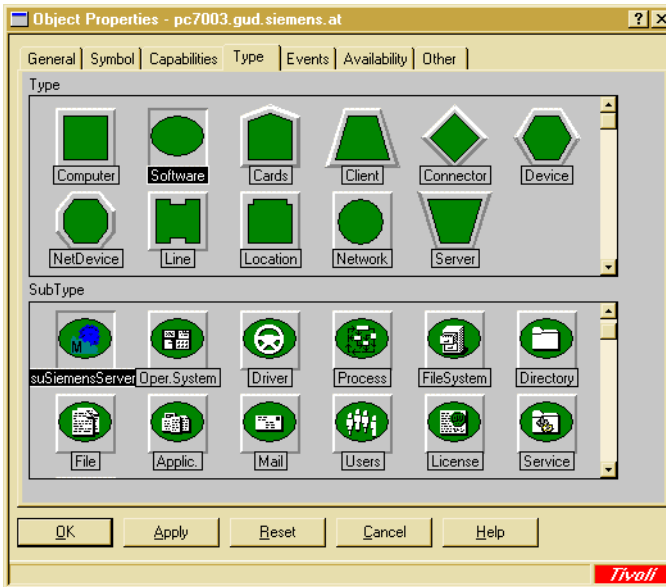


Figure 14: New symbol subclasses in the “Software” symbol class

Component symbols of the *Software:FujitsuSiemensServerView* symbol type are used in the submap of a Fujitsu Siemens PRIMERGY server to display the status of all ServerView agents on that server. The Map application can automatically create these symbols and objects.

The definitions of the symbol classes and symbol subclasses as well as the associated default capabilities for these symbols can be found in the file *usr\ov\c\ServerView\ServerView.symbols*. The corresponding bitmaps are located in the directory *usr\ov\bitmaps\c*.

4.1.2 Fields and Capabilities

The integration package creates fields for internal use by the Map application and capability fields in the NetView database. The capability fields are special fields for classifying objects.

The currently set capabilities of an object can be viewed in the Object Properties of that object.

The *ServerViewObj* capability is used to classify all devices that are managed via the ServerView product.

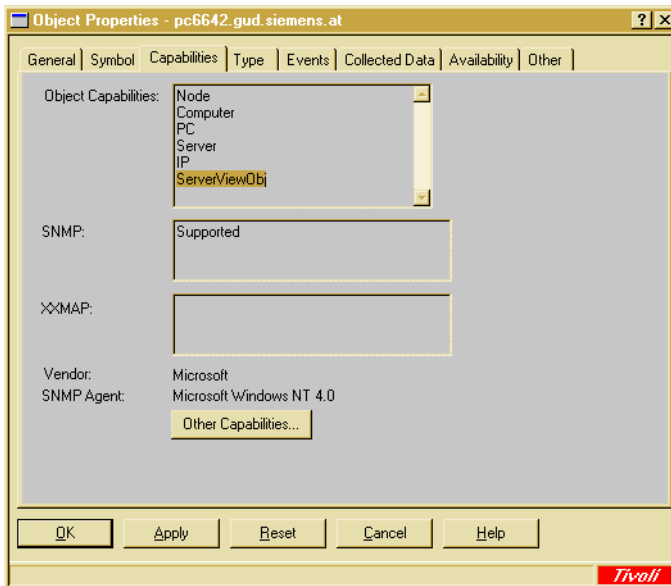


Figure 15: Object Properties with the Capabilities tab

The field and capability definitions can be found in the file `\usr\ov\fields\c\ServerView\ServerView.fields`.

The definitions of the default capabilities for the new symbols are located in the file `\usr\ov\symbols\c\ServerView\ServerView.symbols`

4.2 Status Display of ServerView Devices

All ServerView devices are identified in the NetView map by the graphical symbol subclass *FujitsuSiemens*. The status of a device is shown in the map with color codes. In the case of Fujitsu Siemens servers that are configured accordingly, this status is determined from the status of all its component symbols. These component symbols can be found in the submap of the respective server.

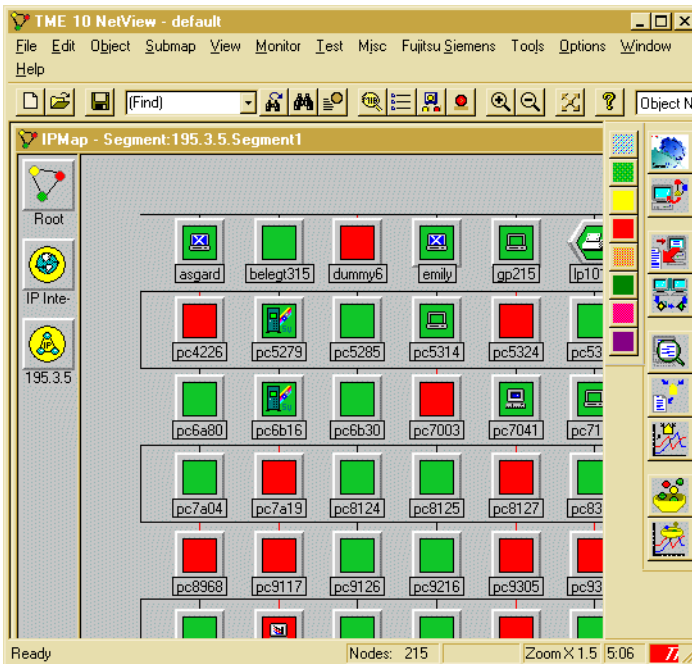


Figure 16: Map with ServerView devices in different states

4.2.1 Data Collection

The Data Collection for ServerView is used to set up the periodic polling of the ServerView agents. The Data Collection is configured with the status variable *SniInvCondition*.

The results of the periodic polls are used for the status display of the ServerView devices.

4.2.2 Threshold and Rearm Events

The two events *SVPollThresh* and *SVPollRearm* are created in NetView.

The Threshold event is triggered on polling the status variable *SniInvCondition* (Data Collection). This event defines the action (reaction script) that sets the device status in the NetView map.

The screenshot shows the 'Trap Properties' dialog box for a Threshold event. The 'Trap Name' is 'SVPollThresh'. The 'Enterprise' is 'NetView' and the 'Trap Type' is 'Specific #1001'. The 'Display the Trap Category as' is set to 'Only Log Event', 'With Severity' is 'Indeterminate', and 'From this Source' is 'Data Collector'. The 'Event Description' field is empty. The 'Run this command when the trap is received' field contains 'SniStatustrap.bat \$3 \$2:ServerView'. The 'Run as' field is 'Hidden Application'. There are 'OK', 'Apply', 'Reset', 'Cancel', and 'Help' buttons at the bottom.

Figure 17: Threshold event

The Rearm event is used to limit the threshold range for the Data Collection.

The screenshot shows the 'Trap Properties' dialog box for a Rearm event. The 'Trap Name' is 'SVPollRearm'. The 'Enterprise' is 'NetView' and the 'Trap Type' is 'Specific #1002'. The 'Display the Trap Category as' is set to 'Only Log Event', 'With Severity' is 'Indeterminate', and 'From this Source' is 'Data Collector'. The 'Event Description' field is empty. The 'Run this command when the trap is received' field is empty. The 'Run as' field is 'Hidden Application'. There are 'OK', 'Apply', 'Reset', 'Cancel', and 'Help' buttons at the bottom.

Figure 18: Rearm event

4.2.3 Reaction Script

The Reaction script `\usr\bin\snistatustrap.bat` is executed at every polling interval of the Data Collection for each polled node. This script sets the status of the polled ServerView device in the NetView map, depending on the current value of the status variable *SniInvCondition* for that device.

4.3 ServerView Traps and MIBs

On installing the ServerView Integration in NetView, all ServerView traps are integrated in the trap configuration of NetView. This extends the trap configuration with the following traps:

aac-generic	ide	rms_cTemperature2
apc	ioManager	s31MgmtAgent
apINetPcSvrMgr	ldcm	siemensRFC1157e
asm	ldsm	siemensRFCL1157e
basppTrap	netapp	sni
cmc	phoenix	sniDesktopMgmt
cmcTc	ppc	sniServerMgmt
dataGeneral	promiseTraps	sw
bridge	raidmanager	tapeAlert
dpt	raidTraps	trapDefinition
duralink	rms_cContact	traps
eISSMTrapObjects	rms_cHumidity1	upsman
em4513MIB	rms_cHumidity2	upsTraps
eMylexRaidEventInformation	rnc_cOutput	wfmTrapInfo
evtlogAgntTrap	rms_cTemperature1	

Table 2: ServerView Traps

The ServerView MIBs are installed in the directory `\usr\ov\snmp_mibs\fujitsuSiemens`. The inventory MIB `Invent.mib` is loaded during the installation so that the Data Collection with the status variable `SniInvCondition` can be installed from this MIB.

4.4 Applications of ServerView Integration in NetView

This section describes the applications available on installing the integration package.

4.4.1 Poll Application

The Poll application searches the network for Fujitsu Siemens PRIMERGY servers on which ServerView agents have been installed. The Poll application sets the `ServerViewObj` capability for all the ServerView servers it finds.

The object IDs, which specify the path when searching the network for ServerView devices, are defined in the configuration file `\usr\ov\bin\ServerViewPoll.cfg`.

4.4.2 Map Application

The Map application configures a network node that was identified by the Poll application as a Fujitsu Siemens PRIMERGY server for the status display in the NetView map.

The following properties are set by the Map application:

- The properties of the network nodes are set to that of a PRIMERGY server.
- Submaps are created on each network node.
- Icons with symbol properties of the ServerView software are created in the submaps.

4.4.3 Reset Function

The Reset function can be used to undo the configuration of one or all PRIMERGY servers (i.e., to reset the configuration by the Map application).

4.4.4 Deinstall Function

The Deinstall function deletes the *ServerViewObj* capability from the NetView database for all PRIMERGY servers (i.e. for all servers for which the *ServerViewObj* capability was set by the Poll application).

4.4.5 ServerView Application Launch

The ServerView Application Launch function starts the ServerView application from the NetView map.

5 Configuration and Operation

This chapter describes how you can start up and manage the components installed with the integration package.

In NetView you can automatically search your network for any network components in the “managed objects” (Discovery). With Discovery, NetView accesses the SNMP agents and assigns corresponding default symbols to the various device types.

The components found are entered in the submap of the relevant device (e.g. IP interfaces or network cards).

5.1 Configuring Fujitsu Siemens Servers with the Map Application

Fujitsu Siemens PRIMERGY servers must be configured for the following reasons:

- The servers should be visibly distinguishable from other devices in the map.
- The status of the ServerView agents should be mapped to appropriate component symbols in the map.



Fujitsu Siemens servers can be configured only in a map with read/write privileges. The Map application makes changes to the objects and symbols in the NetView map.

5.1.1 Creating a ServerView Component Symbol for a Fujitsu Siemens Server

The Map application creates a ServerView component symbol in the submap of a Fujitsu Siemens server with the following capabilities:

- The symbol type is set to *Software:FujitsuSiemensServerView*
- The label of the symbol is set to *ServerView*
- The *Status Source* attribute of the symbol is set to *Propagated*, i.e., the status of the ServerView component symbol is derived from the status of the related object
- The status of the related object is initially set to *Unknown*
- The selection name of the server object and the suffix *:ServerView* form the selection name of the ServerView component object
- The default capabilities of the ServerView component object are set in accordance with the corresponding symbol definition file

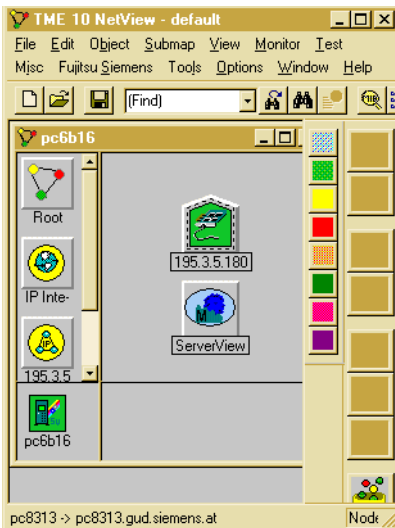


Figure 19: ServerView component symbol

5.1.2 Selection Name

The Map application automatically assigns the selection name of the ServerView component symbol, which depends on the selection name of the parent server.



Neither the selection name of the server, nor the selection name of the ServerView component symbol should be changed manually.

If, however, it is absolutely necessary for the selection name of a Fujitsu Siemens server to be changed, proceed as follows:

- ▶ Select the menu item *Misc – Extended Discovery – Reset selected Fujitsu Siemens Server* for the relevant Fujitsu Siemens server. This deletes the ServerView component symbol from the submap of the server and sets the symbol type to a default value other than *FujitsuSiemens*.
- ▶ Change the selection name of the server.
- ▶ Change the symbol type of at least one of the symbols for this server back to *FujitsuSiemens*. This causes the Map application to regenerate the ServerView component symbol (with a corresponding selection name).

5.1.3 Changes to the Fujitsu Siemens Server

The *Status Source* attribute of the symbol is set to *Propagated*, i.e. the status of the symbol for the server is derived from the status of all component symbols.

The default capabilities of the server are set in accordance with the corresponding symbol definition file.

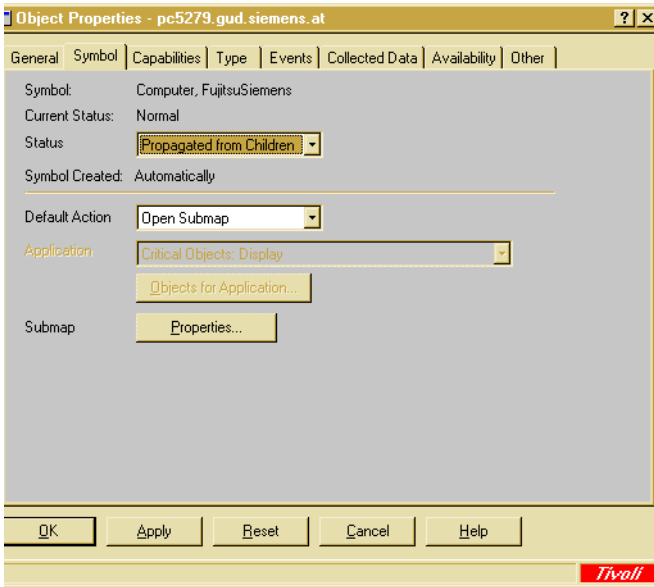


Figure 20: Server symbol

Fujitsu Siemens servers and the associated ServerView component symbols are configured by the Map application when the following events occur:

- when the symbol type of an existing device is changed to *Computer:FujitsuSiemens*.
The configuration is then performed for the affected node.
- when a new device with the symbol type *Computer:FujitsuSiemens* is created.
The configuration is then performed for the affected node.

5.1.4 Manually Configuring a Fujitsu Siemens Server

Select the symbol of the server in the map. You now have two methods by which you can configure a single node as a Fujitsu Siemens server:

1. Using the Context menu, change the symbol type to *FujitsuSiemens*.
2. Create a new server with one of these two symbol types in the map by selecting the menu item *Object – New*.

This creates a server as a Fujitsu Siemens server with the appropriate capabilities and a ServerView component symbol in the map (see the section “Configuring Fujitsu Siemens Servers with the Map Application” on page 33). The configuration is performed even if there are several other existing symbols for the object with different symbol types already present in the current map.

5.1.5 Resetting a Manual Configuration

If you want to reset this configuration, you must first make sure that there is no further symbol with the symbol type *FujitsuSiemens*. Resetting a server is achieved via the menu item *Misc – Extended Discovery – Reset selected Fujitsu Siemens Server*. This changes the symbol and some of the capabilities of the server accordingly. The ServerView component symbol in the related submap is deleted unless there is at least one other symbol for this device with the symbol type *FujitsuSiemens*.



The component symbol is deleted only when the server is no longer represented by any symbol with the symbol type *FujitsuSiemens*.

5.1.6 Automatic Search and Configuration of all Fujitsu Siemens Servers

Under the *Misc* menu item of the NetView main menu, you can start the Poll application with the option *Extended Discovery – Discover Fujitsu Siemens Server*.

NetView automatically assigns the symbol type of a node, which depends on the value of the MIB variable *sysObjectID*. For each known value of the *sysObjectID* MIB variable, an associated symbol type is defined in the `\usr\ov\confc\oid_to_sym` file.

The Poll application enables the symbol type to be assigned more precisely. It can determine the symbol type of a device by checking whether a specific MIB object is supported by that device.

All Poll application output is sent to the shell in which NetView was started. The change in symbol type has the following effect in connection with the Map application: the Map application configures the related node as a Fujitsu Siemens server by changing the symbol type to *FujitsuSiemens*.



Note the effects of the SNMP parameter settings in NetView in this context:

- If you have defined the wrong Community-String for a device, the request of the Poll application will be rejected, and the device will not be detected correctly.
- If you have selected a Timeout value that is too low, the requests may be aborted before a response can be received. If the Timeout value is too high, this will lead to delays when polling devices which do not have SNMP agents or for which the SNMP agent is inactive.
- The reliability of the network connections is determined by the Retry-Count. If you have selected too high a Retry-Count, this will lead to delays when polling devices which do not have SNMP agents or for which the SNMP agent is inactive.



Set the *IPMAP_NO_SYMBOL_CHANGES* environment variable in the runtime environment of NetView to TRUE. This prevents changes to the symbol types from being reset by NetView as part of the Configuration Monitoring, which runs continuously.



Warning

Do not terminate NetView while the Poll application is running.

5.1.7 Configuration File of the Poll Application

In the *\$OV_BIN/ServerViewPoll.cfg* file you will find the definitions of the tests performed by this application. Each entry in this file has the following format (the quotes and commas are part of the syntax and must always be specified):

```
SYSOID="sysObjectID_Value",OBJECT="MIB_ObjectID",  
NEWSYMBOL="New_Symbol_Type"
```

sysObjectID_Value

This parameter identifies a value for the MIB variable *sysObjectID* from the MIB-II in dot notation, beginning with a period, for example: “1.3.6.1.4.1.231.1.3.1” - this is the value returned by all SINIX-N systems as a *sysObjectID*. All nodes returning this value for *sysObject* are to be tested for support of the MIB variables with object identifier *MIB_ObjectID*.

In NetView you can use the “Configuration - System Information” menu item to check if a specific node returns a value for *sysObjectID* and which value is returned.

MIB_ObjectID

This parameter identifies a MIB variable that must be supported by each individual node in order to receive the new symbol type. This variable is specified with the object instance (always “.0” for scalar objects) without the period prefix. For example, “1.3.6.1.4.1.231.2.10.2.1.3.0” identifies the object *snInvCondition* from the inventory MIB.

New_Symbol_Type

This parameter identifies the symbol type to be assigned to all symbols (in the open map) of a node supporting the specified MIB variable. This symbol type must be a type already known in NetView, and is specified by entering the symbol class and symbol subclass, separated by a colon, e.g. *Computer:FujitsuSiemens*. You can view the symbol types defined in NetView by selecting the *Object – New* menu option. If this parameter is not a symbol type known in NetView, the Poll application terminates immediately.

Blank lines and comment lines (which must start with “#” in the first column) are permitted in this configuration file.

The lines of the configuration file are compared against each node in the order in which they are specified. If there are several lines with the same *sysObjectID_Value*, only the first line specified is valid; other lines with the same *sysObjectID_Value* are ignored. The node is always tested only for support of the MIB variables from the first matching line. In this case, “matching” means that the node returns the specified value for the MIB variable *sysObjectID* and there is no symbol representing the node in the open map which has the symbol type *New_Symbol_Type*.

5.2 Status Indication in the Map

5.2.1 The Status from the Viewpoint of NetView

NetView determines the status of a device in the map by sending ICMP echo requests to the respective device. The status determined by this method only indicates the accessibility state of the device. To present the ServerView status described below, the Map application creates a ServerView component symbol in the submap of the server.

NetView determines the status of a correctly configured Fujitsu Siemens server from the status of all its component symbols (attribute *Status Source* of the symbol equals *Propagated*), e.g., from the ServerView status and the status of all interfaces.



The ServerView status can be determined only if the server is accessible via SNMP. If it is not, the status of the ServerView component symbol is no longer updated. The server is then monitored by NetView's monitoring of the other components.



Warning

If the monitoring for the other components of a server by NetView is disabled, it is possible that a failure of that server may not be reflected by a status change of the corresponding symbol in the NetView map. This could occur, for example, if the submap of the server contains only the ServerView symbol and a symbol for the interface, and the user deletes the interface symbol or sets this interface component object to *unmanaged*.

5.2.2 The ServerView Status

For Fujitsu Siemens servers with installed ServerView subagents, you can obtain more detailed information on the status of the device than just its availability status. For this reason, the *sniInvCondition* object from the INVENTORY-MIB depicts the overall status of all ServerView agents on the relevant device. The status returned is always the most critical state among all the ServerView agents.

By monitoring these MIB variables, you can therefore determine the status of a device from the viewpoint of ServerView.

5.2.3 Automatic Monitoring of the ServerView Status

The following components automatically monitor this ServerView status:

- Data Collection for the MIB object *sniInvCondition* from the INVENTORY-MIB
- The Threshold and Rearm events for this Data Collection
- A reaction script for evaluating the values received, which sets the status of the ServerView component symbol accordingly.



All devices for which this status monitoring is enabled must be configured as Fujitsu Siemens servers, i.e., represented by at least one symbol with the symbol type *FujitsuSiemens* in the map. If you do not want any such status monitoring to be performed, you can undo the configuration of the nodes.

5.2.4 How Status Monitoring Works

The value of the MIB variable *sniInvCondition* is periodically polled for each required Fujitsu Siemens server via the Data Collection.



To keep the network load down to a minimum, you should adapt the “generic” Data Collection created during the installation of the integration package (with the source definition “*. *.*.*) before using it.

The related threshold monitoring is defined so that both the Threshold and the Rearm events are triggered at each successful poll.

As a reaction to the Threshold event, the `\usr\ov\bin\setServerViewStatus.bat` reaction script is executed. This script receives the NetView-Object-ID of the corresponding server and the current value of the MIB variable *sniInvCondition* as its parameters. No automatic reaction is involved in the Rearm event. It simply serves to reactivate the Threshold event.

The `\usr\ov\bin\setServerViewStatus.bat` script determines a corresponding NetView status from the ServerView status and the selection name of the related ServerView component symbol from the NetView-Object-ID of the server involved. The determined status of this ServerView component symbol is then set in the submap of the server using the `OV_Set_Status_Color` event.

The Fujitsu Siemens servers are configured by the Map application and the Poll application so that NetView can determine the status of a server from the status of all of its component symbols. Consequently, such status changes are passed up through the map hierarchy and can change the status of the relevant server, segment, network, etc.

You can influence this procedure by performing various configuration steps:

- When configuring the Data Collection, select a suitable polling interval and enter all the Fujitsu Siemens servers to be monitored in the *Source* list. Use the menu option *Tools – MIB – Collect*, select *snInfvCondition* and the click on *Properties* and *Polling Properties* one after the other.



When doing this, do not change the Specific Event Number - it is automatically assigned during the installation of the integration package, based on the previously defined Threshold events.

- The events *SVPollThresh* and *SVPollRearm* are assigned to the event category *Don't log or display*. Consequently, they do not appear in the event browser and are not recorded in the log file. If you want to change this behavior, you can assign a different event category to these events.
- A NetView status is determined in the reaction script from the value of the MIB variable *snInfvCondition*. If necessary, you can modify this script and adapt the assignments to meet your needs.
- The *OV_Set_Status_Color* event is generated by the reaction script at each successful poll. To prevent this event from being recorded in the event browser and/or the log file, you can change the event category for this event accordingly (*Don't log or display* or *Log only*).

5.2.5 Resetting the ServerView Status Manually

To reset the status of a Fujitsu Siemens server in the NetView map, proceed as follows:

- ▶ From the context menu of the node in the map, select the item *Unmanage Object* to place the node in the unconfigured state.
- ▶ Select the item *Manage Object* from the context menu of the node in the map to place the node with the set configuration in the initial state.

This is needed, for example, if the server is no longer accessible via SNMP (the SNMP agent is not running) and you want to prevent the server from being constantly displayed as a “faulty device” in the map.

5.2.6 SNMP Configuration

The parameters you set here are used by the Poll application.

i Please make sure that you also read the details on selecting SNMP parameters in the section “Automatic Search and Configuration of all Fujitsu Siemens Servers” on page 37.

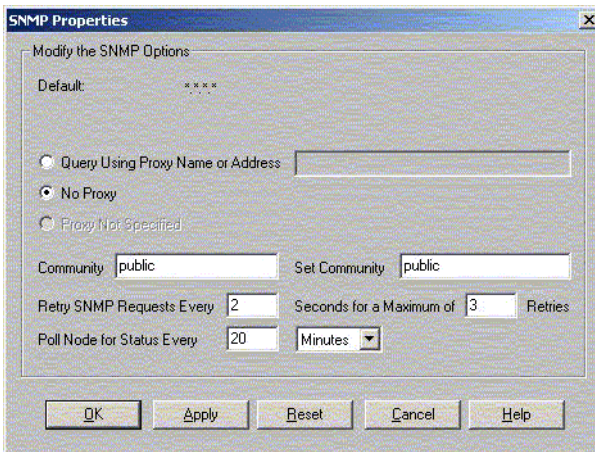


Figure 21: Configuration of SNMP parameters in NetView

5.2.7 Automatic Reactions

In the NetView event configuration, you can set various automatic reactions to be triggered when a trap is received from the ServerView MIBs. This includes:

- Logging of the event in the NetView event log file (Event Log Message)
- Forwarding of the event (Forward Event)
- Displaying a pop-up window with information on the trap that was received (Popup Notification)
- Issuing any shell command (Command for Automatic Action)

This reaction can be used to call scripts or any applications, to send e-mails, and so on. It is also possible to use this reaction to control (or transfer data to) any external systems with a shell interface, e.g. trouble ticket systems, paging software, etc. For more details on the shell interface and how to use it, please refer to the user documentation of the relevant external system.

i Detailed information on configuring automatic reactions can be found in the NetView user documentation.

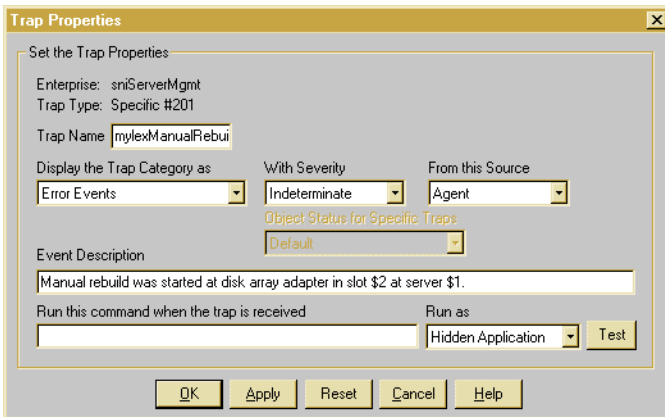


Figure 22: Configuring automatic reactions in NetView

5.3 Starting the Poll Application

The Poll application is started via the *Misc – Extended Discovery – Discover Fujitsu Siemens Server* menu item.

5.4 Map Application

The Map application is executed automatically when the capability of a network node changes to *ServerViewObj*. It is thus executed for every Fujitsu Siemens server detected by the Poll application.

5.5 Operation of the Status Display for Fujitsu Siemens Servers

The menu item *Misc – Extended Discovery – Discover Fujitsu Siemens Server* produces a graphical view of all devices in a hierarchic map. The Fujitsu Siemens servers are displayed in the map in accordance with their configuration and can be visibly distinguished from other devices.

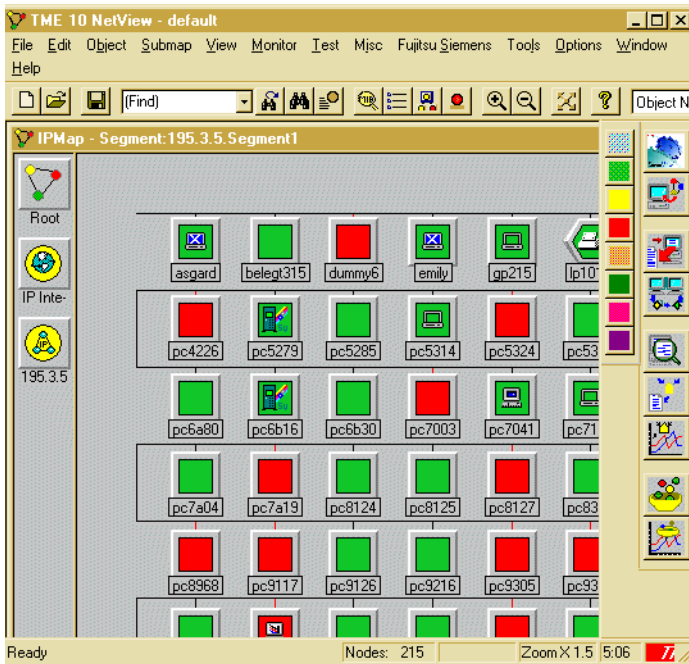


Figure 23: Display of devices in the NetView map

The status of a device is indicated in the map using color codes. In the case of Fujitsu Siemens servers that are configured accordingly, this status is determined from the status of all its component symbols. These component symbols can be found in the submap of the respective server.

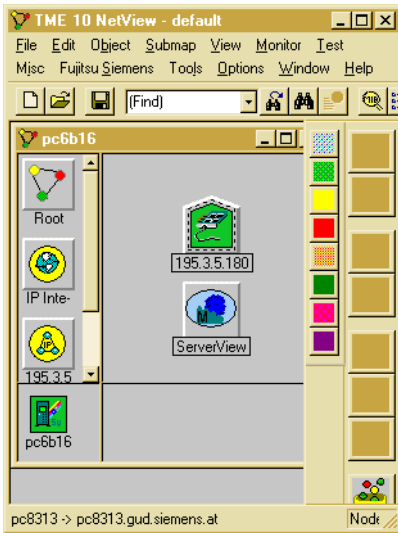


Figure 24: Submap of a server with component symbols

Component symbols can be created and managed by NetView itself or by any other applications such as the Map application, for example.

The overall status of all ServerView agents on a server is determined by a Data Collection with Threshold monitoring and an associated reaction script and mapped to the *ServerView* component symbol in the submap of that server. This component symbol thus corresponds to the status icon in the server list of ServerView.

If the status of the *ServerView* component symbol changes to *Major*, for example, the status of the parent server symbol is updated in accordance with the propagation rules and the original status. This mechanism enables a status to be forwarded up to the highest level in the map hierarchy.

Such status changes inform the network administrator about problems that have occurred. The administrator can then track these status changes down from a higher-level map until he or she finally reaches the map that shows the relevant server. A quick look at the submap of the server immediately indicates which component of the system is in an alarm state and which manager can be used to track this state further.

5.6 Resetting Individual Fujitsu Siemens Servers

You can use the menu option *Misc – Extended Discovery – Reset selected Fujitsu Siemens Server* in the NetView console to reset the configuration of the selected server, i.e., the server is then no longer shown as a Fujitsu Siemens server in the NetView map.

The following capabilities are removed on resetting the configuration:

- The capabilities of the network node for PRIMERGY servers are reset to the default.
- Icons with symbol properties of the ServerView software are removed from the submaps.

5.7 Display of ServerView Events in NetView

The ServerView application can be used to configure the monitoring of various events by the agents. When such an event occurs on the server, a trap is sent to the manager.

NetView displays the received traps from the ServerView MIBs in list form in the event category *ServerView Events*. The output occurs in the format defined in the ServerView MIBs of the integration package. NetView associates the trap with the appropriate device, but the traps have no effect on the color-coded status indicator of a device or component symbol in the map.

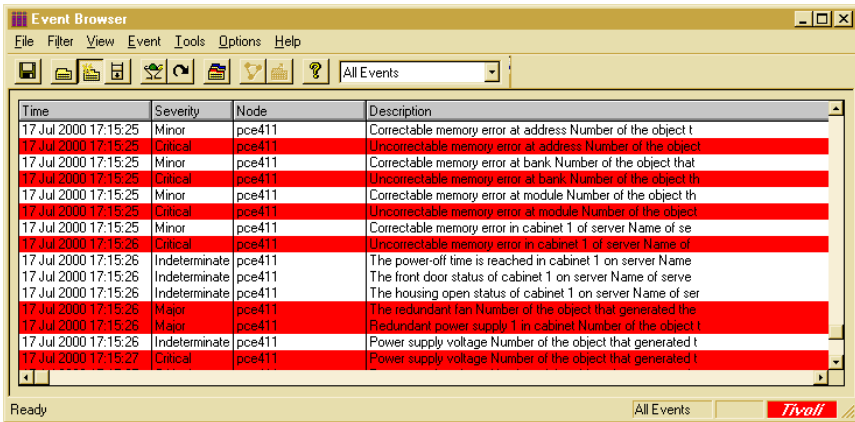


Figure 25: Event Browser window

6 ServerView Application

The ServerView application is a manager for all devices with ServerView agents. It is used in the integration in NetView under Windows to graphically represent the MIB variables from the corresponding MIBs and to configure the server.

6.1 Starting ServerView

You start ServerView with the Application Launch function. This causes the network parameters of the selected Fujitsu Siemens PRIMERGY server to be passed from the NetView map to ServerView.



The properties of the Fujitsu Siemens PRIMERGY servers involved must be configured with type *Computer* and subtype *FujitsuSiemens*.

There are two ways of starting ServerView from the NetView console:

Variant 1

In the NetView map first select the Fujitsu Siemens server (*TRINKET* in this example) for which the Application Launch function is to be executed.

Start the Application Launch function via the menu *Fujitsu Siemens – Start ServerView* (at the top edge of the NetView window).

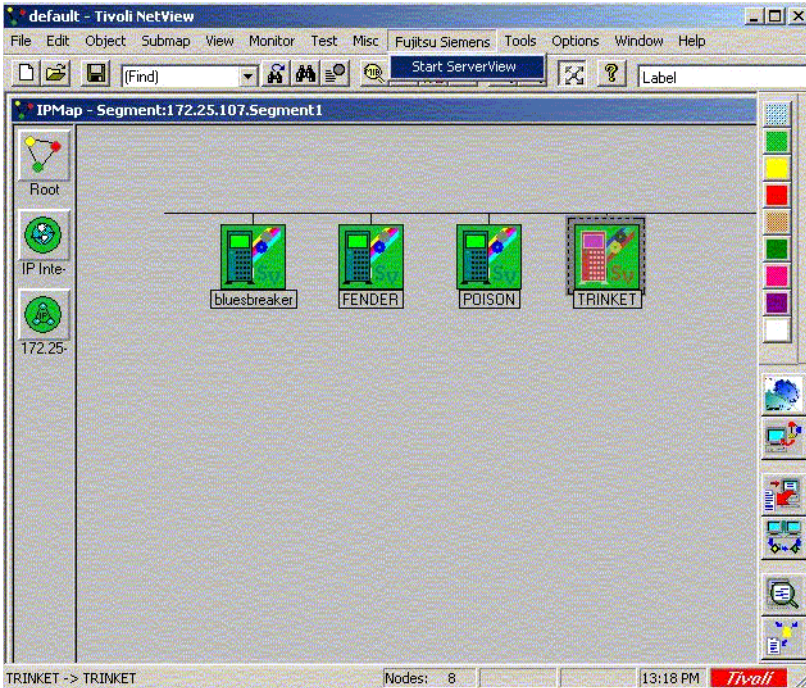


Figure 26: Start ServerView via menu

Variant 2

In the NetView map first select the Fujitsu Siemens server (*TRINKET* in this example) for which the Application Launch function is to be executed.

Start the Application Launch function by clicking on the *Start Fujitsu ServerView* icon (at the right edge of the NetView window).

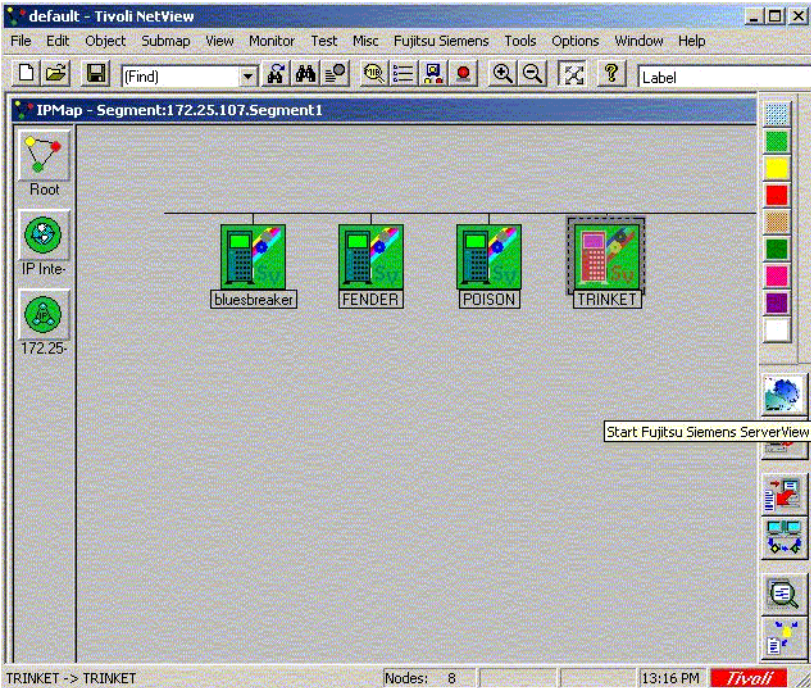


Figure 27: Starting ServerView with the ServerView icon

In both cases the ServerView window is opened and the selected Fujitsu Siemens server (*TRINKET* in this example) is shown in the server list.

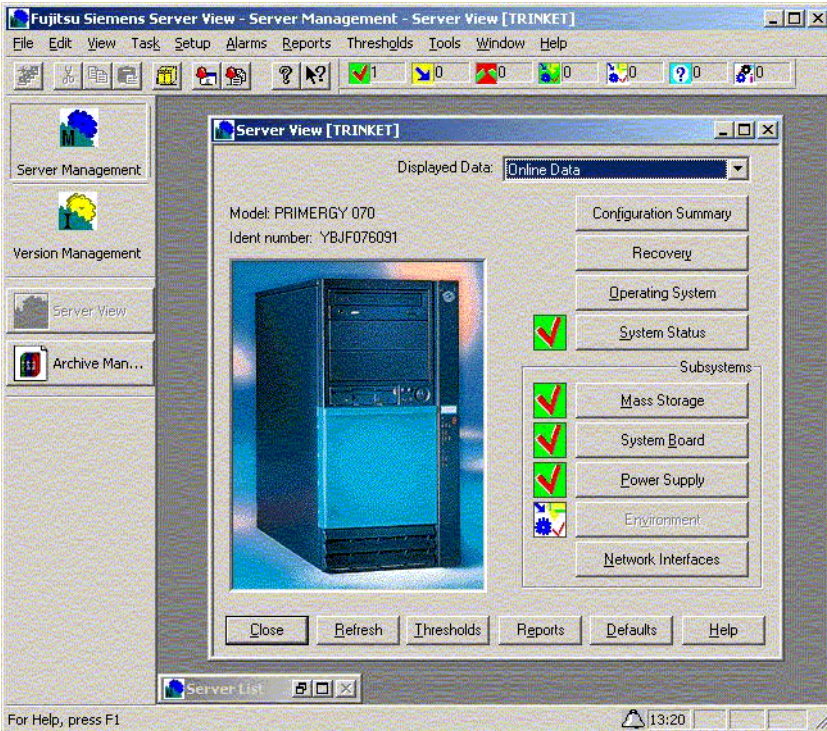


Figure 28: ServerView window showing the selected server

6.2 Installing ServerView

If ServerView and NetView are to be installed on the same system, ServerView V3.x or higher must be installed first.

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Submitted by

Comments
Suggestions
Corrections

Comments on PRIMERGY ServerView Suite
ServerView Integration 2.0 in Tivoli NetView



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