CHAPTER 1

# System Management Overview

## CDP

Cisco Discovery Protocol (CDP) runs over the data link layer and is used to advertise information to all attached Cisco devices, and to discover and view information about attached Cisco devices. CDP runs on all Cisco-manufactured equipment.

For more information about CDP, see Chapter 2, "Configuring CDP."

## Domains

You must create a domain name for Cisco Nexus 1000V and then add control and packet VLANs for communication and management. This process is part of the initial setup of the a Cisco Nexus 1000V when installing the software. If you need to create a domain later, you can do so using the **setup** command or the procedures in Chapter 3, "Configuring the Domain."

You can establish Layer 3 Control in your VSM domain so that your VSM is Layer 3 accessible and able to control hosts that reside in a separate Layer 2 network. For more information, see the "About Layer 3 Control" section on page 3-1.

## Server Connections

In order to connect to vCenter Server or an ESX server, you must first define the connection in the Cisco Nexus 1000V. Chapter 4, "Managing Server Connections" describes how to connect and disconnect with VCenter Server and viewing connections.

## Configuration Management

The Cisco Nexus 1000V lets you change the switch name, configure messages of the day, and display, save, and erase configuration files. For more information about managing the configuration, see Chapter 5, "Managing the Configuration."

# File Management

Using a single interface, you can manage the file system including:

- Flash memory file systems
- Network file systems (TFTP and FTP)
- Any other endpoint for reading or writing data (such as the running configuration)

For more information about working with files, see Chapter 6, "Working with Files."

# User Management

You can identify the users currently connected to the device and send a message to either a single user or all users. For more information, see Chapter 7, "Managing Users."

# NTP

The Network Time Protocol (NTP) synchronizes timekeeping among a set of distributed time servers and clients. This synchronization allows you to correlate events when you receive system logs and other time-specific events from multiple network devices.

For more information about NTP, see Chapter 8, "Configuring NTP."

# Local SPAN and ERSPAN

The Ethernet switched port analyzer (SPAN) lets you monitor traffic in and out of your device, and duplicate packets from source ports to destination ports.

For information about configuring SPAN, see Chapter 9, "Configuring Local SPAN and ERSPAN."

You can also use the Cisco Network Analysis Module (NAM) to monitor ERSPAN data sources for application performance, traffic analysis, and packet header analysis.

To use NAM for monitoring the Cisco Nexus 1000V ERSPAN data sources see the *Cisco Nexus 1010 Network Analysis Module Installation and Configuration Note, 4.2*.

# SNMP

The Simple Network Management Protocol (SNMP) is an application-layer protocol that provides a message format for communication between SNMP managers and agents. SNMP provides a standardized framework and a common language used for the monitoring and management of devices in a network.

For more information about SNMP, see Chapter 10, "Configuring SNMP."

# NetFlow

NetFlow gives visibility into traffic transiting the virtual switch by characterizing IP traffic based on its source, destination, timing, and application information. This information is used to assess network availability and performance, assist in meeting regulatory requirements (compliance), and help with troubleshooting.

For more information, see Chapter 11, "Configuring NetFlow."

You can also use the Cisco Network Analysis Module (NAM) to monitor NetFlow data sources. For more information see the *Cisco Nexus 1010 Network Analysis Module Installation and Configuration Note, 4.2*.

# System Messages

You can use system message logging to control the destination and to filter the severity level of messages that system processes generate. You can configure logging to a terminal session, a log file, and syslog servers on remote systems.

System message logging is based on RFC 3164. For more information about the system message format and the messages that the device generates, see the *Cisco NX-OS System Messages Reference.*

For information about configuring system messages, see Chapter 12, "Configuring System Message Logging."

# iSCSI Multipath

The iSCSI multipath feature sets up multiple routes between a server and its storage devices for maintaining a constant connection and balancing the traffic load.

For more information, see Configuring iSCSI Multipath, page 13-1.

# Troubleshooting

Ping and traceroute are among the available troubleshooting tools.

For more information, see the *Cisco Nexus 1000V Troubleshooting Guide, Release 4.0(4)SV1(3).*