COPY Commands

This chapter provides copy (COPY) commands for the Cisco NCS 2002 and Cisco NCS 2006.

10.1 COPY-IOSCFG

The Copy Cisco IOS Configuration File (COPY-IOSCFG) command supports the following types of operations on the Cisco IOS configuration file of ML-Series Ethernet cards:

1. Uploading of startup Cisco IOS configuration file from the network to the node.

   FTP is the only protocol allowed for uploading. When doing this operation, the SRC field must be an FTP URL string specifying the user name and password for FTP authentication, and specifying the host and the directory to locate the startup configuration file from the network. The DEST field must be a string of "STARTUP".

2. Downloading of startup Cisco IOS configuration file from the node to the network.

   FTP is the only protocol allowed for downloading. When doing this operation, the SRC field must be a string of "STARTUP". The DEST field must be a FTP URL string specifying the user name and password for FTP authentication, and specifying the host and the directory to store the startup configuration file.

Usage Guidelines

- This FTP timeout is 30 seconds and is not configurable.

- The Cisco IOS configuration file is unique for each ML-Series card, and is specified by the SLOT number in the AID field of the command.

- In the gateway network element/end network element (GNE/ENE) environment, you are not allowed to download (backup the Cisco IOS configuration file through TL1 if a GNE firewall exists. Any such attempt will receive a "Data Connection Error" from the GNE. For the upload of Cisco IOS configuration file through TL1, the GNE will allow it to go through the firewall only if the file contains the header "! Cisco IOS config <text>". If the configuration file does not contain this header, GNE will block the uploading with "Data Connection Error."

- The format of the FTP URL string used in the SRC or DEST field of the command is as follows:

  - In a nonfirewall environment, the format of the URL should be:

    "FTP://[FTPUSER[:FTPPASSWORD]]@FTPHOST/PACKAGE_PATH"

    where:

    FTPUSER is the user ID to connect to the computer with the package file.

<FTPPASSWORD> is the password used to connect to the computer with the package file.

<FTPHOST> is the IP address of the computer with the package file. Domain name system (DNS) lookup of hostnames is not supported.

<PACKAGE_PATH> is the long path name to the package file.

Note that USERID and PASSWORD are optional if the user does not need to log into the host computer. Also note that the password might be optional if the user does not need to log in. All the other portions of the URL are required, including the initial "FTP:\\" string.

– In a firewall environment, the hostname should be replaced with a list of IP addresses each separated by the "@" character. The first IP address should be for the machine where the package file is stored. Subsequent IP addresses should be for firewall machines moving outwards towards the edge of the network, until the final IP address listed was the machine that outside users first access the network.

For example: if your topology is "FTPHOST <-> GNE3 <->GNE2 <-> GNE1 <-> ENE", your FTP URL will be:

FTP://FTPUSER:FTPPASSWORD@FTPHOST@GNE3@GNE2@GNE1/PACKAGE_PATH

Category   File Transfer

Security   Provisioning

Input Format   COPY-IOSCFG:[<TID>]:<AID>:<CTAG>::SRC=<SRC>,DEST=<DEST>,[FTTD=<FTTD>];

Input Example   COPY-IOSCFG::SLOT-1:CTAG::SRC="LONG_FTP_PATH",DEST="STARTUP",
FTTD="FTTD_URL";

Table 10-1   COPY-IOSCFG Command - Parameter Support

Input Parameters	Description
<AID>	Access identifier. Specifies the slot number of the card where the Cisco IOS configuration file belongs. AID is from the 27.13 EQPT, page 27-21.
<SRC>	Source AID. Specifies where the Cisco IOS configuration file is copied from. SRC is a string.
<DEST>	Specifies where the Cisco IOS configuration file is copied to. DEST is a string.
<FTTD>	FTTD is a string.

10.2 COPY-RFILE

The Copy File (COPY-RFILE) command downloads a new software package from the location specified by the FTP URL. It is also used to backup and restore the system database.

Prerequisite   To run the **COPY-RFILE** command, do the following:

- Run the FTP server on the remote machine.

- Register the FTP server on the GNE using the **ENT-FTPSERVER** command.

Here is an example that explains the execution of **COPY-RFILE** command:

```
> ENT-FTPSERVER:::A:::IPADDR=72.163.210.211,ENABLE=Y,IPMASK=255.255.255.
> 0,TIMER=0;
Infy600-162 2009-01-23 07:18:27
M  A COMPLD
;
>
> RTRV-FTPSERVER:::A;
Infy600-162 2009-01-23 07:18:43
M  A COMPLD
   "IPADDR=10.77.29.252,IPMASK=255.255.255.0,ENABLE=Y,TIMER=0"
   "IPADDR=72.163.210.211,IPMASK=255.255.255.0,ENABLE=Y,TIMER=0"
   "IPADDR=64.103.135.83,IPMASK=255.255.255.0,ENABLE=Y,TIMER=0"
   "IPADDR=10.65.72.136,IPMASK=255.255.255.0,ENABLE=N,TIMER=0"
;
>
```

Usage Guidelines   To upload package files or restore databases from a host, the host must be running an FTP server application. If the host is not running an FTP server application, the command fails, indicating that the NE was not able to connect to the remote IP address (host). A host can either be a PC or a workstation running an FTP server application.

Note   In Release 5.0 and later, PACKAGE_PATH is relative to your home directory instead of being an absolute path from the root directory of the NE. If you want to specify an absolute path, start the path with the string '%2F'.

Note   FTP timeout is 30 seconds and is not configurable.

Note
- The SWDL type is used for software package uploads. The RFBU type is used for system database backups, and the RFR type is used for system database restores. The SRC input is required when the type is SWDL or RFR. The DEST input is needed when the type is RFBU. The SRC and DEST inputs cannot both be used in the same command.

- FTP is the only allowed file transfer method.

- The extended FTP URL syntax is required by the COPY-RFILE syntax.

- FTP_PORT defaults to 21 and is optional. Leaving this field blank defaults to 21.

- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.

Category   File Transfer

Security   Superuser

Input Format   COPY-RFILE:[<TID>]:[<SRC>]:<CTAG>::TYPE=<XFERTYPE>,[SRC=<SRC1>],
[DEST=<DEST>],[OVWRT=<OVWRT>],[FTTD=<FTTD>][FORCEENABLE=<FORCEENABLE>];

Input Example   COPY-RFILE:HERNDON:RFILE-PKG:703::TYPE=SWDL,SRC="LONG_FTP_PATH",
DEST="LONG_FTP_PATH",OVWRT=YES,FTTD="FTTD_URI,FORCEENABLE=YES";

Table 10-2   COPY-RFILE Command - Parameter Support

Input Parameters	Description
<SRC>	(Optional) Source AID. The type of file being transferred. From the AID "27.25 RFILE" section on page 27-33.
<XFERTYPE>	The file transfer protocol. The parameter type is TX_TYPE, which specifies the type and direction of the file transferred.
• RFBU	Remote File Backup. Applicable for Maintenance User (and above).
• RFR	Remote File Restore. Applicable for Superuser.
• SWDL	Software Download. Applicable for Maintenance User (and above).
<SRC1>	(Optional) Specifies the source of the file to be transferred. Only the FTP URL is supported. In a nonfirewall environment, the format of the URL should be: "FTP://FTP_USER[:FTP_PASSWORD]]@FTP_HOST_IP[:FTP_PORT], /PACKAGE_PATH[;TYPE=I]" where: • <FTP_USER> is the user ID to connect to the computer with the package file. • <FTP_PASSWORD> is the password used to connect to the computer with the package file. • <FTP_HOST_IP> is the IP address of the computer with the package file, DNS lookup of hostnames is not supported. • <FTP_PORT> defaults to 21. • <PACKAGE_PATH> is the long path name to the package file starting from the home directory of the logged-in user. Userid and password are optional if the user does not need to log into the host computer. All the other portions of the URL are required, including the initial "FTP://" string. In a firewall environment, the hostname should be replaced with a list of IP addresses separated by a "@" character. The first IP address should be for the machine where the package file is stored. Subsequent IP addresses should be for firewall machines moving outwards towards the edge of the network, until the final IP address listed is the machine that outside users first access the network. For example, if the topology is "FTP_HOST_IP <-> GNE3 <->GNE2 <-> GNE1 <-> ENE", the FTP URL is: FTP://FTP_USER:FTP_PASSWORD@FTP_HOST_IP@GNE3@GNE2@ GNE1/PACKAGE_PATH The FTP_HOST_IP must be one of the IP addresses that is configured on the node as a secure FTP Host. SRC1 is a string.

Table 10-2   *COPY-RFILE Command - Parameter Support*

Input Parameters	Description
OVWRT	(Optional) If OVWRT is YES, the files should be overwritten. If OVWRT is NO, the file transfers will fail if the file already exists at the destination. Using the NO value will result in a error message. The NO value is not supported for database restore or software download. the parameter type is YES_NO, which indicates whether the user's password is about to expire; the user is logged into the NE; or the user is locked out of the NE.
• NO	No
• YES	Yes
<FTTD>	(Optional) The format of the URI should be "FTTD://[FTTD_USER][:FTTD_PASSWORD]]@FTTD_HOST_TID" where: • FTTD_USER is the user ID to connect to the FTTD host. • FTTD_PASSWORD is the password used to connect to FTTD host. • FTTD_HOST_IP is the TID of the FTTD host/. DNS and network service access point (NSAP) names are not supported. FTTD is a string.
<FORCEENABLE>	(Optional) Indicates whether the command should proceed even if there are Database Out of Sync alarms.
• YES	Yes
• NO	No

10.2   COPY-RFILE