Manage the Node

This chapter provides the CTC procedures for maintaining the nodes, including backup and restoration, viewing the audit trails, and resetting the cards.

NTP-K7 Manage the Node Using CTC

Purpose	This procedure manages the node using CTC.
Tools/Equipment	None
Prerequisite Procedures	Login to CTC in *System Setup and Software Installation Guide for Cisco NCS 4000 Series*
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Perform any of the following tasks as needed:

- DLP-K59 Set Up Name, Date, and Time Information Using CTC, on page 2
- DLP-K84 Back Up the Configuration Using CTC, on page 4
- DLP-K85 Restore the Configuration Using CTC, on page 5
- DLP-K86 View and Archive the Audit Trail Records Using CTC, on page 6
- DLP-K64 Monitor Environmental Parameters Using CTC, on page 7
- DLP-K87 Reset Cards Using CTC, on page 9

Stop. You have completed this procedure.

DLP-K59 Set Up Name, Date, and Time Information Using CTC

Purpose	This procedure provisions identification information for the node, including the node name, date, time, and time zone.
Tools/Equipment	None
Prerequisite Procedures	Login to CTC in *System Setup and Software Installation Guide for Cisco NCS 4000 Series*
Required/As Needed	As needed
Onsite/Remote	Onsite
Security Level	Provisioning or higher

Procedure

Step 1 In the **Node View**, click the **Provisioning** > **General** > **General** tabs.

Step 2 Enter the name of the node for which you want to set the date and time in the **Node Name/TID** field.

Step 3 Click **Create**.
CTC makes use of a Network Time Protocol (NTP) or Simple Network Time Protocol (SNTP) server to set the date and time of the node. It ensures that all the network nodes use the same date and time reference. The server synchronizes the nodes time after power outages or software upgrades.

Step 4 In the **Create NTP/SNTP** dialog box, enter the following information:

- Peer/Server—Choose **Peer or Server** from the drop-down list.
- IP Address— Click **IPv4 Address**or **IPv6 Address** radio button. Enter IPv4 or IPv6 address or hostname of the NTP/SNTP server that provides clock synchronization.

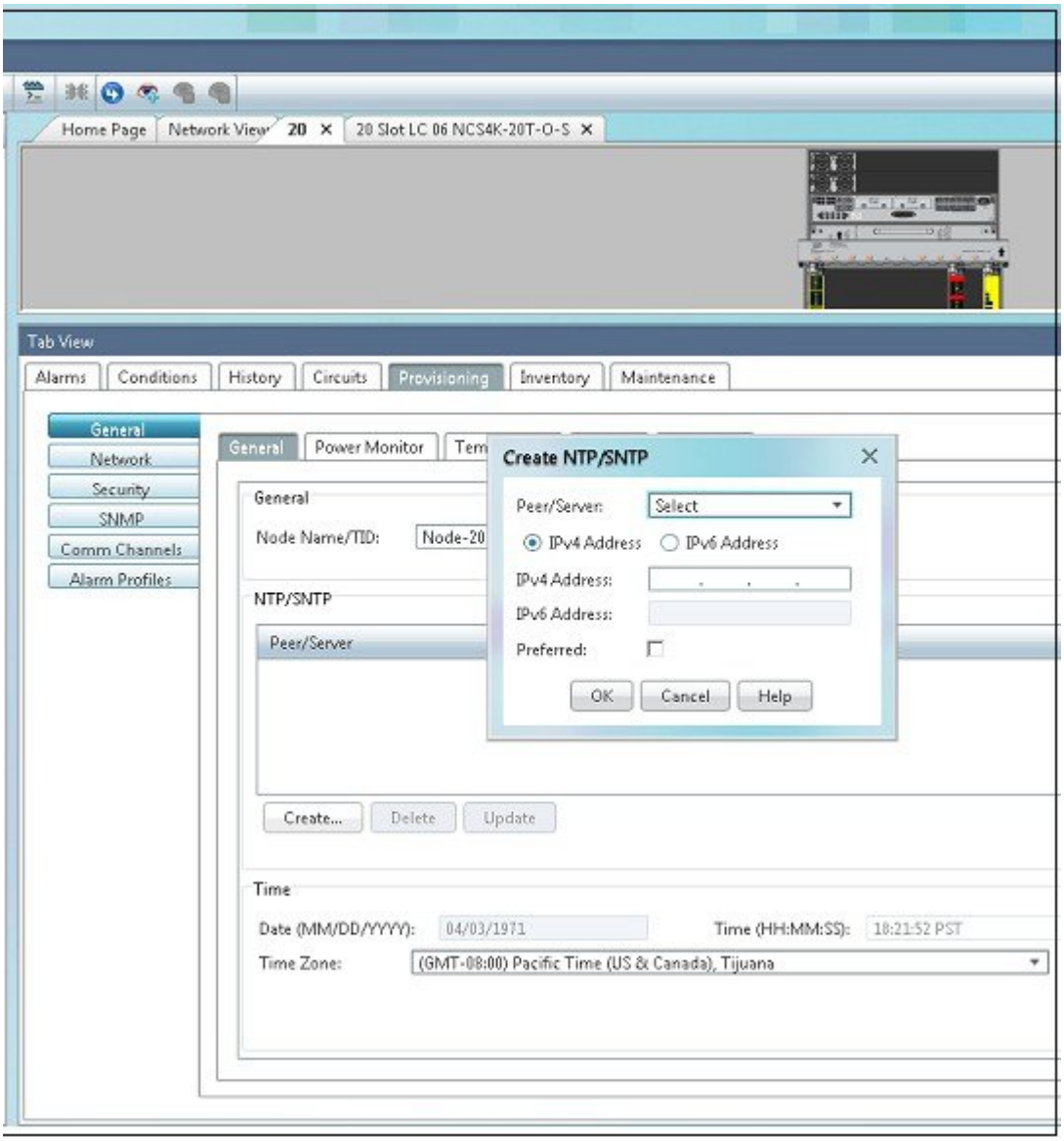
- Preferred—Check the check box if the peer is the preferred server that provides clock synchronization.

Step 5 Click **OK** to set the date and time of the node.

Step 6 If you do not want to use the NTP/SNTP server for date and time, complete the date and time fields manually. The node will use these fields for alarm dates and times. By default, CTC displays all the alarms in the CTC computer time zone for consistency. In **Time** area, enter the following information:

- Date—Enter the current date in the MM/DD/YY format, for example, September 24, 2002 is 9/24/2002.
- Time—Enter the current time in the Hours:Minutes:Seconds format, for example, 11:24:58. The node uses a 24-hour clock, so 10:00 PM is entered as 22:00:00.
- Time Zone—Select the required time zone from the drop-down list. Choose a city within your time zone from the drop-down list. The list displays the 80 World Time Zones from -11 through 0 (GMT) to +14. Continental United States time zones are GMT-05:00 (Eastern), GMT-06:00 (Central), GMT-07:00 (Mountain), and GMT-08:00 (Pacific).

Step 7 Click **Apply**.



Step 8 Return to your originating procedure (NTP).

DLP-K84 Back Up the Configuration Using CTC

Purpose	This procedure stores a backup version of the Cisco NCS 4000 node configuration on the workstation running CTC or on a network server.
Tools/Equipment	None

Prerequisite Procedures	Login to CTC in *System Setup and Software Installation Guide for Cisco NCS 4000 Series*
Required/As Needed	Required. Cisco recommends performing a configuration backup at approximately weekly intervals and prior to and after configuration changes.
Onsite/Remote	Onsite or remote
Security Level	Maintenance or higher

Procedure

Step 1 In **Node View**, click the **Maintenance > Database** tabs.

Step 2 Click **Backup**.

Step 3 Save the current configuration on the workstation's hard drive or on network storage. Use an appropriate file name with the file extension; for example, config.txt.

Step 4 Click **Save**.

Step 5 Click **OK** in the confirmation dialog box.

Step 6 Return to your originating procedure (NTP).

DLP-K85 Restore the Configuration Using CTC

Purpose	This procedure restores the NCS 4000 configuration from the configuration file on the workstation running CTC or on a network server.
Tools/Equipment	None
Prerequisite Procedures	• Login to CTC in *System Setup and Software Installation Guide for Cisco NCS 4000 Series* • DLP-K84 Back Up the Configuration Using CTC, on page 4
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Maintenance or higher

Procedure

Step 1 In node view, click the **Maintenance > Database** tabs.
Step 2 Click **Restore**.
Step 3 Locate the backup configuration file stored on the workstation running CTC or on a network server.
Step 4 Click **Open**.
Step 5 Click **OK** in the confirmation dialog box to restore the NCS 4000 configuration.
Step 6 Return to your originating procedure (NTP).

DLP-K86 View and Archive the Audit Trail Records Using CTC

Purpose	This procedure explains how to view and archive audit trail records.
Tools/Equipment	None
Prerequisite Procedures	Login to CTC in *System Setup and Software Installation Guide for Cisco NCS 4000 Series*
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

In NCS 4000, audit trail is used to view the list of all the configuration commands issued to the node. Audit trail records are useful for maintaining security, recovering lost transactions, and enforcing accountability. Accountability refers to tracing user activities; that is, associating a process or action with a specific user.

You need to archive the audit trail logs to maintain a record of actions performed for the node. If the audit trail log is not archived, the oldest entries are overwritten after the log reaches capacity.

Procedure

Step 1 In **Node View**, click the **Maintenance > Audit** tabs.
Step 2 Click **Retrieve**.
The most recent audit trail records appears in the Audit tab.
Step 3 Click **Archive**.
The Archive Audit Trail dialog box appears to store the audit trail log entries in a user generated file.
Step 4 Navigate to the directory (local or network) where you want to save the file.
Step 5 Enter a name in the File Name field.
Step 6 Click **Save** and click **OK**.

640 entries are saved in this file. The subsequent entries continue with the next number in the sequence.

Note Archiving does not delete entries from the CTC audit trail log. However, the entries will be deleted by the system after the log capacity is reached. If you archived the entries, you cannot re-import the log file back into CTC and will have to view the view in a different application such as Microsoft Word.

Step 7 Return to your originating procedure (NTP).

DLP-K64 Monitor Environmental Parameters Using CTC

Purpose	This procedure monitors the environmental parameters of the Cisco NCS 4000 chassis.
Tools/Equipment	None
Prerequisite Procedures	Login to CTC in *System Setup and Software Installation Guide for Cisco NCS 4000 Series*
Required/As Needed	As needed
Onsite/Remote	Onsite
Security Level	Provisioning or higher

Procedure

Step 1 In the **Node View**, click the **Provisioning** > **General** tabs.

Step 2 Click the **Power Monitor** sub-tab.
This sub-tab dynamically displays the power consumption values of the NCS 4000 chassis. The values are displayed based on the input voltage going into the system.

- Equipments—Displays the route processors and power filters of the chassis.
- Card number/Equipment Number—Displays the route processor card numbers and power filter numbers.
- Module Sensor—Displays the module sensor name of the selected equipment.
- Value (MilliAmperes)—Displays the module sensor values (in MilliAmperes) of the selected equipment.

Step 3 Click the **Temperature** sub-tab.
This sub-tab displays the input temperature of the NCS 4000 chassis.

- Equipments—Displays the route processors and power filters of the chassis.
- Card number/Equipment Number—Displays the route processor card numbers and power filter numbers.
- Module Sensor—Displays the module sensor name of the selected equipment.

- Value (Celsius)—Displays the module sensor values (in Celsius) of the selected equipment.

Step 4 Click the **Voltage** sub-tab.
This sub-tab displays the input voltage of the NCS 4000 chassis.

- Equipments—Displays the route processors and power sensor name of the module card.
- Card number/Equipment Number—Displays the route processor card numbers and power filter numbers.

Step 5 Click the **Fan Speed** sub-tab.
This sub-tab displays the input values of fan speed supply in the NCS 4000 chassis. The values are displayed based on the input speed going into the fan.

- Equipments—Displays the route processors of the chassis.
- Router name (0/FT0)—Displays all the fan tray names.
- Module Sensor—Displays the speed sensor of the module.
- Value (RPM)—Displays the module sensor speed (in RPM) of the selected equipment.

Step 6 Return to your originating procedure (NTP).

Equipment Inventory

In node view, the Inventory tab displays information about the NCS 4000 equipment, including:

- Location—Identifies where the equipment is installed, either chassis or slot number.
- Eqpt Type—Displays the type of equipment.
- Admin State—Changes the service state of the card unless network conditions prevent the change.

  The administrative state changes to OOS,DSBLD when the card is shut down due to insufficient power.
- Service State—Displays the current card service state, which is an autonomously generated state that gives the overall condition of the card. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State.
- Description—Displays the description of the equipment.
- HW Part #—Displays the hardware part number; this number is printed on top of the card.
- Replaceable—Indicates whether an equipment can be replaced or not.
- Serial #—Displays the equipment serial number; this number is unique to each card.
- Uptime—Displays the time from the last boot.
- PCA#—
- Product ID—Displays the manufacturing product identifier for a hardware component, such as a fan tray, chassis, or card.
- Version ID—Displays the manufacturing version identifier for a fan tray, chassis, or card.

- CLEI—Displays the Common Language Equipment Identifier code.
- HW ID—Displays the hardware identifier of the equipment.

DLP-K87 Reset Cards Using CTC

Purpose	This procedure resets the cards using CTC.
Tools/Equipment	None
Prerequisite Procedures	"Login to CTC" in *System Setup and Software Installation Guide for Cisco NCS 4000 Series*
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Superuser only

Only the hard reset of the card is supported. The hard reset temporarily removes power from the card and clears all the buffer memory.

Procedure

Step 1 In node view, click the **Inventory** tab.

Step 2 Choose a card and click **Hard-Reset Card** to initiate a hard reset.

Step 3 Click **Yes** when the confirmation dialog box appears.

Step 4 (Only for Route Processor cards) Click **Close** when the "Lost connection to node, changing to Network View" dialog box appears.

Step 5 Return to your originating procedure (NTP).

Firewall Ports

The following table lists the ports that must be enabled to establish a communication channel with the NE (controller card).

Table 1: Firewall Ports for Various Sessions

Session Type	Session Description	Mode	Port Number	Firewall ACL
HTTP	HTTP port on NE	Standard	80	Inbound
		Secure	443 for SSL	Inbound
SSH	SSH port on NE	Secure	22	Inbound
Telnet	Telnet port on NE	Standard	23	Inbound
TL1	TL1 port on NE	Standard	2361,3082,3083	Inbound
SNMP	SNMP listener port on NE	Standard	161	Inbound
		Secure		
	SNMP trap listener port on the machine receiving the traps	Standard	162 (default); user configurable to any port between 1024 to 65535	Outbound
		Secure		