

Chapter 1

Product Overview

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The CiscoWorks NetView Interface provides two-way communication between the CiscoWorks network management software and the IBM NetView software operator. The interface uses the following functionality:

- Allows you to manage your Cisco routers by forwarding trap information obtained from these Simple Network Management Protocol (SNMP) devices to IBM NetView.
- Adds RUNCMD capabilities that access certain CiscoWorks applications and the Sybase tables and assists you in the management of your Cisco routers.
- Enables you to use the SunLink Protocol Conversion Application (PCA) to convert events and traps so they can be forwarded to IBM NetView.

Figure 1-1 illustrates the process CiscoWorks NetView Interface uses to translate an SNMP network *trap* or event to IBM's NetView console in the form of an SNA alert Network Management Vector Transport (NMVT).

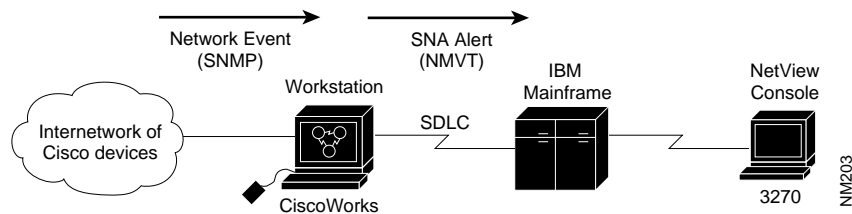


Figure 1-1 CiscoWorks NetView Interface SNMP Event Conversion

Using SNMP

By allowing NetView operators access to Cisco SNMP devices to perform administration and maintenance queries, the CiscoWorks NetView Interface minimizes the additional network management software the operator must learn and use, and gives the operator access to Cisco devices from the NetView console.

The CiscoWorks NetView Interface includes SunLink SNA Peer-to-Peer RunTime Environment (RTE) software. The interface uses the Sun product capabilities to interact with the NetView operator. The NetView operator defines the System Network Architecture (SNA) peer device to the IBM mainframe in a VTAM definition statement, then sets up the appropriate CiscoWorks NetView Interface configuration files. Then, the CiscoWorks NetView Interface uses these files to specify which network events to convert to SNA alerts and how the conversion takes place.

Using the RUNCMD Process

The CiscoWorks NetView Interface responds to Cisco router queries and views router configuration files via RUNCMD requests, and forwards command request information for each managed device called an *agent*. The SNMP agent is generally provided by the vendor as an integral part of the software that comes with the device.

The RUNCMD Server allows NetView operators to retrieve information from Cisco devices by using commands. The RUNCMD interface is open-ended. You can also customize your own commands and add them into your path. The RUNCMD Server uses CiscoWorks applications along with some SNM commands to provide device information to the IBM NetView console.

The interface receives command requests from IBM NetView operators via the RUNCMD Server. The CiscoWorks NetView Interface executes command requests on the local UNIX system, translates this information into SNMP, and forwards it to the network device.

Figure 1-2 illustrates the general relationship of the CiscoWorks NetView Interface RUNCMD process.

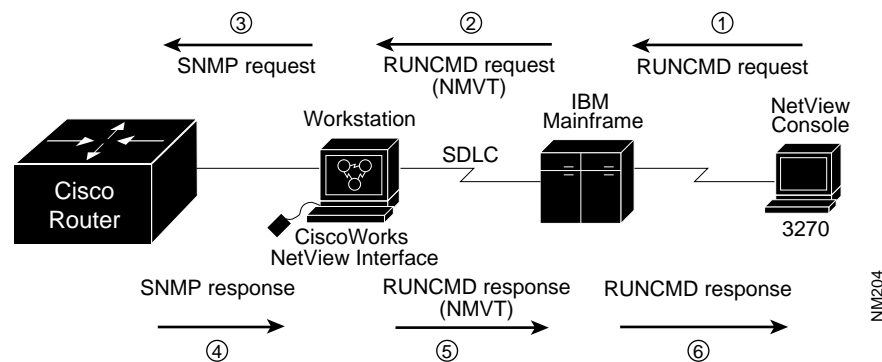


Figure 1-2 CiscoWorks NetView Interface Functional Diagram

Understanding Terminology

The CiscoWorks NetView Interface interacts with several other products and therefore uses terms that might not be recognizable. This section groups the terms according to their products and defines them briefly.

If you cannot find a term or would like more information about a term, refer to the specific product manuals.

IBM NetView

Some key terms used in this manual include the following:

- *Alert*—Problem or impending problem record sent to a network operator within NetView that warrants action at the control point.
- *Agent*—Software that processes queries and returns replies on behalf of this application. The Peer-to-Peer agent, referred to also as the P2P agent, reports the values of specified variables to the CiscoWorks workstation.
- *Event*—Network message indicating operational irregularities in physical elements of a network or a response to the occurrence of a significant task, typically the completion of a request for information.
- *Network Control Program (NCP)*—In SNA, programs that route and control the flow of data between a communication controller (in which they reside) and other network resources.
- *Network Communications Control Facility (NCCF)*—The facility in the IBM NetView console where you send RUNCMD requests.
- *Network Management Vector Transport (NMVT)*—SNA message consisting of a series of vectors conveying network management-specific information.
- *NetView*—A system 370-based IBM licensed program that monitors, manages, and diagnoses a network and its problems.
- *Network Problem Determination Application (NPDA)*—The location in the IBM NetView console where you view NMVTs.
- *Synchronous Data Link Control (SDLC)*—IBM bit-synchronous link-layer protocol.
- *Systems Network Architecture Network (SNA)*—Part of a user-application network that conforms to the formats and protocols of Systems Network Architecture. It enables transfer of data among end users and provides protocols for controlling the resources of various network configurations.
- *Trap*—Unsolicited message sent by an SNMP agent to a network management system such as CiscoWorks that indicates the occurrence of a significant event.
- *Vector*—Data segment of an SNA message. A vector consists of a length field, a key that describes the vector type, and vector-specific data.
- *Virtual Telecommunications Access Method (VTAM)*—A set of programs that enables the SNA Peer-to-Peer gateway to establish and maintain the connection to an IBM host mainframe using this host-related system.

SunLink SNA Peer-to-Peer RunTime Environment

Some key terms used in this manual include the following:

- *Protocol Conversion Application (PCA)*—Converts SNM events and traps so they can be forwarded to SNA NetView. Integrates SunNet Manager with NetView, allowing SNM agents to send SNA alerts to NetView.
- *SNA Peer-to-Peer Gateway*—Uses Advanced Program-to-Program Communication (APPC) protocols to communicate with a remote program over an SNA network. It also provides communications to IBM's NetView.
- *Physical Unit Management Services (PUMS)*—Manages the SSCP-PU session in the gateway, the NMVT on that session, and communications with the PUMS API in the client, CiscoWorks NetView Interface.

CiscoWorks

The following list of CiscoWorks applications can be accessed through the RUNCMD utility:

- Configuration Management
- Contacts
- Path Tool
- Show Commands
- Sybase Database

For more information on these CiscoWorks applications, refer to the *CiscoWorks User Guide*.

If you are unfamiliar with SNMP terms that may be helpful in understanding the CiscoWorks NetView Interface, refer to the *Internetworking Terms and Acronyms* publication.