Carrier VoIP

Core and Billing Manager 850 Configuration Management

NN10353-511

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Contents

Core and Billing Manager 850 Configuration Management

This NTP contains the procedures used for configuration software applications that run on the core manager.

New in this release for Core and Billing Manager 850 Configuration Management in SN09U

Features changes

The following feature-related changes have been made in the documentation:

- With the addition of new role groups, the CBM user group improvements feature allows you to perform CBM maintenance procedures without having to be the root user. The CBM user group improvements feature required changes to the procedures that require new authorization level and access:
  - addition of a statement in the prerequisites section indicating the authorization level required to complete the procedure
  - if non-restricted shell access is required to complete the procedure, addition of a statement in the prerequisites section indicating that non-restricted shell access is required
  - addition of a table in the prerequisites section listing procedures relating to authorization level and access
- The Passphrase Protected Keys for SSH feature required the procedure to be the updated, with information pertaining to key-based (public key) authentication

Configuring a Virtual IP Address on an SPFS-Based Server

Application

Use this procedure to configure a virtual IP address on a Server Platform Foundation Software (SPFS) based server. This procedure applies to simplex and high availability (HA) servers. An HA server refers to a Sun Netra 240 server pair.

A virtual IP address is required for the Audio Provisioning Server (APS), which resides on the same SPFS-based server as the CS 2000 Management Tools software (CS2M). A virtual IP address is also required for the Integrated Element Management System (IEMS) when the IEMS is on the same SPFS-based server as the CS 2000 Management Tools software (CS2M).

Prerequisites

You need the root user ID and password for the server on which you are configuring the virtual IP address.

Prerequisites for Core and Billing Manager 850

In order to perform this procedure, you must have the following authorization and access:

- You must be a user in a role group authorized to perform config-admin actions.
- You must obtain non-restricted shell access.

For more information about how to log in to the CBM as an authorized user, how to request a non-restricted shell access, or how to display actions a role group is authorized to perform, review the procedures in the following table.

Related procedures

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Requesting non-restricted shell access	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

Action

Perform the following steps to complete this procedure.

ATTENTION
In a two-server configuration, perform the steps that follow on the Active server.

Configure a virtual IP address

Step	Action

At your workstation

1 Log in to server by typing

```
> telnet <server>
```

and pressing the Enter key.

where

`server` is the IP address or host name of the SPFS-based server on which you are configuring the virtual IP address

In a two-server configuration, enter the physical IP address of the Active server (unit 0 or unit 1).

2 When prompted, log in as root .

In a two-server configuration, ensure you are on the Active server by typing ubmstat. If *ClusterIndicatorSTBY* is displayed in the response, which indicates you are on the Inactive server, log out of that server and log in to the other server through telnet using the physical IP address of the other unit. The response must display *ClusterIndicatorACT*, which indicates you are on the Active server.

3 Access the command line interface by typing

```
# cli
```

and pressing the Enter key.

Example response

```
Command Line Interface
 1 - View
2 - Configuration
3 - Other
X - exit
select -
```

4 Enter the number that corresponds to the "Configuration" option in the menu.

Example response

```
Configuration
```

```
  1 - NTP Configuration
  2 - Apache Proxy Configuration
  3- OAMP Application Configuration
  4- CORBA Configuration
  5- IP Configuration
  6- DNS Configuration
  7- Syslog Configuration
  8- Remote Backup Configuration
 9 - Database Configuration
 10 - NFS Configuration
 11 - Bootp Configuration
 12 - Restricted Shell Configuration
 13 - Security Services Configuration
 14 - Disk Drive Upgrade
 15 - Login Session
 16 - Location Configuration
 17 - Cluster Configuration
 18 - Succession Element Configuration
 19 - snmp_poller (SNMP Poller Configuration)
 20 - backup_config (Backup Configuration)
X - exit
Select -
```

5 Enter the number that corresponds to the "IP Configuration" option in the menu.

Example response

```
IP Configuration
 1 - config_router (Configure Default
Router and Netmask)
 2 - config_data (Configure System Data IP Addresses)
 3 - ipsecike_config (Configure IPSec/IKE Rules)
 4 - Enable_2network (Enable Second Network
Interface)
 5 - Config_data_2network (Configure Second
Network IP Addresses
 6 - Disable_2network (Disable Second
Network     Interface)
X - exit
select -
```

6 Enter the number that corresponds to the "config_data" option in the menu.

Example response

```
===Executing "config_data"
WARNING: Changing the network settings will effect all
applications!  Improper network configuration will
result in loss of service!  Applications may require
restart or reconfiguration after network changes
```

```
CAUTION: You are not accessing this tool via the system
console.  Changing network configuration may disrupt
this session.
CAUTION: HTTPS Certificate is installed for web
services.  Changing the hostname or ip may require an
updated certificate.
hostname:           <hostname>
ip address:             <ip address>
Enter the hostname for this system [hostname]
```

7 When prompted, enter the hostname for this SPFS-based server, or press the Enter key to accept the default value if one is specified.

Example response

```
Enter ip address for <hostname> [00.00.00.00]
```

8 When prompted, enter the IP address for this SPFS-based server, or press the Enter key to accept the default value if one is specified.

Example response

```
Configure additional ip address?  [yes]
```

9 When prompted, indicate whether you want to configure an additional IP address.

If you enter	Do
yes	step 12
no	step 15

10 When prompted, enter the virtual IP address you want to configure on this server, or press the Enter key to accept the default value if one is specified.

Example response

```
Enter application for ip address <ip address>
```

11 When prompted, enter the application name for the additional IP address you just specified, or press the Enter key to accept the default value if one is specified.

When configuring a virtual IP address for APS, the application name is APS. When configuring a virtual IP address for IEMS, the application name is IEMS.

The system allocates a hostname for each virtual IP address that is configured. The hostname is in the form of <spfs_primary_hostname-application>, for example, “wxe0s00j-iems” when the virtual IP address is set up for IEMS. Hostnames are stored in file” /etc/hosts” on the system.

Example response

```
Configure additional ip address?  [no]
```

12 Repeat step 11.

13 When prompted, confirm the settings by typing

`ok`

and pressing the Enter key.

*Example response on an **HA system***

```
The network changes have been made, however the cluster
requires a restart of both units.  The units must be
restarted in the below order.
1) Login as root on the console of the standby unit and
shut it down with the command: "shutdown -i 0 -y".
2)  After the standby unit has shutdown, restart the
active unit with the command: "shutdown -i 6 -y".
3) After the restart is complete, the new network
settings are in effect.
4) Boot the standby unit with the command "boot".
==="config_data" completed successfully
```

*Example response on a **simplex system***

```
The network changes have been made, however a restart
is required to use the new network settings.  Reboot to
ensure all applications are restarted.  Exit this "cli"
tool and reboot using the Solaris command "shutdown -i
6 -y".
==="config_data" completed successfully
```

14 Exit each menu level of the command line interface to eventually return to the command prompt, by typing

`select - x`

and pressing the Enter key.

If you have	Do
a simplex system	step 17 only
an HA system	step 18

15 Reboot the server by typing

`# shutdown -i 6 -y`

and pressing the Enter key.

You have completed this procedure.

At the console of the Inactive node

16 Log in to the inactive node through the console (port A) using the root user ID and password.

Ensure you are on the Inactive server by typing ubmstat. If *ClusterIndicatorACT* is displayed in the response, which indicates you are on the Active server, log out of that server and log in to the other server. The response must display *ClusterIndicatorSTBY*, which indicates you are on the Inactive server.

17 Shutdown the inactive node by typing

```
# shutdown -i 0 -y
```

and pressing the Enter key.

At the console of the active node

18 Log in to the active node through the console (port A) using the root user ID and password.

Ensure you are on the Active server by typing ubmstat. If *ClusterIndicatorSTBY* is displayed in the response, which indicates you are on the Inactive server, log out of that server and log in to the other server through telnet using the physical IP address of the other unit. The response must display *ClusterIndicatorACT*, which indicates you are on the Active server.

19 Restart the active node by typing

```
# shutdown -i 6 -y
```

and pressing the Enter key.

At the console of the Inactive node

20 Boot the inactive node by typing

```
# boot
```

and pressing the Enter key.

You have completed this procedure.

—End—

Configuring log delivery destinations

Purpose

Use this procedure to add an output log device. An output log device is a destination to which your system forwards user-defined streams of logs.

Application

You can add any of the following log devices using the Log Delivery Application Commissioning Tool (logroute):

- a TCP device (a host IP and port on the network)
- a TCP-IN device (a remote IP and a CBM port number)
- a file device (a file on the CBM)

You can configure up to 30 Log Delivery output devices. If you want to

- change any aspect of an existing device, including log routing entries, refer to the procedure "Modifying a log device using logroute" (page 21).
- delete an existing device, refer to the procedure "Deleting a device using logroute" (page 29).
- modify global parameters (parameters that apply to all devices), refer to the procedure "Configuring Log Delivery global parameters" (page 81).

All devices can be accessed either locally or from a remote location (console). To access the devices from a remote console, refer to the procedure "Accessing a TCP or TCP-IN log device from a remote location" in the Fault Management document.

Prerequisites

All users are authorized to perform this procedure.

For information on how to log in to the CBM as an authorized user or how to display information about a user or role group, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

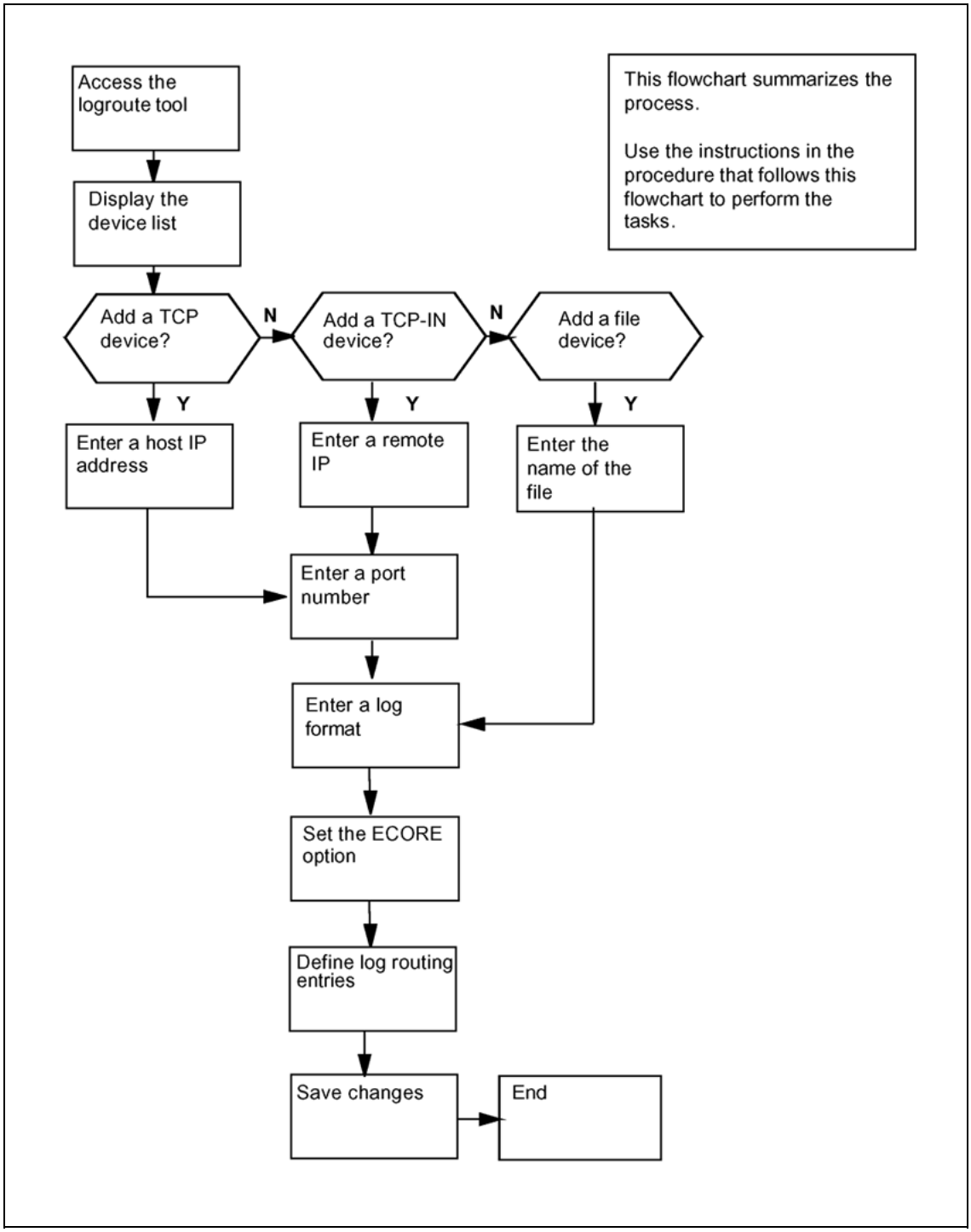
Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321

Task flow diagram

The following task flow diagram provides a summary of the process. Use the instructions in the procedure that follows the flowchart to perform the task.

Task flow for Configuring log delivery destinations



Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Configuring log delivery destinations

Step	Action

At any workstation or console

1 Log into the CBM.

2 Access the logroute tool:

```
logroute
```

The Logroute Main Menu screen appears.

```
                    Logroute Main Menu

            1 - Device List
            2 - Global Parameters
            3 - CM Configuration File
            4 - Gdd Configuration
            5 - Help
            6 - Quit Logroute



   Enter Option ==>
```

3 Display the device list:

```
1
```

The Device List Menu screen appears.

```
                    Device List Menu

            1 - View Device
            2 - Add Device
            3 - Delete Device
            4 - Modify Device
            5 - Help
            6 - Return to Main Menu



   Enter Option ==>
```

4 Begin to add a new log device:

2

The Add Device screen appears.

```
                    Add Device

          1 - Add TCP Device
          2 - Add TCPIN Device
          3 - Add File Device
          4 - Help
          5 - Return to Device List




  Enter Option ==>
```

5 If you want to view the devices currently configured, enter 1 and press the Enter key. Follow the on-screen instructions to display the details for the selected device.

If you want to add a	Do
TCP device	step 6
TCP-IN device	step 9
file device	step 12

6 Start adding a TCP device:

1

Example response:

```
                        TCP Device
  Enter ABORT to return to Add Device Screen

          1 - HOST IP      :
          2 - PORT         :
          3 - FORMAT       : STD
          4 - ECORE        : ON
          5 - Log Routing  :



  Enter host IP address <###.###.###.###> ==>
```

7 Enter a host IP address.

8 When prompted, enter a port number from the range displayed.

Continue with step 14.

9 Start adding a TCP-IN device:

2

Example response:

```
                      TCP-IN Device
  Enter ABORT to return to Add Device Screen

          1 - REMOTE IP      : any
          2 - PORT           :
          3 - FORMAT         : STD
          4 - ECORE          : ON
          5 - Log Routing    :



  Enter remote IP address <###.###.###.###> or a for any ==>
```

10 Enter an authorized remote IP address. Enter **a** if you want to leave the default value of `any`.

11 When prompted, enter an CBM port number.

Continue with step 14.

12 Start adding a file device:

3

Example response

```
                              File
Enter ABORT to return to Previous Screen

          1 - FILENAME      :
          2 - FORMAT        : STD
          3 - ECORE         : ON
          4 - Log Routing   :




Enter file name  ==> /data/logs/
```

13 Enter the name of the file where the logs will be stored.

14 When prompted, enter the log format (STD, STD_OLD, SCC2, or SCC2_OLD).

Enter STD or SCC2 if you want the following information to be displayed in all log reports (otherwise, enter STD_OLD or SCC2_OLD):

- user-defined office ID, same for all logs and streams
- the name of the node (ECORE) from which the log is generated
- the sequence number in dual (global and device) format

The default format is STD.

15 When prompted, set the ECORE option to ON or OFF.

Enter ON, if you want the log-generating node name to be displayed in all reports (the format must be STD or SCC2). Otherwise, enter OFF.

You are now prompted to define a log routing entry for the device that you are adding. Use the following table to determine your next step.

If you want to	Do
suppress logs (cause them not to be routed to this device)	enter **d**, and press the Enter key
un-suppress logs (cause them to be routed to this device)	enter **a**, and press the Enter key

The rules you enter here only accommodate the set of logs defined in the procedure "Specifying the logs delivered from the CM to the core manager" (page 74). Logs suppressed at the CM cannot be unsuppressed for a specific device.

Example response:

```
Enter log identifier ("log_type", or "log_type
log_number") ==>
```

16 Enter a log type, or a combination of log type and log number (separated by a space). The new entry is added to the log routing list on the screen.

An example of a log type is "PM". This entry will suppress or un-suppress all PM logs.

An example of a combined log type and log number is PM 181. This entry will suppress or un-suppress the PM181 logs but leave the routing of other PM logs unchanged.

You can also enter **all**, which will suppress or un-suppress all logs routed to this device.

Example response:

```
Wish to enter more Logrouting Details?  (Y/N)[N]:
```

If you	Do
want to add more routing entries The maximum number of log routing entries is 1024. If you have 1024 entries, and you want to add another one, you must replace one of the existing entries with the new entry.	enter **y**, and return to step 15
do not want to add more routing entries	enter **n**, and go to step 17

17 You are prompted to save the device details. Save the new device:

y

The new device will be added to the system.

Example response:

```
Save data completed -- press return to continue
```

Press the Enter key to return to the Add Device screen.

If you enter **n**, the system returns to the Device List Menu screen. No new device is added to the system.

If you	Do
want to add more devices	go to step 5
do not want to add more devices	go to step 18

18 Return to the Device List Menu screen:

```
5
```

19 Return to the Logroute Main Menu screen:

```
6
```

20 Quit the logroute tool:

```
6
```

21 You have completed this procedure.

—End—

Modifying a log device using logroute

Purpose

Use this procedure to change any parameter of an existing log device, including the routing entries that suppress or un-suppress logs delivered to that device.

The routing rules you enter for each device only accommodate the set of logs defined in the procedure "Specifying the logs delivered from the CM to the core manager" (page 74). Logs that are being suppressed at the CM cannot be un-suppressed for a specific device.

If you want to modify global parameters (parameters that apply to all devices), refer to the procedure Configuring Log Delivery global parameters.

Prerequisites

Procedure	Document
Logging in to the CS 2000 Core Manager	*CS 2000 Core Manager Security and Administration*, NN10170-611
Displaying information about a user or role group	*CS 2000 Core Manager Security and Administration*, NN10170-611

Prerequisites

All users are authorized to perform this procedure.

For information on how to log in to the CBM as an authorized user or how to display information about a user or role group, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

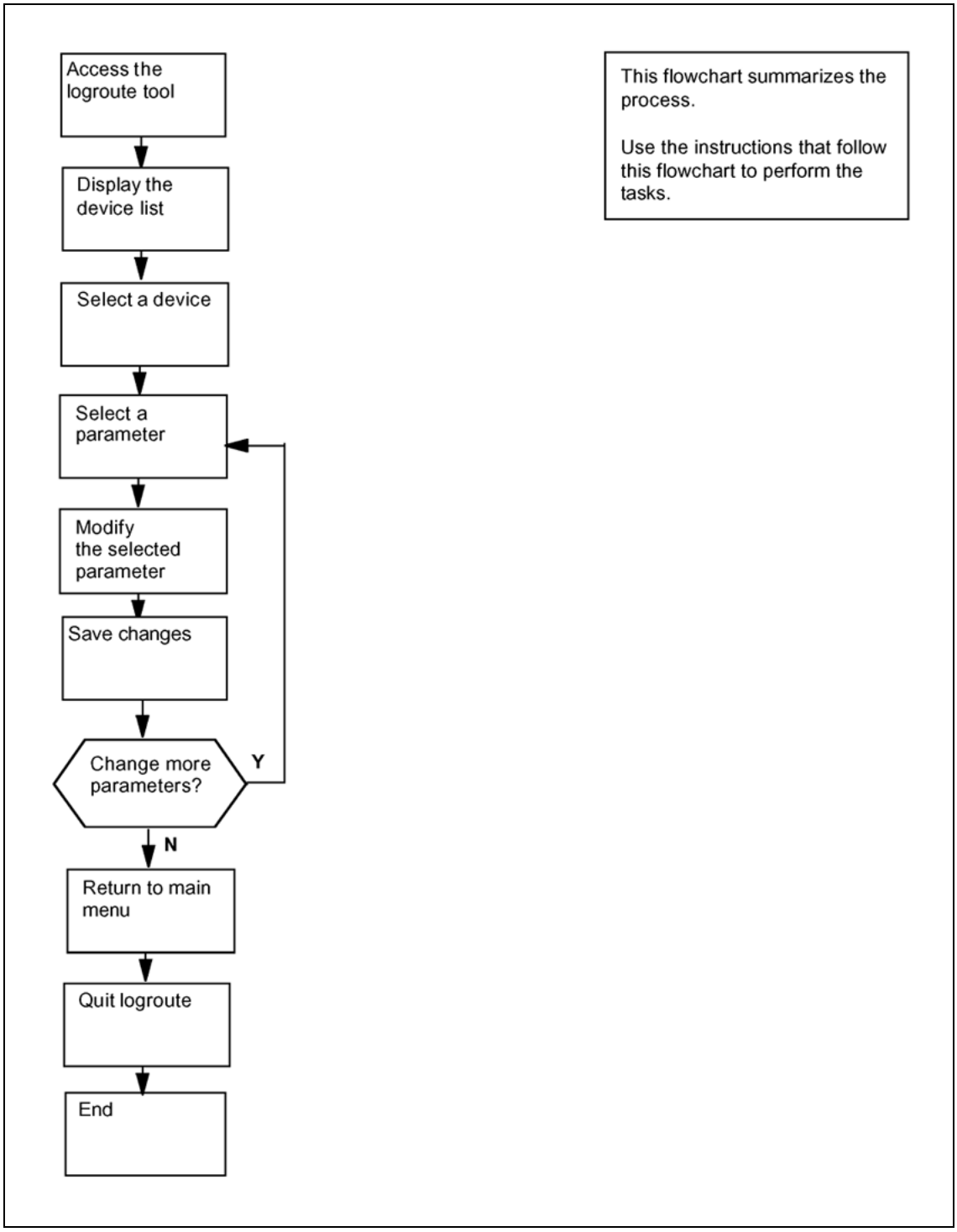
Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321

Task flow diagram

The following task flow diagram provides an overview of the process. Use the instructions in the procedure that follows the flowchart to perform the tasks.

Task flow for Modifying a log device using logroute



Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Procedure

Modifying a log device using logroute

Step	Action

At the VT100 console

1 Log into the core manager.

2 Access the logroute tool:

```
logroute
```

The Logroute Main Menu screen appears.

```
                    Logroute Main Menu

            1 - Device List
            2 - Global Parameters
            3 - CM Configuration File
            4 - Gdd Configuration
            5 - Help
            6 - Quit Logroute



    Enter Option ==>
```

3 Display the device list:

```
1
```

The Device List Menu screen appears.

```
                    Device List Menu

            1 - View Device
            2 - Add Device
            3 - Delete Device
            4 - Modify Device
            5 - Help
            6 - Return to Main Menu



    Enter Option ==>
```

4 Access the Modify Device Menu screen:

4

The system displays all currently configured devices.

Example response:

```
                Modify Device Menu

Enter ABORT to return to Device List Menu...
        Devices:                                    Type
        1 - /data/logs/niru1                        File
        2 - HOST: any             PORT: 8551        TCPIN
        3 - HOST: 47.135.213.86   PORT: 1027        TCP
        4 - HOST: any             PORT: 8556        TCPIN









Enter number of device to change ==>
```

5 Enter the number for the device that you want to modify.

The screen for the selected device is displayed.

Example of a TCPIN device screen (second device in the preceding example):

```
                TCP-IN Device

Enter ABORT to return to Modify Device Menu

        1 -  REMOTE IP              : any
        2 -  PORT                   : 8551
        3 -  FORMAT                 : STD
        4 -  ECORE                  : ON
        5 -  Log Routing            :
             ADDREP ALL
             ADDREP TRK 101
             ADDREP TRK 100
             ADDREP TRK 102



Enter number of device parameter to change ==>
```

6 Enter the number for the parameter that you want to modify.

If the parameter that you selected is	Do
REMOTE IP, HOST IP, PORT, or FILENAME	step 7
FORMAT	step 8
ECORE	step 9
Log Routing	step 10

7 At the prompt, enter a new value for the selected parameter. Continue with step 16.

8 At the prompt, enter the new log format (from the range displayed).

Enter STD or SCC2 if you want the following information to be displayed in all log reports:

- user-defined office ID, same for all logs and streams
- the name of the node (ECORE) from which the log is generated
- the sequence number in dual (global and device) format

Continue with step 16.

9 At the prompt, change the setting for the ECORE option (ON or OFF).

If you enter ON, the name of the node from which the log is generated is displayed in all log reports (for STD and SCC2 formats only).

Continue with step 16.

10 The system displays all existing logrouting entries for the selected device, and prompts you to add or delete an entry. Complete the following steps to add or delete a routing entry.

If you want to	Do
add an entry	enter **a**, and continue with step 11
delete an entry	enter **d**, and continue with step 14

11 At the prompt, enter one of the following values:

- **a**

  if you want to un-suppress logs (cause them to be routed to the device)

- **d**

  if you want to suppress logs (cause them not to be routed to the device)

Response

```
Enter log identifier ("log_type", or "log_type
log_number") ==>
```

12 Enter a log type or a combination of log type and log number (separated by a space). The new entry is added to the log routing list on the screen. For example, an entry of:

- PM will suppress or un-suppress all PM logs. An entry of
- PM 100 will suppress or un-suppress the PM100 logs, but leave the routing of other PM logs unchanged.

Example response:

```
Wish to enter more Logrouting Details (Y/N) [N]:
```

13 If you want to suppress or un-suppress more logs, enter y, and go back to step 11. Otherwise, enter n, and continue with step 16.

14 Enter the number of the entry that you want to delete from the log routing list. The entry you specified is removed from the display.

Example response:

```
Wish to delete more Logrouting Details (Y/N) [N]:
```

15 If you want to delete more entries, enter **y**, and repeat step 14.

If you do not want to delete any more entries, enter n, and continue with step 16.

16 When prompted, save your changes:

y

Example response:

```
WARNING: Some log devices will be restarted.  Do you
wish to proceed?
```

17 Confirm the save command:

y

Example response:

```
Save data completed -- press return to continue
```

Press the Enter key to confirm the change.

If you do not want to save your change, enter n and press the Enter key.

If you	Do
want to make more changes for the selected device	step 6
do not want to make more changes for the selected device	step 18

18 Type **abort** and press the Enter key. The system returns to the Modify Device Menu screen.

19 If you want to modify another device, go back to step 5. Otherwise, continue with step 20.

20 Exit the Modify Device Menu screen:

```
abort
```

21 Return to the Logroute Main Menu screen:

```
6
```

22 Quit the logroute tool:

```
6
```

23 You have completed this procedure.

—End—

Deleting a device using logroute

Purpose

Use this procedure to delete a log device using the Log Delivery Application Commissioning Tool (logroute). This procedure allows you to delete any one of the following devices:

- a TCP device (an IP and port address on the network)
- a TCP-IN device (a port on the core manager)
- a file device (a file on the core manager)

Prerequisites

All users are authorized to perform this procedure.

For information on how to log in to the CBM as an authorized user or how to display information about a user or role group, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

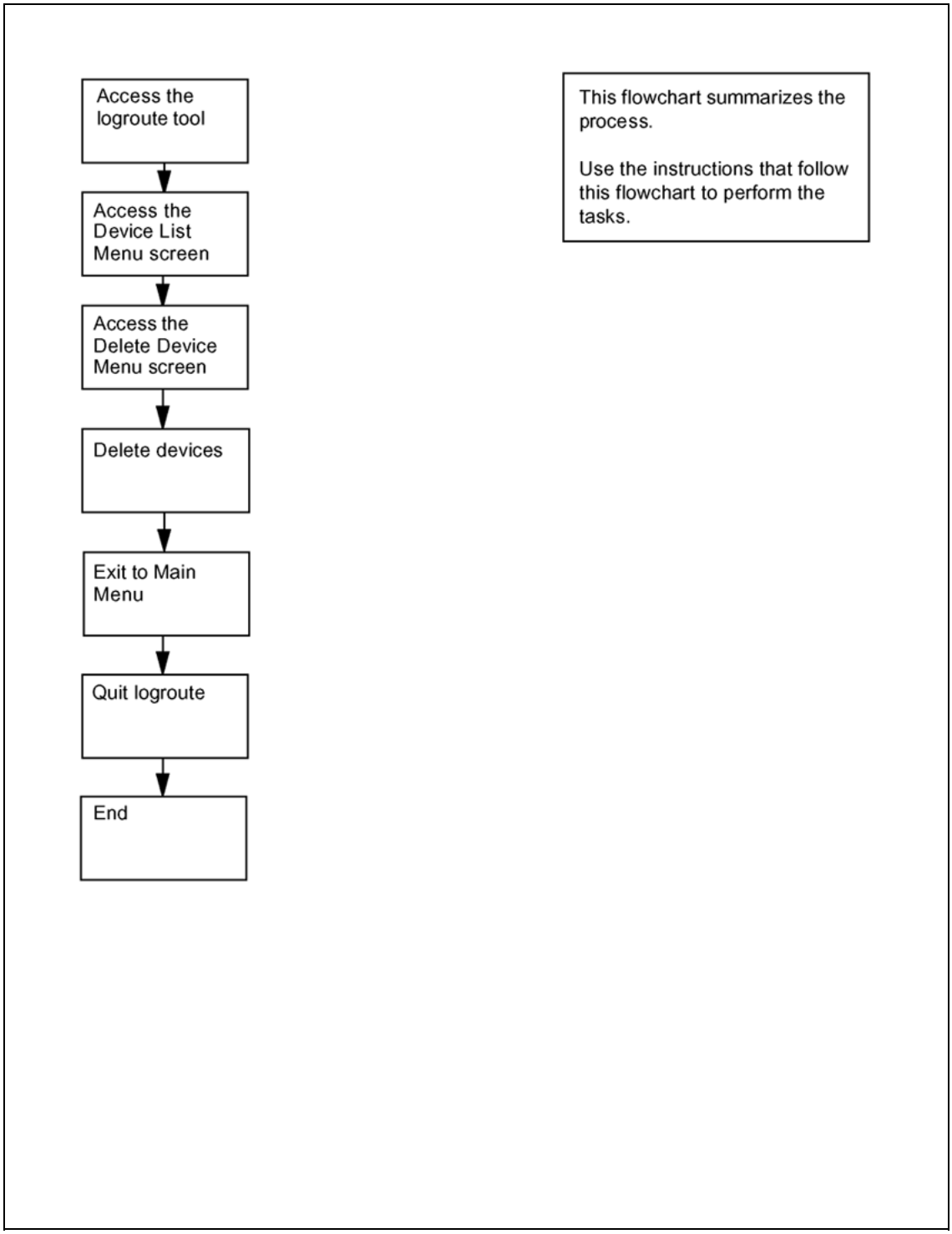
Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321

Task flow diagram

The following task flow diagram provides an overview of the process. Use the instructions in the procedure that follows the flowchart to perform the tasks.

Task flow for Deleting a device using logroute



Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Procedure

Deleting a device using logroute

Step	Action
	At the VT100 console
1	Log into the core manager.
2	Access the logroute tool: `logroute` The Logroute Main Menu screen appears.
3	Display the device list: `1` The Device List Menu screen appears.

```
                    Device List Menu

            1 - View Device
            2 - Add Device
            3 - Delete Device
            4 - Modify Device
            5 - Help
            6 - Return to Main Menu



    Enter Option ==>
```

If you want to view the devices currently configured, enter 1. Follow the on-screen instructions to display the details for the selected device.

4	Access the Delete Device Menu screen: `3` The system displays the list of configured devices and prompts you to enter the number of the device that you want to delete. *Example response:*

```
                    Delete Device Menu
Enter ABORT to return to Device List Menu
          Devices:                                    Type:
          1 - HOST: any              PORT: 8551       TCPIN
          2 - HOST: 10.102.4.4       PORT: 14450      TCP
          3 - /data/logs/faults                       FILE




 Enter device number to delete ==>
```

5 Enter the number of the device you want to delete.

Response

```
Device will be deleted permanently.  Continue...
(Y/N)[N]:
```

6 Confirm that you want to delete the selected device:

`Y`

Example response:

```
Save data completed -- press return to continue
```

If you do not want to delete the selected device, enter **`n`**, press the Enter key, and select a new device to delete.

7 Press the Enter key to confirm that you want to continue.

The device is removed from the list and you are prompted to enter the next device to be deleted.

8 Use the following table to determine your next step.

If you	Do
want to delete another device	step 5
do not want to delete another device	step 9

9 Return to the Device List Menu screen:

`abort`

10 Return to the Logroute Main Menu screen:

`6`

11 Quit the logroute tool:

6

12 You have completed this procedure.

—End—

Configuring log delivery for MDM/PPEM security and audit logs (MDM 601 and PPEM 601)

Purpose

Use this procedure to set up a log device that contains only the security and audit logs that are sent to the core manager's syslog system.

Prerequisites

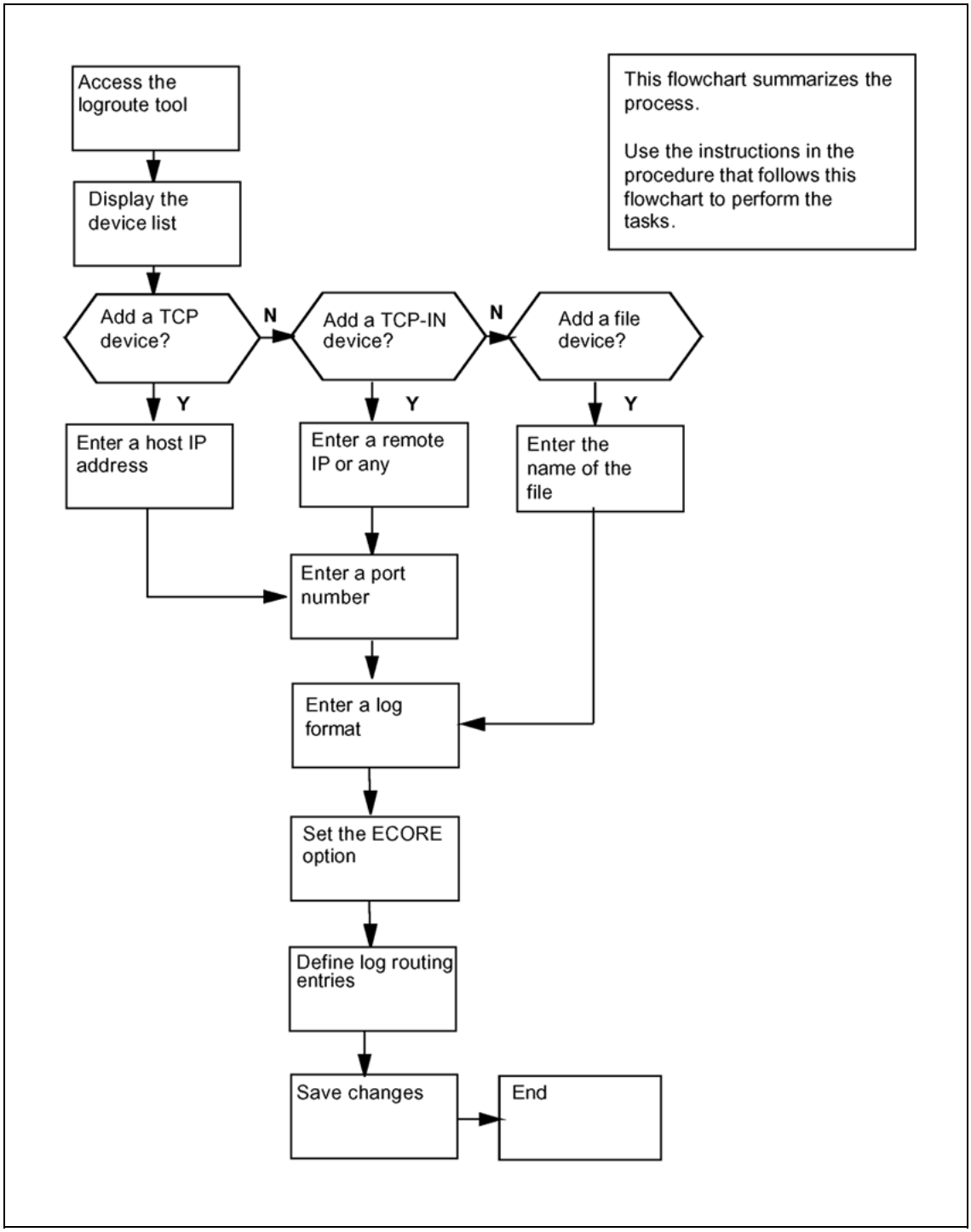
System requirements

The Nortel Multiservice Switch Log Streamer application should be configured on the core manager to retrieve logs from the MDM. To configure the Nortel Multiservice Switch Log Streamer application on the CS 2000 Core Manager, use the procedure Installing and configuring the log delivery application in NN10104-511, *CS 2000 Core Manager Configuration Management*.

Task flow diagram

The following task flow diagram provides a summary of the process. Use the instructions in the procedure that follows the flowchart to perform the task.

Task flow for Configuring log delivery destinations



Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Configuring log delivery for MDM/PPEM security and audit logs (MDM 601 and PPEM 601)

Step	Action

At any workstation or console

1 Log into the core manager.

2 Access the logroute tool:

```
logroute
```

The Logroute Main Menu screen appears.

```
                    Logroute Main Menu

            1 - Device List
            2 - Global Parameters
            3 - CM Configuration File
            4 - Gdd Configuration
            5 - Help
            6 - Quit Logroute



   Enter Option ==>
```

3 Enter "1" to display the device list.

The Device List Menu screen appears.

```
                    Device List Menu

            1 - View Device
            2 - Add Device
            3 - Delete Device
            4 - Modify Device
            5 - Help
            6 - Return to Main Menu



    Enter Option ==>
```

4 Enter "2" to add a new log device.

The Add Device screen appears.

```
                    Add Device

          1 - Add TCP Device
          2 - Add TCPIN Device
          3 - Add File Device
          4 - Help
          5 - Return to Device List




  Enter Option ==>
```

5 Use the following table to determine your next step.

If you want to add a	Do
TCP device	step 6
TCP-IN device	step 18
file device	step 30

6 Enter "1" to add a TCP device.

Example response:

```
                    TCP Device
 Enter ABORT to return to Add Device Screen
          1 - HOST IP     :
          2 - PORT        :
          3 - FORMAT      : STD
          4 - ECORE       : ON
          5 - Log Routing :




 Enter host IP address <###.###.###.###> ==>
```

7 Enter a host IP address.

Example response:

```
                        TCP Device
Enter ABORT to return to Add Device Screen

         1 - HOST IP      : 10.10.10.10
         2 - PORT         :
         3 - FORMAT       : STD
         4 - ECORE        : ON
         5 - Log Routing  :



Enter port number (range - 1024 to 32767) ==>
```

8 Enter a port number from the range displayed.

Example response:

```
                        TCP Device
Enter ABORT to return to Add Device Screen

         1 - HOST IP      : 10.10.10.10
         2 - PORT         : 1111
         3 - FORMAT       : STD
         4 - ECORE        :
         5 - Log Routing  :



Enter format type (STD or SCC2 or STD_OLD or SCC2_OLD)
```

9 Enter the log format (STD, STD_OLD, SCC2, or SCC2_OLD).

Example response:

```
                    TCP Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : 10.10.10.10
        2 - PORT         : 1111
        3 - FORMAT       : SCC2
        4 - ECORE        :
        5 - Log Routing  :



Enter Ecore option (ON or OFF) ==>
```

10 Set the ECORE option to ON or OFF.

Example response:

```
                    TCP Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : 10.10.10.10
        2 - PORT         : 1111
        3 - FORMAT       : SCC2
        4 - ECORE        : ON
        5 - Log Routing  :



Enter - a: addrep or d: delrep ==>
```

11 Enter "a" to add report.

Example response:

```
                        TCP Device
Enter ABORT to return to Add Device Screen

         1 - HOST IP      : 10.10.10.10
         2 - PORT         : 1111
         3 - FORMAT       : SCC2
         4 - ECORE        : ON
         5 - Log Routing :




Enter log identifier (log_type or log_type log_number)
```

12 Enter log identifier as "MDM 601"

Example response:

```
                        TCP Device
Enter ABORT to return to Add Device Screen

         1 - HOST IP      : 10.10.10.10
         2 - PORT         : 1111
         3 - FORMAT       : SCC2
         4 - ECORE        : ON
         5 - Log Routing :
             ADDREP MDM 601




Wish to enter more Logrouting Details? (Y/N)[N] ==>
```

13 Enter "Y" to add more logrouting details.

Example response:

```
                    TCP Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : 10.10.10.10
        2 - PORT         : 1111
        3 - FORMAT       : SCC2
        4 - ECORE        : ON
        5 - Log Routing :
            ADDREP MDM 601



Enter - a: addrep or d: delrep ==>
```

14 Enter "a" to add report.

Example response:

```
                    TCP Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : 10.10.10.10
        2 - PORT         : 1111
        3 - FORMAT       : SCC2
        4 - ECORE        : ON
        5 - Log Routing :
            ADDREP MDM 601



Enter log identifier (log_type or log_type log_number)
```

15 Enter log identifier as "PPEM 601"

Example response:

```
                        TCP Device
Enter ABORT to return to Add Device Screen

         1 - HOST IP      : 10.10.10.10
         2 - PORT         : 1111
         3 - FORMAT       : SCC2
         4 - ECORE        : ON
         5 - Log Routing :
             ADDREP MDM 601
             ADDREP PPEM 601



Wish to enter more Logrouting Details? (Y/N)[N] ==>
```

16 Enter "N" to indicate you don't want to add more logrouting details.

Example response:

```
                        TCP Device
Enter ABORT to return to Add Device Screen

         1 - HOST IP      : 10.10.10.10
         2 - PORT         : 1111
         3 - FORMAT       : SCC2
         4 - ECORE        : ON
         5 - Log Routing :
             ADDREP MDM 601
             ADDREP PPEM 601



Save device Details? (Y/N)[N] ==>
```

17 Enter "Y" to save device details.

The message, "Save data completed -- press return to continue" displays.

Press the Enter key to return to the Add Device screen.

If you enter n, the system returns to the Device List Menu screen. No new device is added to the system.

If you	Do
want to add more devices	go to step 5
do not want to add more devices	go to step 41

18 Enter "2" to add a TCP_IN device.

Example response:

```
                        TCP-IN Device
Enter ABORT to return to Add Device Screen

         1 - HOST IP      :
         2 - PORT         :
         3 - FORMAT       : STD
         4 - ECORE        : ON
         5 - Log Routing  :




Enter remote IP address <###.###.###.###> or a for any
```

19 Enter a remote IP address or "a" for any IP address.

Example response:

```
                        TCP-IN Device
Enter ABORT to return to Add Device Screen

         1 - HOST IP      : any
         2 - PORT         :
         3 - FORMAT       : STD
         4 - ECORE        : ON
         5 - Log Routing  :




Enter port number (range - 8550 to 8579) ==>
```

20 Enter a port number from the range displayed.

Example response:

```
                    TCP-IN Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : any
        2 - PORT         : 8558
        3 - FORMAT       : STD
        4 - ECORE        :
        5 - Log Routing  :



Enter format type (STD or SCC2 or STD_OLD or SCC2_OLD)
```

21 Enter the log format (STD, STD_OLD, SCC2, or SCC2_OLD).

Example response:

```
                    TCP-IN Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : any
        2 - PORT         : 8558
        3 - FORMAT       : SCC2
        4 - ECORE        :
        5 - Log Routing  :



Enter Ecore option (ON or OFF) ==>
```

22 Set the ECORE option to ON or OFF.

Example response:

```
                    TCP-IN Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : any
        2 - PORT         : 8558
        3 - FORMAT       : SCC2
        4 - ECORE        : ON
        5 - Log Routing  :




Enter - a: addrep or d: delrep ==>
```

23 Enter "a" to add report.

Example response:

```
                    TCP-IN Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : any
        2 - PORT         : 8558
        3 - FORMAT       : SCC2
        4 - ECORE        : ON
        5 - Log Routing  :




Enter log identifier (log_type or log_type log_number)
```

24 Enter log identifier as "MDM 601".

Example response:

```
                    TCP-IN Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : any
        2 - PORT         : 8558
        3 - FORMAT       : SCC2
        4 - ECORE        : ON
        5 - Log Routing :
            ADDREP MDM 601



Wish to enter more Logrouting Details? (Y/N)[N] ==>
```

25 Enter "Y" to add more logrouting details.

Example response:

```
                    TCP-IN Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : any
        2 - PORT         : 8558
        3 - FORMAT       : SCC2
        4 - ECORE        : ON
        5 - Log Routing :
            ADDREP MDM 601



Enter - a: addrep or d: delrep ==>
```

26 Enter "a" to add report.

Example response:

```
                    TCP-IN Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : any
        2 - PORT         : 8558
        3 - FORMAT       : SCC2
        4 - ECORE        : ON
        5 - Log Routing :
            ADDREP MDM 601



Enter log identifier (log_type or log_type log_number)
```

27 Enter log identifier as "PPEM 601".

Example response:

```
                    TCP-IN Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : any
        2 - PORT         : 8558
        3 - FORMAT       : SCC2
        4 - ECORE        : ON
        5 - Log Routing :
            ADDREP MDM 601
            ADDREP PPEM 601



Wish to enter more Logrouting Details? (Y/N)[N] ==>
```

28 Enter "N" to indicate you don't want to add more logrouting details.

Example response:

```
                    TCP-IN Device
Enter ABORT to return to Add Device Screen

        1 - HOST IP      : any
        2 - PORT         : 8558
        3 - FORMAT       : SCC2
        4 - ECORE        : ON
        5 - Log Routing  :
            ADDREP MDM 601
            ADDREP PPEM 601



Save device Details? (Y/N)[N] ==>
```

29 Enter "Y" to save device details.

The message, "Save data completed -- press return to continue" displays.

Press the Enter key to return to the Add Device screen.

If you enter **n**, the system returns to the Device List Menu screen. No new device is added to the system.

If you	Do
want to add more devices	go to step 5
do not want to add more devices	go to step 41

30 Enter "3" to add file device.

Example response:

```
                      File
Enter ABORT to return to Add Device Screen

        1 - FILENAME     :
        2 - FORMAT       : STD
        3 - ECORE        : ON
        4 - Log Routing  :




Enter file name ==>
```

31 Enter the file name with the full path, where logs will be stored.

Example response:

```
                        File
Enter ABORT to return to Add Device Screen

          1 - FILENAME     : /cbmdata/00/data/logs/fl1
          2 - FORMAT       : STD
          3 - ECORE        : ON
          4 - Log Routing  :




Enter format type (STD or SCC2 or STD_OLD or SCC2_OLD)
```

32 Enter the log format (STD, STD_OLD, SCC2, or SCC2_OLD).

Example response:

```
                        File
Enter ABORT to return to Add Device Screen

          1 - FILENAME     : /cbmdata/00/data/logs/fl1
          2 - FORMAT       : SCC2
          3 - ECORE        : ON
          4 - Log Routing  :




Enter Ecore option (ON or OFF) ==>
```

33 Set the ECORE option to ON or OFF.

Example response:

```
                        File
Enter ABORT to return to Add Device Screen

         1 - FILENAME     : /cbmdata/00/data/logs/fl1
         2 - FORMAT        : SCC2
         3 - ECORE         : ON
         4 - Log Routing   :




Enter - a: addrep or d: delrep ==>
```

34 Enter "a" to add report.

Example response:

```
                        File
Enter ABORT to return to Add Device Screen

         1 - FILENAME     : /cbmdata/00/data/logs/fl1
         2 - FORMAT        : SCC2
         3 - ECORE         : ON
         4 - Log Routing   :




Enter log identifier (log_type or log_type log_number)
```

35 Enter log identifier as "MDM 601".

Example response:

```
                    File
Enter ABORT to return to Add Device Screen

        1 - FILENAME     : /cbmdata/00/data/logs/fl1
        2 - FORMAT       : SCC2
        3 - ECORE        : ON
        4 - Log Routing  :
            ADDREP MDM 601




Wish to enter more Logrouting details? (Y/N)[N] ==>
```

36 Enter "Y" to add more logrouting details.

Example response:

```
                    File
Enter ABORT to return to Add Device Screen

        1 - FILENAME     : /cbmdata/00/data/logs/fl1
        2 - FORMAT       : SCC2
        3 - ECORE        : ON
        4 - Log Routing  :
            ADDREP MDM 601




Enter - a: addrep or d: delrep  ==>
```

37 Enter "a" to add report.

Example response:

```
                        File
Enter ABORT to return to Add Device Screen

          1 - FILENAME     : /cbmdata/00/data/logs/fl1
          2 - FORMAT       : SCC2
          3 - ECORE        : ON
          4 - Log Routing  :
              ADDREP MDM 601




Enter log identifier (log_type or log_type log_number)
```

38 Enter log identifier as "PPEM 601".

Example response:

```
                        File
Enter ABORT to return to Add Device Screen

          1 - FILENAME     : /cbmdata/00/data/logs/fl1
          2 - FORMAT       : SCC2
          3 - ECORE        : ON
          4 - Log Routing  :
              ADDREP MDM 601
              ADDREP PPEM 601




Wish to enter more Logrouting Details? (Y/N)[N] ==>
```

39 Enter "N" to indicate you don't want to add more logrouting details.

Example response:

```
                        TCP Device
Enter ABORT to return to Add Device Screen

          1 - FILENAME     : /cbmdata/00/data/logs/fl1
          2 - FORMAT       : SCC2
          3 - ECORE        : ON
          4 - Log Routing  :
              ADDREP MDM 601
              ADDREP PPEM 601




Save device Details? (Y/N)[N] ==>
```

40 Enter "Y" to save device details.

The message, "Save data completed -- press return to continue" displays.

Press the Enter key to return to the Add Device screen.

If you enter **n**, the system returns to the Device List Menu screen. No new device is added to the system.

If you	Do
want to add more devices	go to step 5
do not want to add more devices	go to step 41

41 Return to the Device List Menu screen:

enter 5

42 Return to the Logroute Main Menu screen:

enter 6

43 Quit the logroute tool:

enter 6

44 You have completed this procedure.

—End—

Excluding MDM/PPEM audit and security logs from other log devices

Purpose

Use this procedure to exclude MDM/PPEM audit and security logs from other log devices.

Prerequisites

Logging on to the core manager

All users are authorized to perform this procedure.

For information on how to log in to the CBM as an authorized user or how to display information about a user or role group, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321

System requirements

The Nortel Multiservice Switch Log Streamer application should be configured on the core manager to retrieve logs from the MDM. To configure the Nortel Multiservice Switch Log Streamer application on the CS 2000

Core Manager, use the procedure Installing and configuring the log delivery application in NN10104-511, *CS 2000 Core Manager Configuration Management*.

Procedure

The following procedures show how to exclude the MDM/PPEM audit and security logs from all log device types.

Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Excluding the MDM/PPEM audit and security logs from other log devices.

Step	Action
	At the VT100 console
1	Log into the core manager.
2	Access the logroute tool: `logroute` The Logroute Main Menu screen appears.

```
                    Logroute Main Menu

            1 - Device List
            2 - Global Parameters
            3 - CM Configuration File
            4 - Gdd Configuration
            5 - Help
            6 - Quit Logroute



    Enter Option ==>
```

3	Enter "1" to display the device list. The Device List Menu screen appears.

```
                    Device List Menu

            1 - View Device
            2 - Add Device
            3 - Delete Device
            4 - Modify Device
            5 - Help
            6 - Return to Main Menu



    Enter Option ==>
```

4 Enter "1" to view the configured devices.

The Device List screen appears.

This example screen, and other example screens shown in this procedure, shows log removal only for a TCP device. These examples are provided to show the type of screen that will display in response to the steps performed in this procedure. Thus, the content of the screens that actually displays when you are preforming this procedure will vary according to device type and your system's configuration.

```
                    Device List Screen

            Devices:
            1 - HOST: 10.10.10.10.    PORT: 1111   Type: TCP









    Enter Device number for more details or
    Press Enter to return to Device List Menu:
```

5 Enter the number for the device you want to review. For example, in the example screen shown in step 4, you would enter "1" to display the details for the device shown.

Example response

```
                    TCP Device

          1 - HOST IP      : 10.10.10.10
          2 - PORT         : 1111
          3 - FORMAT       : SCC2
          4 - ECORE        : ON
          5 - Log Routing :
              ADDREP MDM 601
              ADDREP PPEM 601


  Press Enter to return to Device List Screen:
```

6 In the device detail screen that displays, verify that logs "MDM 601" and "PPEM 601" are shown configured for the device. Also verify whether the device is configured for ALL logs.

If the device	
is configured for ALL logs	step 23
is configured for "MDM 601" and "PEM 601" logs	step 7

7 Press Enter to return to the Device List Screen and when the Device List Screen displays, press Enter again to return to the Device List Menu.

The Device List Menu screen appears.

```
                  Device List Menu

          1 - View Device
          2 - Add Device
          3 - Delete Device
          4 - Modify Device
          5 - Help
          6 - Return to Main Menu


  Enter Option ==>
```

8 Enter "4" to modify a device.

The Device List screen appears.

```
                    Device List Screen

            Devices:
            1 - HOST: 10.10.10.10.    PORT: 1111   Type: TCP




    Enter device number to delete ==>
```

9 Enter the number for the device you want to modify. For example, in the example screen shown in step 8, you would enter "1" to display the device shown.

Example response

```
                        TCP Device

            1 - HOST IP      : 10.10.10.10
            2 - PORT         : 1111
            3 - FORMAT       : SCC2
            4 - ECORE        : ON
            5 - Log Routing  :
                ADDREP MDM 601
                ADDREP PPEM 601



    Enter number of device parameter to change:
```

10 Enter "5" to change the Log Routing device parameter.

Example response:

```
                    Logrouting of TCP Device
Enter ABORT to return to previous screen
Logrouting
          1 - ADDREP MDM 601
          2 - ADDREP PPEM 601




 Enter "a" to add report or "d" to delete report ==>
```

11 Enter "d" to delete a report.

Example response:

```
                    Logrouting of TCP Device
Enter ABORT to return to previous screen
Logrouting
          1 - ADDREP MDM 601
          2 - ADDREP PPEM 601




 Enter log routing number to delete ==>
```

12 Enter the log routing number for MDM 601. For example, in the Logrouting of TCP Device screen shown in step 11, you would enter "1".

Example response:

```
                    Logrouting of TCP Device
Enter ABORT to return to previous screen

          1 - ADDREP PPEM 601




 Wish to delete more Logrouting Details? (Y/N)[N]:
```

13 Enter "Y" to indicate that you want to delete another Logrouting detail.

Example response:

```
                    Logrouting of TCP Device
Enter ABORT to return to previous screen
Logrouting
          1 - ADDREP PPEM 601




 Enter log routing number to delete ==>
```

14 Enter the log routing number for PPEM 601. For example, in the Logrouting of TCP Device screen shown in step 13, you would enter "1".

Example response:

```
                    Logrouting of TCP Device
Enter ABORT to return to previous screen




 Wish to delete more Logrouting Details? (Y/N)[N]:
```

15 Enter "N" to indicate that you don't want to delete more Logrouting details.

16 Enter "Y" to save the Logrouting details changes you have made.

Example response:

```
                    Logrouting of TCP Device
Enter ABORT to return to previous screen




 WARNING: Some log devices will be restarted. Do you wish
 to proceed?:
```

17 Enter "Y" to confirm that you wish to proceed with saving the Logrouting details changes.

Example response:

```
                    Logrouting of TCP Device
Enter ABORT to return to previous screen




 Save data completed -- press return to continue
```

18 Press Enter to continue.

Example response

```
                        TCP Device
Enter ABORT to return to Previous Screen
          1 - HOST IP      : 10.10.10.10
          2 - PORT         : 1111
          3 - FORMAT       : SCC2
          4 - ECORE        : ON
          5 - Log Routing  :




Enter number of device parameter to change:
```

19 Enter "abort" to return to the Modify Device Menu.

Example response:

```
                    Modify Device Menu
Enter ABORT to return to Device List Menu
          Devices:                                    Type:
          1 - HOST: 10.10.10.10     PORT: 1111        TCP




 Enter number of device to change ==>
```

20 Enter "abort" to return to the Device List Menu.

The Device List Menu screen appears.

```
                    Device List Menu

          1 - View Device
          2 - Add Device
          3 - Delete Device
          4 - Modify Device
          5 - Help
          6 - Return to Main Menu



 Enter Option ==>
```

21 Enter "6" to return to the Logroute main menu screen.

The Logroute Main Menu screen appears.

```
                    Logroute Main Menu

            1 - Device List
            2 - Global Parameters
            3 - CM Configuration File
            4 - Gdd Configuration
            5 - Help
            6 - Quit Logroute



    Enter Option ==>
```

22 Use the following table to determine your next step.

If you	Do
want to exclude MDM/PPEM audit and security logs from another device	step 3
do not want to exclude MDM/PPEM audit and security logs from another device	step 40

23 Press Enter to return to the Device List Screen and when the Device List Screen displays, press Enter again to return to the Device List Menu.

The Device List Menu screen appears.

```
                    Device List Menu

            1 - View Device
            2 - Add Device
            3 - Delete Device
            4 - Modify Device
            5 - Help
            6 - Return to Main Menu



    Enter Option ==>
```

24 Enter "4" to modify a device.

The Device List screen appears.

```
                    Device List Screen

            Devices:
            1 - HOST: any    PORT: 8558   Type: TCP-IN









    Enter device number to delete ==>
```

25 Enter the number for the device you want to modify. For example, in the example screen shown in step 24, you would enter "1" to display the device shown.

Example response

```
                        TCP-IN Device

            1 - HOST IP      : any
            2 - PORT         : 8558
            3 - FORMAT       : SCC2
            4 - ECORE        : ON
            5 - Log Routing  :
                ADDREP ALL




    Enter number of device parameter to change:
```

26 Enter "5" to change the Log Routing device parameter.

Example response:

```
                    Logrouting of TCP-IN Device
Enter ABORT to return to previous screen
Logrouting
          1 - ADDREP ALL




 Enter "a" to add report or "d" to delete report ==>
```

27 Enter "a" to add report.

Example response:

```
                    Logrouting of TCP-IN Device
Enter ABORT to return to previous screen
Logrouting
          1 - ADDREP ALL




 Enter "a" to add report or "d" to delete report ==>
```

28 Enter "d" to delete report.

Example response:

```
                    Logrouting of TCP-IN Device
Enter ABORT to return to previous screen
Logrouting
          1 - ADDREP ALL




 Enter log identifier (log_type or log_type log_number)
```

29 Enter the log identifier, "MDM 601".

Example response:

```
                    Logrouting of TCP-IN Device
Enter ABORT to return to previous screen
Logrouting
          1 - ADDREP ALL
          2 - DELREP MDM 601




 Wish to enter more Logrouting Details? (Y/N)[N]:
```

30 Enter "Y".

Example response:

```
                    Logrouting of TCP-IN Device
Enter ABORT to return to previous screen
Logrouting
          1 - ADDREP ALL
          2 - DELREP MDM 601




 Enter - a: addrep or d: delrep ==>
```

31 Enter "d" to delete report.

Example response:

```
                    Logrouting of TCP-IN Device
Enter ABORT to return to previous screen
Logrouting
          1 - ADDREP ALL
          2 - DELREP MDM 601




 Enter log identifier (log_type or log_type log_number)
```

32 Enter the log identifier, "PPEM 601".

Example response:

```
                    Logrouting of TCP-IN Device
Enter ABORT to return to previous screen
Logrouting
          1 - ADDREP ALL
          2 - DELREP MDM 601
          3 - DELREP PPEM 601




 Wish to enter more Logrouting Details? (Y/N)[N]:
```

33 Enter "N" to indicate that you don't want to enter more Logrouting details.

34 Enter "Y" to save the Logrouting details changes you have made.

Example response:

```
                    Logrouting of TCP-IN Device
Enter ABORT to return to previous screen









 WARNING: Some log devices will be restarted. Do you wish
 to proceed?:
```

35 Enter "Y" to confirm that you wish to proceed with saving the Logrouting details changes.

Example response:

```
                    Logrouting of TCP-IN Device
Enter ABORT to return to previous screen




 Save data completed -- press return to continue
```

36 Press Enter to continue.

Example response

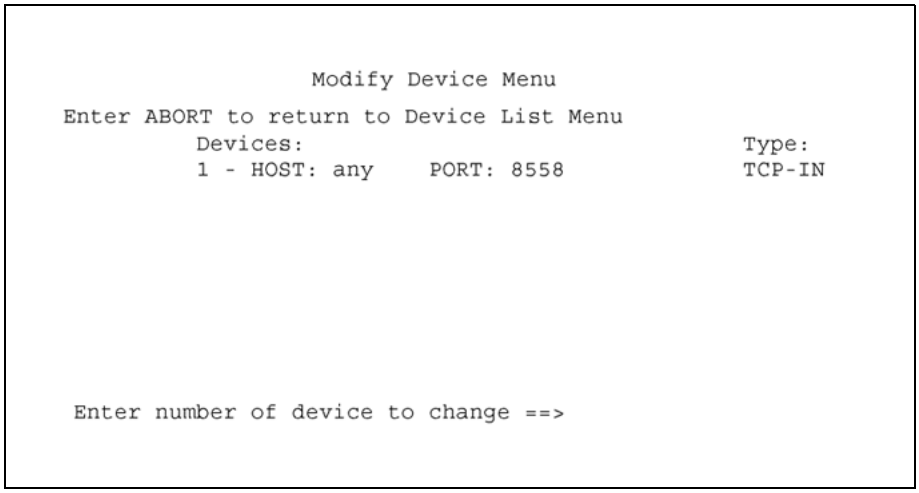
```
                        TCP-IN Device
Enter ABORT to return to Previous Screen
          1 - HOST IP      : any
          2 - PORT         : 8558
          3 - FORMAT       : SCC2
          4 - ECORE        : ON
          5 - Log Routing  :




Enter number of device parameter to change:
```

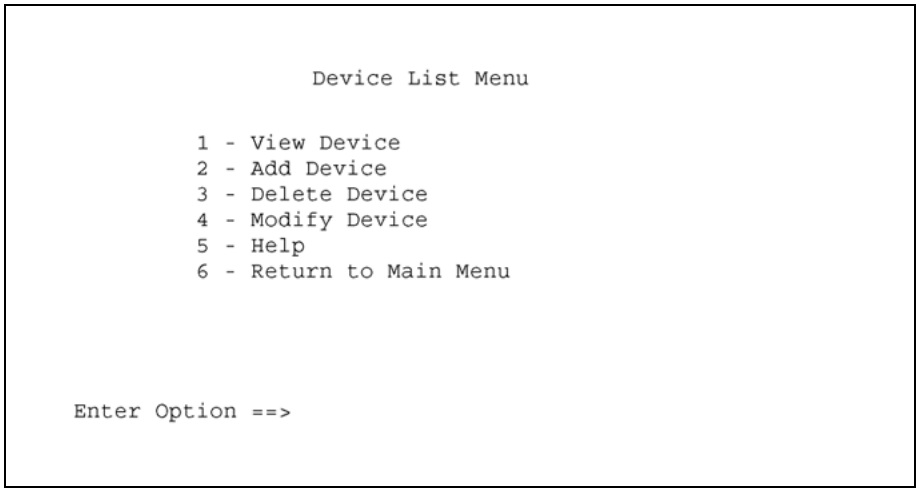
37 Enter "abort" to return to the Modify Device Menu.

Example response:



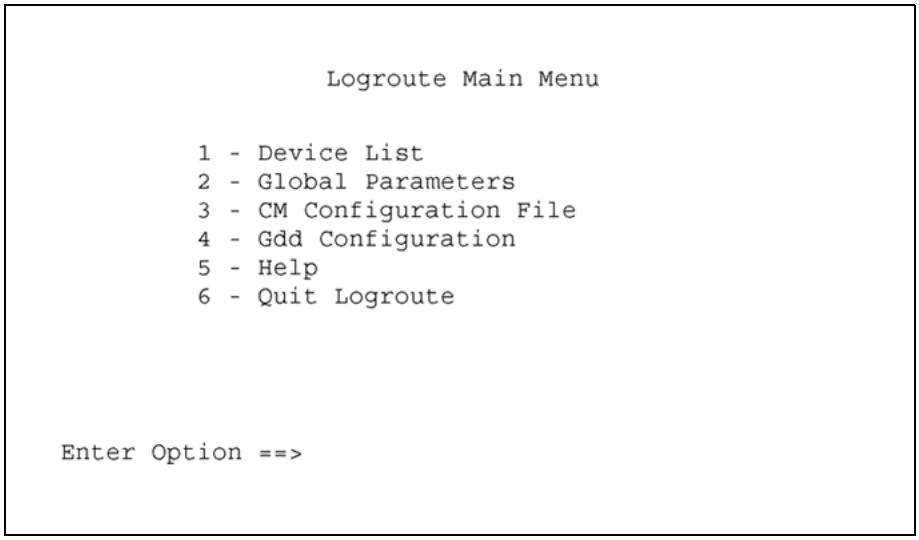
38 Enter "abort" to return to the Device List Menu.

The Device List Menu screen appears.



39 Enter "6" to return to the Logroute main menu screen.

The Logroute Main Menu screen appears.



40 Enter "6" to exit from the Logroute tool.

41 You have completed this procedure.

—End—

Specifying the logs delivered from the CM to the core manager

Purpose

Use this procedure to specify the logs to be delivered from the computing module (CM) to the core manager. When the Log Delivery service is first installed, it receives all logs in the CM log stream by default. If you wish to modify the incoming CM log stream, use the CM Configuration File menu in the logroute tool to add or delete individual logs or log types.

Prerequisites

All users are authorized to perform this procedure.

For information on how to log in to the CBM as an authorized user or how to display information about a user or role group, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

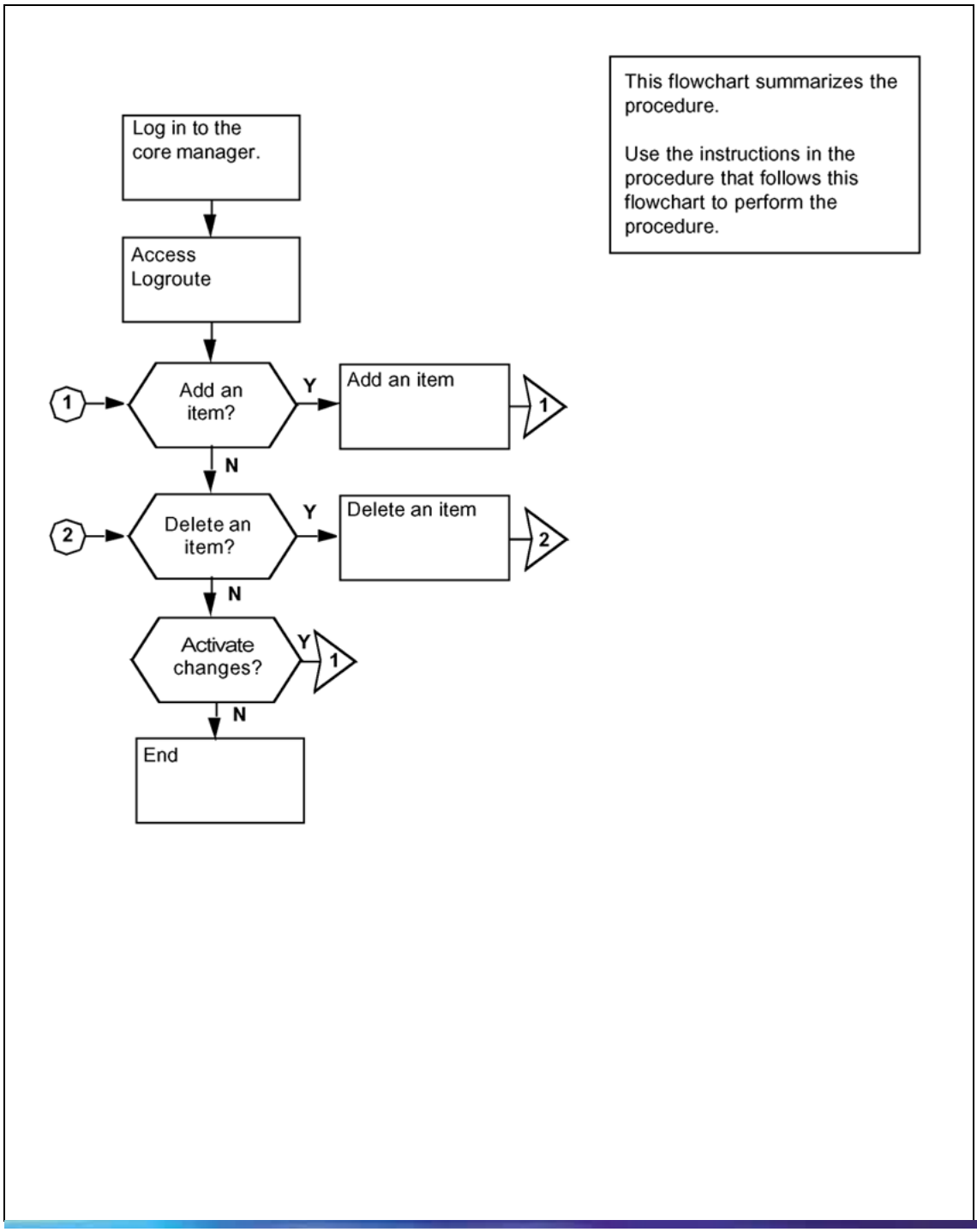
Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321

Task flow diagram

The following task flow diagram provides an overview of the process. Use the instructions in the procedure that follows the flowchart to perform the tasks.

Task flow for Specifying the logs delivered from the CM the core manager



Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Procedure

Specifying the logs delivered from the CM to the core manager

Step	Action
	At the VT100 console
1	Log into the core manager.
2	Access the logroute tool: `logroute` The Logroute Main Menu screen is displayed.

```
                    Logroute Main Menu

            1 - Device List
            2 - Global Parameters
            3 - CM Configuration File
            4 - GDD Configuration
            5 - Help
            6 - Quit Logroute



    Enter Option ==>
```

3	Access the CM Configuration File menu: `3` The CM Config File Menu screen is displayed.

```
                    CM Config File Menu

              1 - View Config List
              2 - Add Report
              3 - Delete Report
              4 - Help
              5 - Return to Main Menu




    Select Option ==>
```

If you want to	Do
add routing report to the list	step 4
delete routing report from the list	step 7

4 Access the CM - Add Report screen:

2

The system displays the list of the current routing entries for the incoming CM log stream.

Example response: response

```
                    CM - Add Report
Enter ABORT to return to CM Config File Menu

          1 - DEL IOAUD 107




Warning: You must BSY and RTS the Log Delivery application
for the CM configuration to take effect.
```

If you want to	Do
suppress logs (cause them to be removed from the incoming CM log stream)	enter **d**, and press the Enter key
un-suppress logs (cause them to be included in the incoming CM log stream)	enter **a**, and press the Enter key

An entry of n (NOCMLOGS) will suppress all CM logs -- no CM logs will be delivered to your system.

Response

```
Enter log identifier ("log_type", or "log_type
log_number") ==>
```

5 Enter a log type or a combination of log type and log number (separated by a space).

An example of a log type is "PM". This entry will suppress or un-suppress all PM logs.

An example of a combined log type and log number is PM 181. This entry will suppress or un-suppress the PM181 logs but leave the routing of other PM logs unchanged.

Example response:

```
Save Report details?  (Y/N)[N]:
```

6 Save your changes:

y

The new item is added to the list.

If you	Do
want to add more entries to the list	step 4
do not want to add more entries to the list	step 10

7 Access the CM - Delete Report screen:

```
3
```

The system displays the list of the current routing entries for the incoming CM log stream.

Example response:

```
                    CM - Delete Report
Enter ABORT to return to CM Config File Menu

           1 - DEL IOAUD 107
           2 - ADD PM 181









      Select report to delete ==>
```

8 Enter the number of the item you want to delete from the list.

Example response:

```
Report will be deleted permanently.  Continue?
(Y/N)[N]:
```

9 Confirm the delete command:

```
Y
```

Example response:

The system displays the CM Delete Report screen with the following warning

```
Warning:  You must BSY and RTS the Log Delivery
application for the CM configuration to take effect.
```

If you	Do
want to delete more entries from the list	step 8
do not want to delete more entries from the list	step 10

10 Return to the CM Config File Menu screen:

```
abort
```

If you	Do
want to make more changes to the CM log stream list	step 4
do not want to make more changes to the CM log stream list	step 11

11 Return to the Logroute Main Menu screen:

```
5
```

12 Quit the logroute tool:

```
6
```

13 You have completed this procedure.

—End—

Configuring Log Delivery global parameters

Purpose

Use this procedure to configure the Log Delivery global parameters. The global parameters are set to default values at initial installation and should not require modification.

The online Log Delivery commissioning tool called logroute controls Log Delivery global parameters. The Log Delivery global parameters apply to all Log Delivery output devices and are separate from device-specific parameters.

For information on configuring or modifying device-specific parameters, refer to one of the following procedures:

- "Configuring log delivery destinations" (page 12)
- "Modifying a log device using logroute" (page 21)

The logroute tool allows you to customize the following global parameters:

- log_office_id (office name)

  This parameter is valid only for devices that have log format set to STD or SCC2.
- buffer size (number of logs)
- reconnect time-out value (seconds)
- lost logs threshold (number of lost logs before the system generates a design log)

  This parameter is for Nortel personnel only.
- incoming end of line character (ASCII code)
- outgoing end of line characters (ASCII code)
- start of log characters (ASCII code)
- end of logs characters (ASCII code)
- the number of days to keep log files
- maximum size of a log file (Mbyte)
- maximum size action

ATTENTION

Any settings changed by the Log Delivery application and the logroute tool will not affect Generic Data Delivery settings or the logs in the /gdd volume.

If the global parameters do require modification, the ranges and default for each parameter are as follows:

- log_office_id: values are NULL, CLLI, CORE-COMPAT, or up to 12-characters office name, default is CLLI

  The log_office_id parameter refers to the office name, which will be attached to all logs delivered to all devices that have log format set to STD or SCC2. If you enter

  — NULL, the office name will not be attached to the logs.

  — CLLI, the CLLI name of your system will be attached to all logs.

  — CORE-COMPAT, the core's LOG_OFFICE_ID defined in table OFCVAR will be used for all logs. Until the first log arrives from the core, the system CLLI is used.

- buffer size (number of logs): range is 50 to 300, default is 150
- reconnect time-out value (secs): range is 1 to 3600, default is 15
- lost logs threshold: range is 1 to 300, default is 100 (-1 turns this option off)
- number of days to keep log files: range is 1 to 45, default is 5
- maximum size of a log file (Mbytes): range is 5 to 300, default is 40
- maximum size action: values are STOPDEV, CIRCULATE, and ROTATE

  The maximum size action parameter allows you to configure the action the system performs when the file reaches its maximum size. The STOPDEV value tells the file device to save the data in separate files every 12 hours. When the file created at each 12-hour rotation is full, the system stops writing log data to the file. The system loses any log data generated from the time the system stops writing to the file to the start of a new file at the next rotation.

  The ROTATE value tells the file device to save the data in separate files every 12 hours. When the file created at each 12-hour rotation is full, the system creates another file to continue saving any log data. The system does not wait until the next 12-hour rotation to create a new file.

  The CIRCULATE value tells the file device to save the data in separate files every 12 hours. When the file reaches its maximum size, the system saves the new log data by overwriting the earliest data in the file.

The remaining global parameters are represented by ASCII character codes. For more information on these parameters including their ranges, see the logroute help menu. The values for the global parameters represented by ASCII character codes are as follows:

- incoming end of line character: default is 10 which corresponds to a line feed character (go to the next line)
- outgoing end of line characters: default is 10 13 which represents a line feed (go to the next line) followed by a carriage return
- start of log characters: default is 10 13 which represents a line feed (go to the next line) followed by a carriage return
- end of logs characters: default is 10 13 which represents a line feed (go to the next line) followed by a carriage return

  Any configuration changes take effect immediately. You do not have to busy and return the Log Delivery application to service for the changes to take effect.

Prerequisites

All users are authorized to perform this procedure.

For information on how to log in to the CBM as an authorized user or how to display information about a user or role group, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

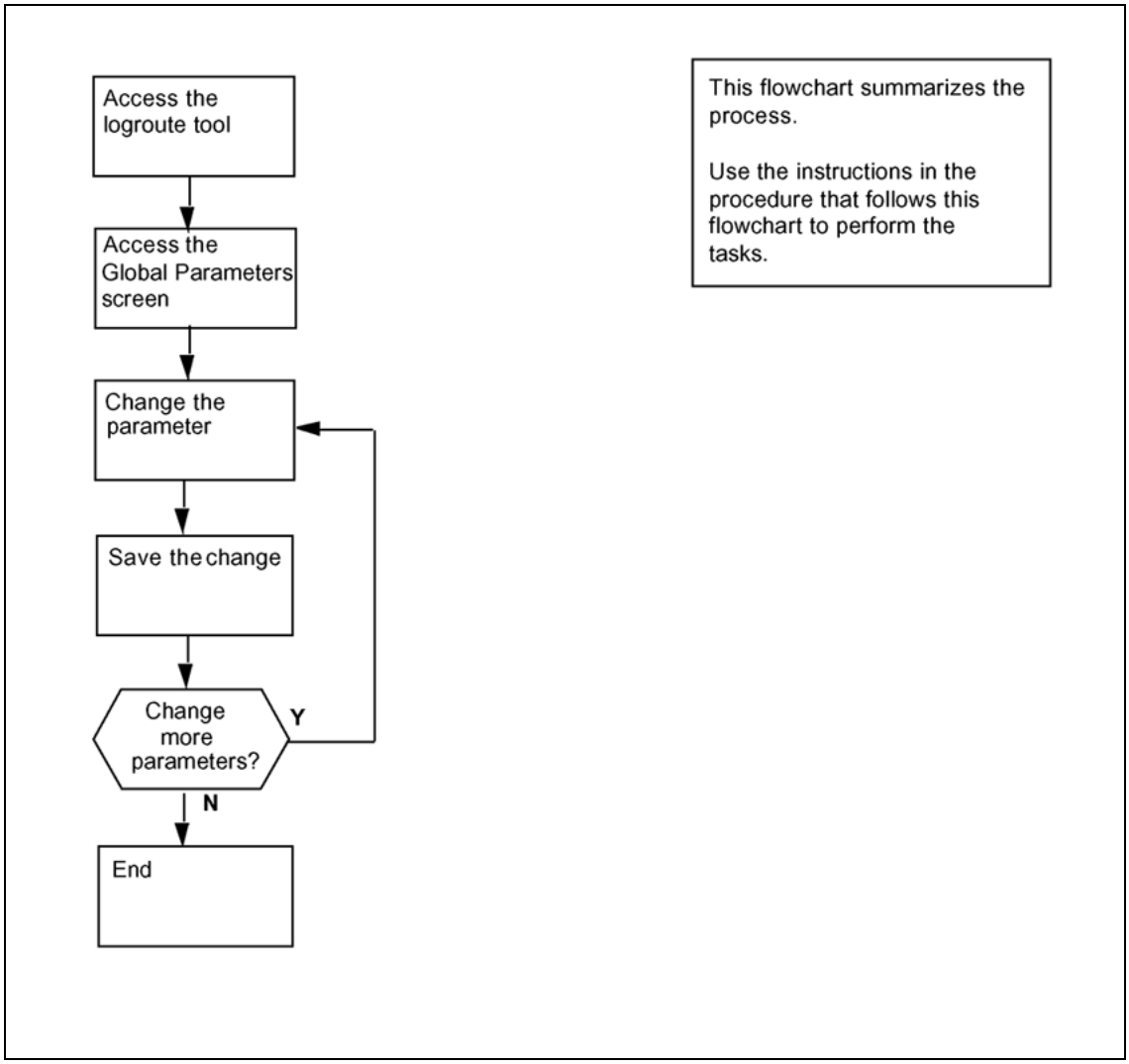
Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321

Task flow diagram

The following task flow diagram provides an overview of the process. Use the instructions in the procedure that follows the flowchart to perform the tasks.

Task flow for Configuring Log Delivery global parameters



Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Procedure

Configuring Log Delivery global parameters

Step	Action
	At the VT100 console
1	Log into the core manager.
2	Access the logroute tool:

logroute

The Logroute Main Menu screen appears.

3 Access the Global Parameters screen:

2

Example response:

```
          Global Parameters
1  - LOG_OFFICE_ID : CLLI
2  - Buffer size (number of logs)     : 150
3  - Reconnect timeout value (secs)   : 15
4  - Lost logs threshold (NT only)    : 100
5  - Incoming end of line character   : 10
6  - Outgoing end of line characters  : 10 13
7  - Start of log characters          : 10 13
8  - End of logs characters           : 10 13
9  - Number of days to keep log files : 5
10 - Maximum size of a log file (Meg) : 40
11 - Maximum size action  : STOPDEV
12 - Help
13 - Return to Main Menu
Enter Option ==>
```

This display shows the default values for the Global Parameters menu.

4 Select the parameter that you want to change:

<n>

where

<n> is the menu number next to the global parameter you want to change

Example response for changing the buffer size:

```
          Global Parameters
1  - LOG_OFFICE_ID : CLLI
2  - Buffer size (number of logs)     : 150
3  - Reconnect timeout value (secs)   : 15
4  - Lost logs threshold (NT only)    : 100
5  - Incoming end of line character   : 10
6  - Outgoing end of line characters  : 10 13
7  - Start of log characters          : 10 13
8  - End of logs characters           : 10 13
9  - Number of days to keep log files : 5
10 - Maximum size of a log file (Meg) : 40
11 - Maximum size action  : STOPDEV
12 - Help
13 - Return to Main Menu
Enter buffer size (range - 50 to 300) ==>
```

The log and line delimiters (incoming and outgoing end of line characters, and start and end of log characters) must be entered as decimal or hexadecimal ASCII code.

For a detailed description of each parameter, see the Help menu (option 12).

5 Enter a new value for the selected parameter.

6 The system prompts you to save the change. The following message is displayed:

```
Save Global Parameter details  [Y/N][N]:
```

If you	Do
want to save your change	enter **y**, press the Enter key, and continue with step 7
do not want to save your change	enter **n**, press the Enter key, and go to step 11

7 The system displays the following warning:

```
WARNING: All log devices will be restarted.  Do you
wish to proceed.
```

If you want to	Do
complete the saving process	step 9
stop the saving process	step 8

8 Enter **n**.

The unchanged value appears on the Global Parameter screen.

Continue with step 11.

9 Enter **y**.

The system displays the following message:

```
Save data completed -- press return to continue
```

10 Press the Enter key again to confirm the change. The new value appears on the Global Parameter screen.

If you	Do
want to change another global parameter	step 4
do not want to change another global parameter	step 11

11 Return to the Logroute Main Menu:

```
13
```

12 Quit the logroute tool:

```
6
```

13 You have completed this procedure.

—End—

Configuring the GDD parameter using logroute

Purpose

Use this procedure to configure the Generic Data Delivery (GDD) parameter. This parameter defines how many days the log files will be stored in the /gdd directory on the datavg volume.

For the Core and Billing Manager, you will need to resize the GDD volume (/cbmdata/00/gdd) based on the following engineering rules:

- for an End-Office: 220 MBytes/day * #RetentionDay.
- for a Tandem PT-IP Office: 100 Mbytes/day * #RetentionDay.
- For the installations previously specified you will also need to resize the data volume (/cbmdata/00) using these rules if a file device is configured to capture all the logs and the global parameter "Maximum Size action" has been set to ROTATE.

When the configured number of days is reached (maximum 30 days), the logs are rotated, and the oldest log file is replaced by the newest.

Prerequisites

All users are authorized to perform this procedure.

For information on how to log in to the CBM as an authorized user or how to display information about a user or role group, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

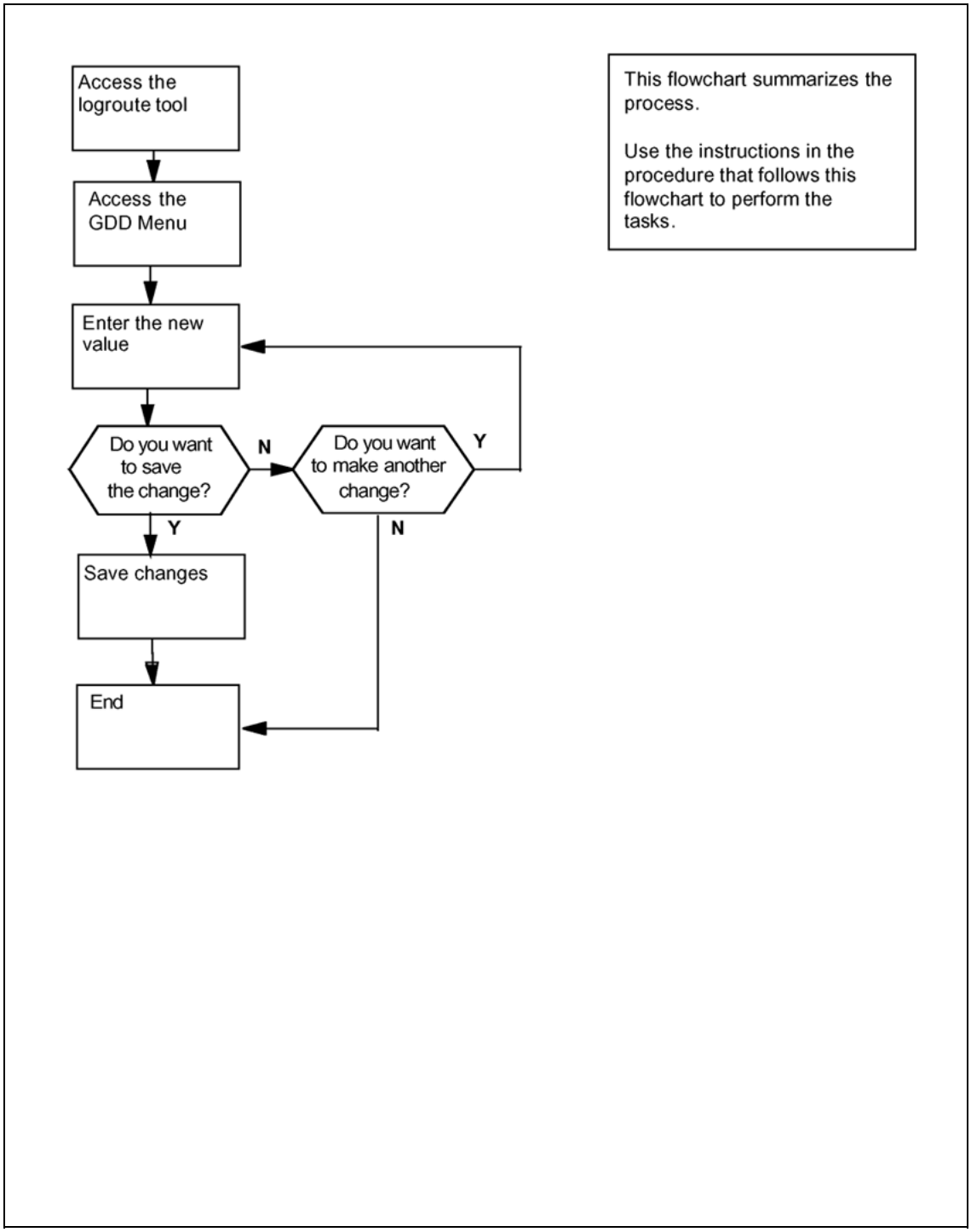
Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321

Task flow diagram

The following task flow diagram provides an overview of the process. Use the instructions in the procedure that follows the flowchart to perform the tasks.

Task flow for Configuring GDD parameter using logroute



Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Configuring GDD parameter using logroute

Step	Action

At the VT100 console

1 Log into the core manager.

2 Access the logroute tool:

```
logroute
```

The Logroute Main Menu screen appears.

```
                    Logroute Main Menu

            1 - Device List
            2 - Global Parameters
            3 - CM Configuration File
            4 - Gdd Configuration
            5 - Help
            6 - Quit Logroute



    Enter Option ==>
```

3 Access the GDD Menu:

```
4
```

Example response:

```
                        GDD Menu

      1 - Number of days to keep log files in /gdd:  30
      2 - Help
      3 - Return to Main Menu




    Enter Option ==>
```

4 Select the GDD parameter:

```
1
```

Example response:

```
Enter number of days (range 1 to 30) ==>
```

5 Specify how many days you want the log files to be stored in the /gdd directory. Enter the number (within the range) and press the Enter key.

Example response:

```
Save GDD Value [Y/N][N] :
```

If you	Do
want to save your change	step 7
do not want to save your change	step 6

6 Cancel your change:

n

If you	Do
want to make another change	step 4
do not want to make another change	step 10

7 Save the GDD value:

y

Example response:

```
Warning:  This would change the number of days to store
logs in /gdd.  Log files older than the day specified
would be deleted.
```

8 Press the Enter key to confirm the change.

Example response:

```
Save data completed -- press return to continue
```

9 Press the Enter key to continue. The new value is displayed.

10 Return to the Logroute Main Menu screen:

3

11 Quit the logroute tool:

6

12 You have completed this procedure.

—End—

Configuring outbound connection security for OMDD

Purpose

Secure outbound file transfer of OMs is provided through the OpenSSH SFTP (secure file transfer protocol) client. The SFTP client protects all data, including sensitive users' passwords, by encrypting the data before it leaves the core manager and decrypting the data after it arrives at the downstream OSS destination. The SFTP client also provides data integrity checking to ensure that the data has not been tampered with during the transfer.

Both password-based authentication and key-based (public key) authentication are supported for secure outbound file transfers using the OpenSSH SFTP.

Prerequisites

The following prerequisites apply to the outbound connection security feature:

- An SSH sftp server (SFTP server subsystem) that is compatible with the OpenSSH sftp client must be running on the downstream Operations Support System (OSS) in order for the OMDD to transfer data with the OpenSSH sftp client.
- OpenSSH software, version 3.7.1p2 or later, and any dependent software must be installed on the core manager in order for SFTPW (Secure File Transfer Protocol wrapper) protocol for outbound file transfer to be used. There is no explicit check performed by the OMDD software to determine whether this package or fileset is installed when the SFTPW is being configured. Thus, if the OMDD SFTPW application fails to find the sftp program, an SFTPW alarm is raised and the application terminates any transfer event it is attempting to perform.
- For the CBM, this secure outbound transfer capability depends on the OpenSSH packages as well as NTutil.
- For the SDM and CS 2000 Core Manager, the secure outbound transfer capability depends on the SDM_OpenSSH.base fileset, which must be installed manually, and the SDM_BASE.util fileset.
- The initial host key acceptance of the downstream processor should be performed manually in order for the SFTPW to be used for file transfer from the core manager. The .ssh/known_hosts file in the maint home directory is edited by SSH software to include the host key. After this is completed, sftp can be used to send files to the downstream OSS. This step must be performed for each downstream destination prior to schedule tuple configuration for SFTPW.

You must have the root user ID and password to perform this procedure.

Limitations and restrictions

The following limitations and restrictions apply to the secure outbound file transfer capability:

- Secure outbound file transfer (SFTPW) cannot re-send ClosedSent files when ClosedSent files already exist on the target directory in the downstream system. Therefore, it is important that existing ClosedSent (or processed) files at the downstream system be either moved to another directory or re-named before an attempt is made to re-send ClosedSent files from the core manager to the downstream system.
- Automatic dumping of the public key file on the remote system is not supported. Users have to manually dump the contents of the public key file into the user's authorization file on the remote system.

  If the remote system is running OpenSSH server, the public key should be appended to .ssh/authorized_keys or .ssh/authorized_keys2 file.
- The user SHELL (cshrc or bash) startup script at the downstream system must not contain ANY echo or print statements which will interfere the handshaking between sftp client and sftp-server. The symptom is that the sftp session terminated pre-maturely and the message "Received message too long <a long num> is printed".
-

Procedure

To configure secure data transfer to a downstream OSS destination, it is necessary to first accept the known host key for the downstream OSS destination. Steps 1 through 10 of this procedure enable you to perform this task. This task must be performed whenever the destination downstream OSS is rebooted or whenever the SFTPD server on the OSS is restarted.

Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Configuring outbound connection security for OMDD

Step	Action
	At the PC or UNIX workstation
1	Establish a telnet connection to the core manager by completing the following substeps. a. Open a terminal window that is VT100 compatible. b. Log onto the core manager from the terminal window prompt:

telnet <ip_address>

where

<ip_address> is the IP address of the core manager

c. When prompted, enter your user ID and password.

d. Change to the root user. Type

su - root

and press the Enter key.

e. When prompted, enter the root password.

2 Change directory to the maint home directory:

cd ~maint

3 Look in the maint directory for the ".ssh" directory:

ls -lad .ssh

If	Do
the .ssh file does not exist	step 4
the .ssh file does exist	step 10

4 Create the .ssh directory:

mkdir .ssh

5 Change the .ssh directory ownership:

chown maint:maint .ssh

6 Change the permissions associated with the .ssh directory:

chmod u+rwx .ssh

7 Change to the maint user:

su maint

8 Run the ssh client to the downstream OSS destination by providing a "maint" user name and IP address for the ssh client, by performing the following steps:

a. Type

ssh -l maint <nn.nn.nn.nn>

where

<nn.nn.nn.nn> is the IP address of the ssh client

Example of response

The authenticity of host Ô10.10.10.10’ can’t be established.

RSA key fingerprint is 3a:d5:d7:6e:ee:6b:45:fc:b9:0b:92:a7:1c:d8:f1:be.

Are you sure you want to continue connecting (yes/no)?

b. Type

```
yes
```

Example of response

Warning: Permanently added Ô10.10.10.10’ (RSA) to the list of known hosts.

9 Press ctrl + C to terminate the program.

10 Exit the telnet session:

```
exit
```

11 Configure the outbound file transfer destination for secure data transfer, using password-based authentication or key-based authentication.

For the procedure on how to configure an outbound file transfer destination, refer to the chapter "Adding a file transfer destination" in the CBM 850 Performance Management book, NN10361-711.

12

13 You have completed this procedure.

—End—

Troubleshooting

Possible error scenarios that may occur when you are performing this procedure and the steps to perform in addressing these problems are listed in the following:

- Connection refused

  This error causes a "Down" status for the SSH Collector Status parameter.

  Example

  Error : ssh; connect to host <hostname/hostip> port 22:
  Connection refused
  Connection closed.

To resolve this problem:

— Verify that the host machine is on the network.

— Verify that the SSH server on the host machine is running and that the configuration is correct (such as, the port number and fingerprint).

- SSH not found

  This error is caused by the ssh not being installed on the core manager.

  Example

  Error: /bin/ksh: ssh: not found.

  To resolve this problem:

  — Verify that the OpenSSH package is installed on the system.

  If your core manager is an AIX-based SDM or CS 2000 Core Manager, you can verify whether the OpenSSH package is installed by checking for the package at the SWIM level of the sdmmtc user interface.

  If the package is not installed, contact your Nortel service representative for assistance in installing the OpenSSH package provided by Nortel.

  You should not install the OpenSSH package downloaded from the web unless you are instructed to do so by your Nortel service representative.

- known_hosts file cannot be datafilled

  This error is caused by the non-existence of, or incorrect permissions for, the /home/maint/.ssh (AIX-based SDM) or /cbmdata/users/maint/.ssh (CBM) directory.

  To resolve this problem:

  — Verify that you are logged in as the root user and that you switched user (su) to the maint user.

  — Verify that the directory /home/maint/.ssh (AIX-based SDM) or /cbmdata/users/maint/.ssh (CBM) is present and has read/write permissions set for the maint user. If the directory doesn't exist, create it.

  — Verify that the correct IP address is used for host key acceptance.

- SSH server's host key has changed

  If the server's host key has changed, the client will notify you that the connection cannot proceed until the server's host key is deleted from the known_hosts file using a text editor. Before performing this task, you must contact the system administrator of the SSH server to ensure that the server operation will not be compromised.

To resolve this problem:

— Try to create an ssh connection to a different machine. If you receive an error message about a changed or incorrect public key, it is probably due to the host changing its public key. Edit the file /home/maint/.ssh/known_hosts using a text editor and delete any line containing the name of that host.

— Try to create an ssh connection to that host again and then accept a new public key for the host.

- SSH warns about "man-in-the-middle attack"

  This problem is caused either by someone eavesdropping on your connection or by the host key having been changed.

  To resolve this problem:

  — Contact your system administrator to determine whether the host key has been changed or whether the ip address of the client has been changed.

  — Edit the file /home/maint/.ssh/known_hosts using a text editor and delete any line containing the name of that host.

  — Datafill the known_host keys with new information.

- sftp session terminated pre-maturely with the message "Received message too long <a long num>"

  Ensure that the user SHELL (cshrc or bash) startup script at the downstream system does not contain any echo or print statements which will interfere the handshaking between sftp client and sftp-server.

Configuring core access for SBRM through the CBM 850

Purpose

This procedure enables you to configure access to the core for the Synchronous Backup Restore Manager (SBRM). This procedure must be performed before the SBRM can automatically backup a core image.

Perform the procedure, "Creating the backup user ID on the core for SBRM" (page 102)before you perform this procedure for the first time.

This procedure should be performed whenever the password for the core user password expires or is changed. This ensures that the password you set in this procedure matches that set for the user on the core.

Prerequisites

In order to perform this procedure, you must have the following authorization and access.

- You must be a user in a role group authorized to perform config-admin actions.
- You must obtain non-restricted shell access.

For more information on how to log in to the CBM as an authorized user, how to request a non-restricted shell access, or how to display actions a role group is authorized to perform, review the procedures in the following table.

Procedure

Configuring core access for SBRM

Step	Action
	At your workstation
1	Log into the core manager as a user authorized to perform config-admin actions.
2	Change directory to the directory containing appropriate configuration script: `cd /opt/nortel/bkresmgr/cbm/scripts`
3	Run the configuration script: `./bkmgr_config.sh`

4 As the script runs, you are first prompted for the user name. The user name is that which will be used to login to the core in order to initiate an image dump. The script restricts the name to a maximum of 16 characters. The user name you enter must first have been enabled on the core through the procedure, "Creating the backup user ID on the core for SBRM" (page 102).

5 As the script continues to run, you are then prompted for the user you entered (in step 4). The script restricts the password to a maximum of 16 characters. This password is the one that was set up through the procedure, "Creating the backup user ID on the core for SBRM" (page 102).

6 As the script continues to run, you are then prompted for the logical volume where the backup is to be stored. This is the device on which the core image dump will be stored. You should ensure that this device has enough space to store the backup.

7 As the script continues to run, you are then prompted for the core type, either xa-core or Compact. This information is needed in order for the software to know whether the core will also have a Message Switch load.

8 You have completed this procedure.

—End—

Creating the backup user ID on the core for SBRM

Purpose

This procedure enables you to create the user ID on the core to enable the operation of the Synchronous Backup Restore Manager (SBRM). The types of operations that can be performed by this user are:

- set dump_restore_in_progress field in ofcstd table
- start image dump
- ability to run itocci command set

This procedure should be performed before you first perform the procedure, "Configuring core access for SBRM".

Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Procedure

Creating the backup user ID on the core for SBRM

Step	Action
	At the CI prompt on the core
1	Enter the following command: **`permit <backupuser> <backupuser_pswd> 4 10000 english all`** where **`<backupuser>`** is the user name for the core, that is up to 16 characters in length, that will be used by SBRM for login **`<backupuser_pswd>`** is the password for the <backupuser> user you are creating, which can be up to 16 characters in length **`4`** is the priority **`10000`** is the stack size **`english`** the language setting **`all`** is the privilege setting If Enhanced Password Control is in effect on the CM, the password must be at least six characters in length. If Enhanced Password Control is in effect on the CM and after the user is permitted on the switch, log into the core manually with this user first. The core will prompt you to change the password at the

first login after the login is permitted. Change the password and then perform the procedure, "Configuring core access for SBRM" using the <backupuser> user you have created and the changed password.

The SBRM does not have the ability to manage passwords. Therefore, you must re-run the configuration script in "Configuring core access for SBRM" to ensure that the password for the <backupuser> user.

2 You have completed this procedure.

—End—

Commissioning or decommissioning Network Time Protocol (NTP)

Purpose

Use this procedure to add or remove a Network Time Protocol (NTP) server or peer on the Core and Billing Manager.

After CBM 850 HA system installation, if no external NTP server is configured the ntp level of cbmmtc will display an NTP peer server, which is the unit mate. This is for cluster internal synchronization purposes only. During this time, the overall NTP state is "unequipped" (-) and NTP info is "No NTP servers or peers defined." After the external NTP server is added, the NTP info will change, and the NTP state will change from (-) to (.), to reflect the presence of an external source.

Prerequisites

In order to perform this procedure, you must have the following authorization and access.

- You must be a user in a role group authorized to perform config-admin actions.
- You must obtain non-restricted shell access.

For more information on how to log in to the CBM as an authorized user, how to request a non-restricted shell access, or how to display actions a role group is authorized to perform, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Requesting non-restricted shell access	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

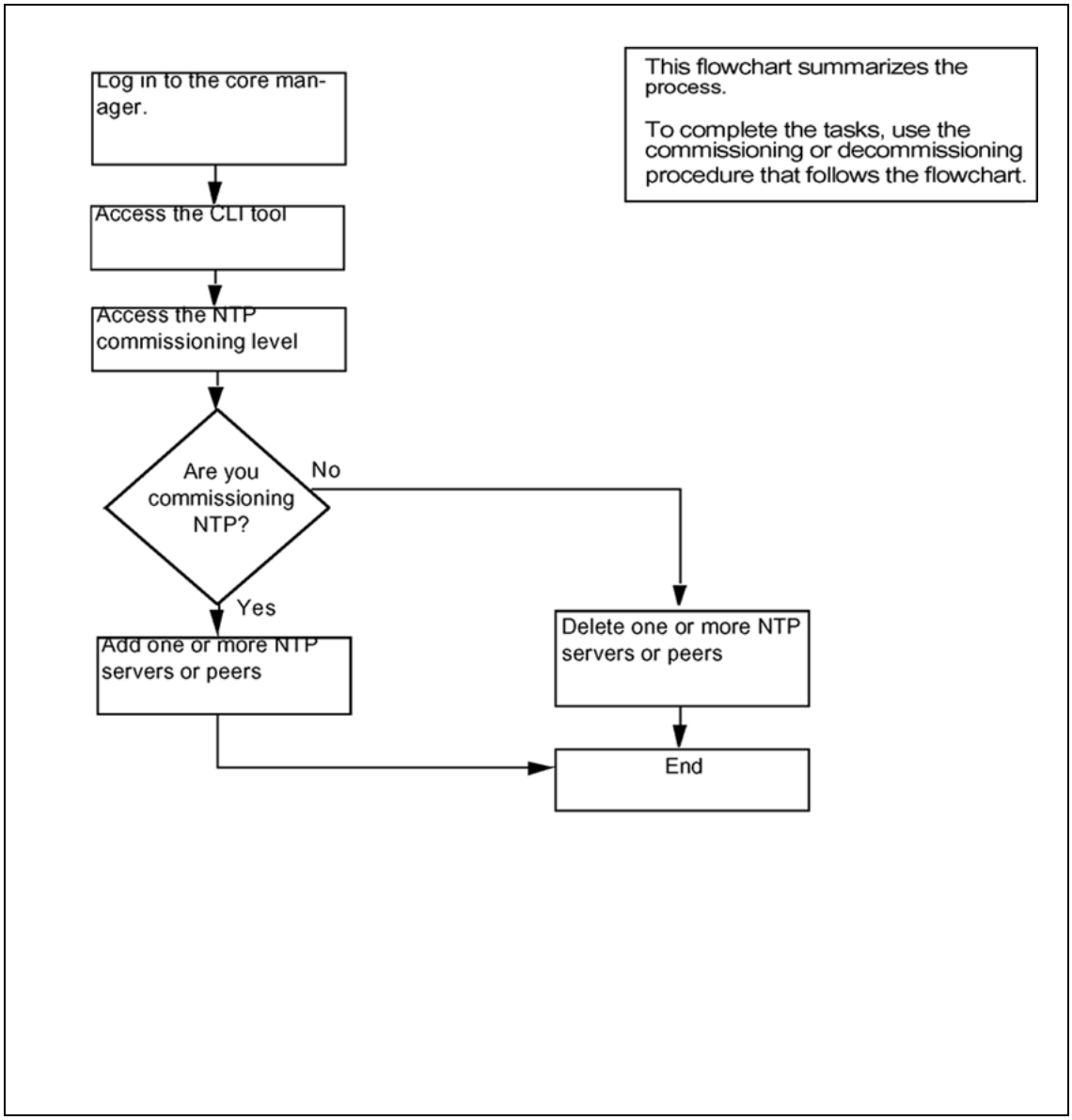
Procedure	Document
Requesting non-restricted shell access	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321
Requesting non-restricted shell access	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321

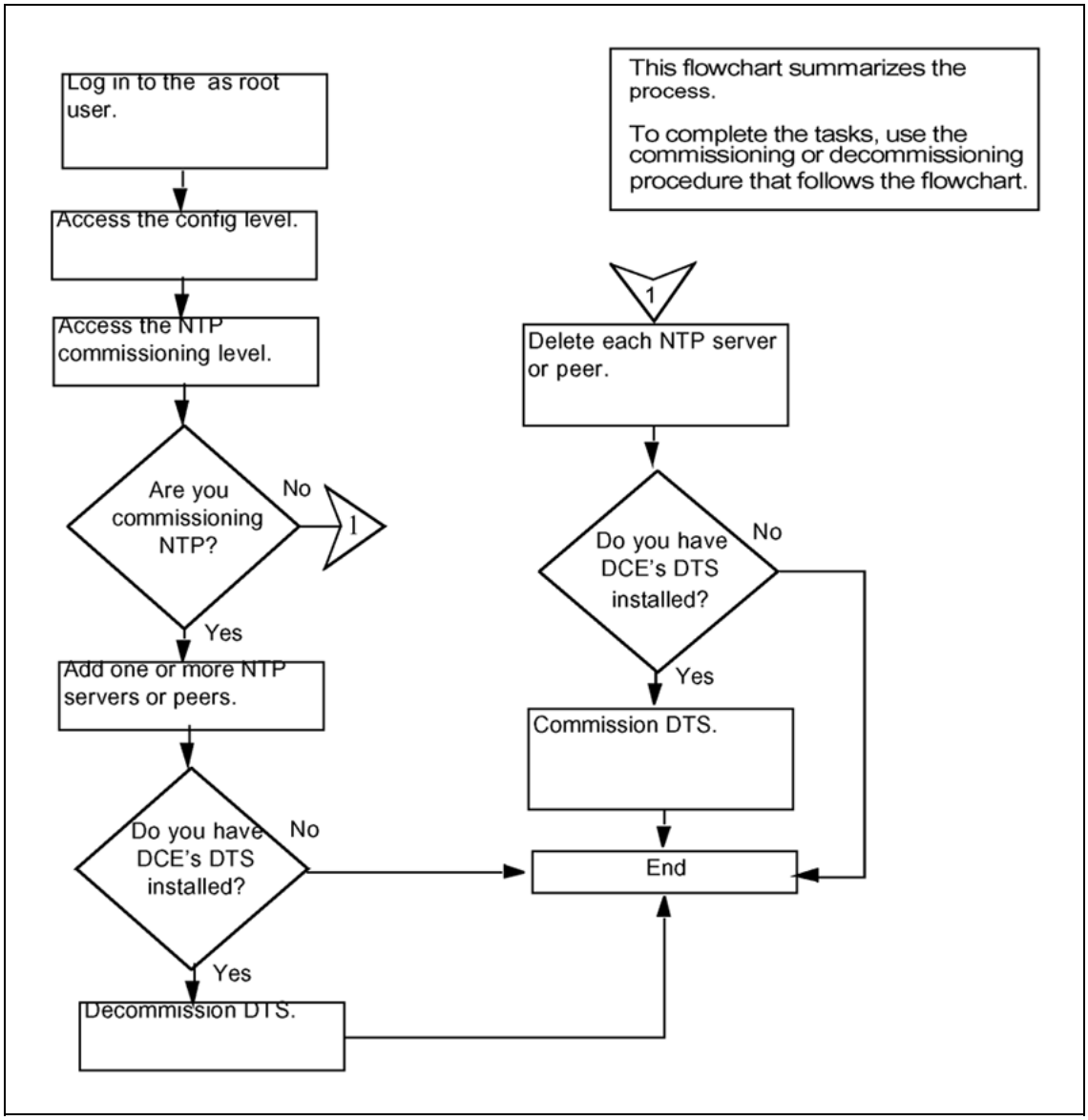
Task flow diagram

The following task flow diagram summarizes the commissioning or decommissioning Network Time Protocol (NTP) process. To complete the tasks, use the instructions in the procedure that follows the flowchart.

Task flow for Commissioning or decommissioning NTP



Task flow for Commissioning or decommissioning NTP



Procedure

Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Commissioning NTP

Step	Action
	At the local VT100 console

1 Log into the core manager as a user authorized to perform config-admin actions.

2 Access the CLI tool:

```
cli
```

3 Access the CLI configuration level:

```
<#>
```

where

`<#>` is the number next to the CLI configuration level.

4 Access the NTP configuration level:

```
<#>
```

where

`<#>` is the number next to the Network Time Protocol configuration selection.

5 Add an NTP server or peer:

```
<#>
```

where

`<#>` is the number next to the Configure the NTP daemon selection.

6 Enter the IP address of the server or peer.

A peer can act as a server.

You can add a maximum of three NTP servers or peers. If you attempt to add more than three, then the system will only recognize the three most recent NTP servers or peers.

7 Add additional servers or peers, or exit.

If you want to	Then
add additional servers or peers	step 6
exit	step 13

If you want to	Then
add additional servers or peers	step 6
exit	step 9

8 When prompted for TAG(alias), enter the hostname for the NTP server/peer. Repeat this step until all TAG(alias) have been entered for the IP addresses previously entered.

The TAG(alias) is not optional for the CBM.

9 When prompted, enter **x** to exit the NTP configuration level.

10 When prompted, enter **x** to exit the CLI configuration level.

11 When prompted, type **x** to exit the CLI tool.

12 Access the RMI level to see the response.

```
cbmmtc ntp
```

13 Execute SETTIMETONTP to sync MTX to NTP server. Values will vary.

```
SETTIMETONTP

*****************************************
THE CORE CLK WRT NTP TIME IS AS UNDER:
 *****************************************
TIME OFFSET         : 40267 MILLI SECONDS
ROUND TRIP DELAY    : 24 MILLI SECONDS
NTP TIME            : 3309735096 SECONDS,
                      454 MILLI SECONDS
TIME ZONE           : -360 MINUTES
SAMPLE AGE          : 63 SECONDS
VALID SAMPLE %AGE : 0 %
PLEASE CONFIRM IF YOU INTEND TO SYNCHRONISE
CORE CLK WITH ABOVE VALUES
Please confirm ("YES", "Y", "NO", or "N"):
y
*********************************************
THE CORE CLK IS SYNCHRONISED WITH NTP AS UNDER:
*********************************************
TIME OFFSET         : 40267 MILLI SECONDS
ROUND TRIP DELAY    : 24 MILLI SECONDS
NTP TIME            : 3309735140 SECONDS,
                      507 MILLI SECONDS
TIME ZONE           : -360 MINUTES
SAMPLE AGE          : 67 SECONDS
VALID SAMPLE %AGE : 0 %
```

14 You have completed this procedure.

—End—

Decommissioning NTP

Step	Action

At the local VT100 console

1 Log into the core manager as the root user.

2 Log into the core manager as a user authorized to perform config-admin actions.

3 Access the CLI tool:

```
cli
```

4 Access the CLI configuration level:

```
<#>
```

where

`<#>` is the number next to the CLI configuration level.

5 Access the NTP configuration level:

```
<#>
```

where

`<#>` is the number next to the Network Time Protocol configuration selection.

6 Remove all servers or peers, remove selected servers or peers, or exit.

If you want to	Then
remove all NTP servers or peers	step 8
remove only selected NTP servers or peers	step 10
exit	step 14

7 Remove all NTP servers

```
<#>
```

where

`<#>` is the number next to the Unconfigure the NTP daemon selection.

8 When prompted, enter `y` to confirm the deletion or n to cancel. Go to step 14.

9 Remove only selected NTP servers or peers

<#>

where

<#> is the number next to the Remove an NTP server selection.

You can also delete an NTP server or peer using either its hostname or IP address.

10 When prompted, enter the hostname for the NTP server or peer which you want to delete.

If you want to	Do
remove an additional NTP server or peer	repeat this step
exit	go to step 14

11 When prompted, enter **x** to exit the NTP configuration level.

12 When prompted, enter **x** to exit the CLI configuration level.

13 When prompted, type **x** to exit the CLI tool.

14 Access the RMI level to see the response.

```
cbmmtc ntp
```

15 You have completed this procedure.

—End—

Adding or removing an NTP server or peer

Purpose

Use this procedure to add or remove a Network Time Protocol (NTP) server or peer.

You can add up to three NTP servers or peers.

Prerequisites

In order to perform this procedure, you must have the following authorization and access.

- You must be a user in a role group authorized to perform config-admin actions.
- You must obtain non-restricted shell access.

For more information on how to log in to the CBM as an authorized user, how to request a non-restricted shell access, or how to display actions a role group is authorized to perform, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Requesting non-restricted shell access	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

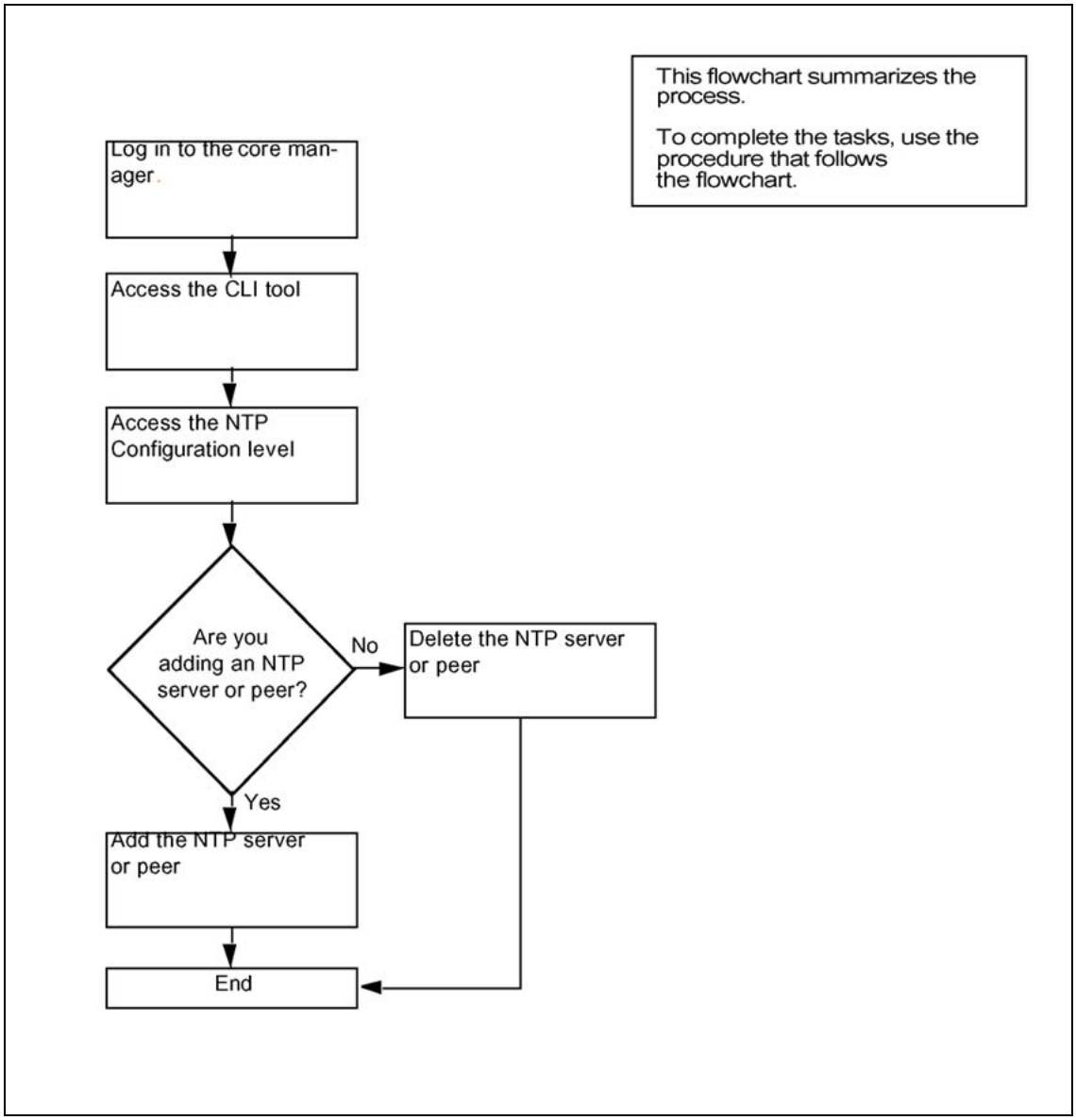
Procedure	Document
Requesting non-restricted shell access	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 850 Security and Administration for GSM/UMTS*, NN20000-321
Requesting non-restricted shell access	*Core and Billing Manager 850 850 Security and Administration for GSM/UMTS*, NN20000-321
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 850 Security and Administration for GSM/UMTS*, NN20000-321

Task flow diagram

The following task flow diagram summarizes the software upgrade process. To complete the tasks, use the instructions in the procedures that follow the flowchart.

Task flow for adding or removing an NTP server or peer



Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Procedure

Adding or removing an NTP server or peer

Step	Action
	At the local VT100 console

1 Log into the core manager as a user authorized to perform config-admin actions.

2 Access the CLI tool

```
cli
```

3 Access the CLI configuration level:

```
<#>
```

where

`<#>` is the number next to the CLI configuration selection.

4 Access the NTP configuration level:

```
<#>
```

where

`<#>` is the number next to the Network Time Protocol configuration selection.

If you want to	Do
add an NTP server or peer	step 5
remove all NTP servers or peers	step 8
remove only a selected NTP server or peer	step 10

5 Add an NTP server or peer:

```
<#>
```

where

`<#>` is the number next to the Configure the NTP daemon selection.

6 When prompted, enter the IP address for that server or peer.

If you want to	Do
add an additional NTP server or peer	repeat this step
exit	enter `x`

You can add a maximum of three NTP servers or peers. If you attempt to add more than three, then the system will only recognize the three most recent NTP servers or peers.

A peer can act as a server.

7 When prompted, enter the hostname for the server or peer. Repeat this step until all TAG(alias) have been entered for the IP addresses previously entered.

Please do not use the IP address as an NTP hostname TAG (alias).

The TAG (alias) is not optional for the CBM.

If you want to	Do
add an NTP server or peer	step 5
exit	step 12

8 Remove all NTP servers

<#>

where

<#> is the number next to the Unconfigure the NTP daemon selection.

9 When prompted, type **y** to confirm the deletion or **n** to cancel. Go to step 12.

10 Remove only selected NTP servers or peers

<#>

where

<#> is the number next to the Remove an NTP server selection.

You can also delete an NTP server or peer using either its hostname or IP address.

11 When prompted, enter the hostname for the NTP server or peer which you want to delete.

If you want to	Do
remove an additional NTP server or peer	repeat step 11
exit	go to step 12

12 When prompted, enter **x** to exit the NTP configuration level.

13 When prompted, enter **x** to exit the CLI configuration level.

14 When prompted, enter **x** to exit the CLI tool.

15 Access the core manager RMI level to see the response.

```
cbmmtc ntp
```

16 You have completed this procedure.

—End—

Installing the logreceiver tool on a client workstation

Application

Use this procedure to install the logreceiver tool on a client workstation. The procedure accesses the logreceiver software stored on the CBM to which the workstation can connect, and installs it in a specific directory on the workstation.

The logreceiver tool is supported only on clients running Solaris 7, Solaris 8, or Solaris 9.

Prerequisites

All users are authorized to perform this procedure.

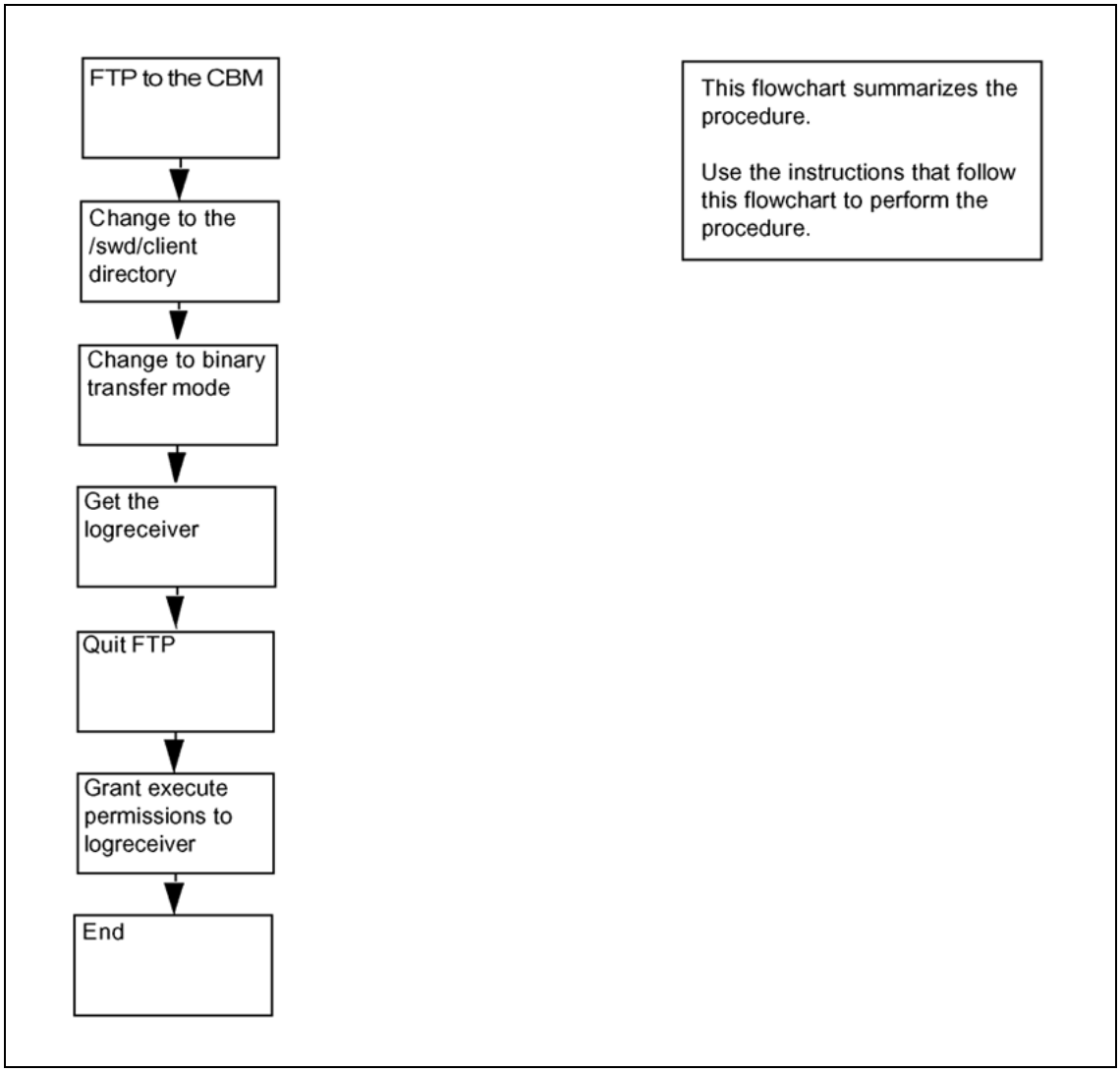
For information on how to log in to the CBM as an authorized user or how to display information about a user or role group, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

Action

The flowchart that follows provides a summary of this procedure. Use the instructions in the step action procedure that follows the flowchart to perform the procedure.

Summary of Installing the logreceiver tool on a client workstation



Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Installing the logreceiver tool on a client workstation

Step	Action
	At the local or remote VT100 console
1	FTP to the CBM **`ftp <CBM_IP_address>`** where **`<CBM_IP_address>`** is the IP address or node name of the CBM

2 Change the directory to /swd/client

```
ftp> cd /swd/client
```

3 Change the files transfer mode to binary

```
ftp> binary
```

4 Get the logreceiver tool

```
ftp> get logreceiver
```

5 Quit FTP

```
ftp> bye
```

6 Grant execute permissions to the logreceiver

```
chmod +x logreceiver
```

7 You have completed this procedure.

—End—

Installing the CMFT on a client workstation

Purpose

Use this procedure to install the Command Module File Transfer script (CMFT) on a client workstation.

Application

This procedure copies the CMFT from the Command Module (CM) to a specified directory on the client workstation, typically /sdm/bin. The CMFT script allows you to use SCFT (SSH Core File Transfer) to transfer files to and from the CM.

SCFT is described in the "OpenSSH Overview" section in *CBM 850 Accounting*, NN10363-811

Prerequisites

All users are authorized to perform this procedure.

For information on how to log in to the CBM as an authorized user or how to display information about a user or role group, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

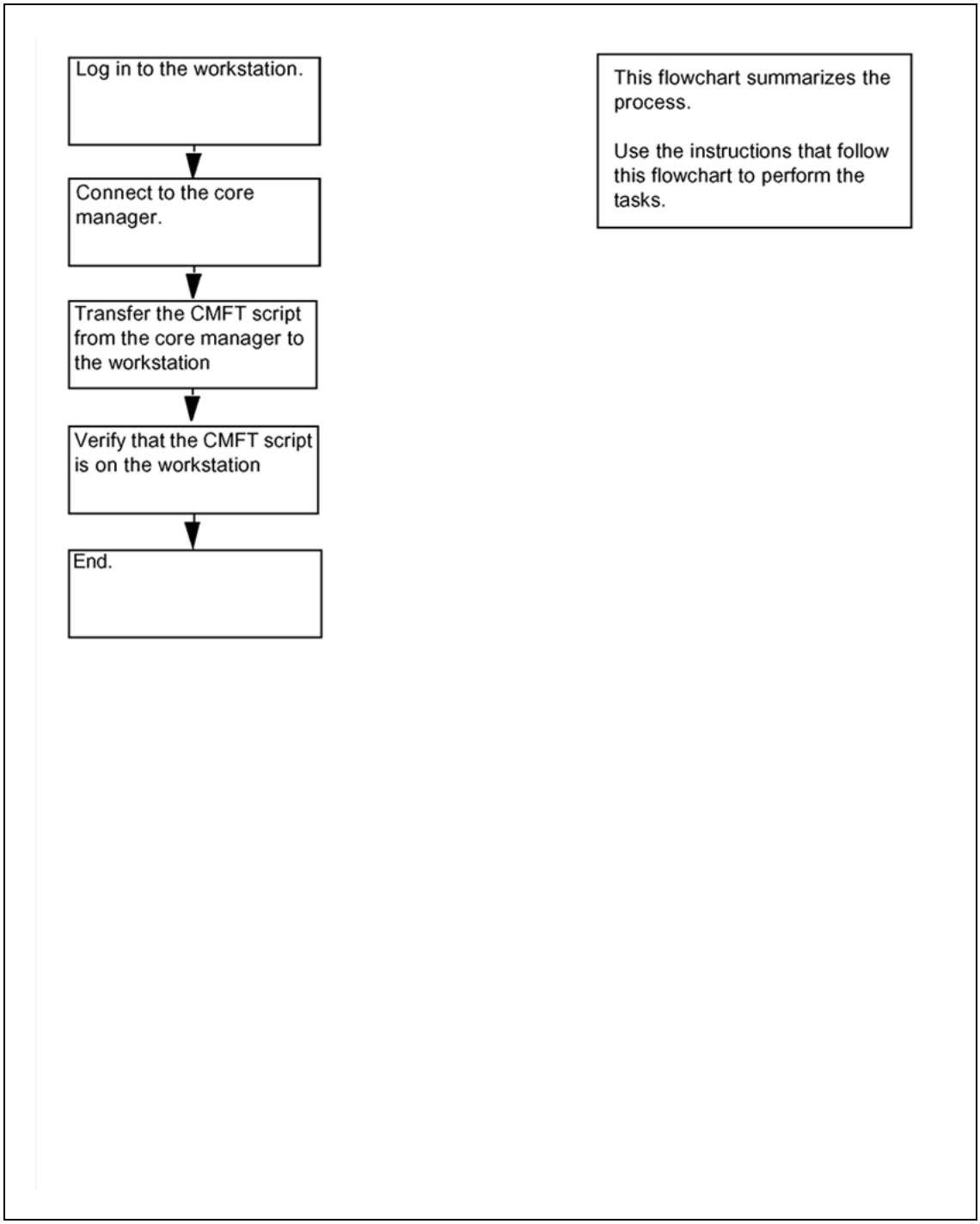
Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for CDMA*, NN20000-320

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration for GSM/UMTS*, NN20000-321

Task flow diagram

The task flow diagram that follows provides a summary of this process. Use the instructions in the procedure that follows the flowchart to perform the tasks.

Task flow for installing the CMFT on a client workstation



Instructions for entering commands in the following procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Procedure

Installing the CMFT on a client workstation

Step	Action
	At the local or remote VT100 console
1	Log in to the client workstation.
2	Get the CMFT script from the core manager: **`scp <your user ID>@ <coremanager_ip_address> :/sdm/scft/cmft.`** where **`<coremanager_ip_address>`** is the core manager node name or ip address
3	Verify that you have successfully transferred the CMFT script **`ls -l cmft`** The client workstation displays the CMFT script.
4	Set the ownership and permissions of the CMFT script to 755: **`chmod 755 cfmt`**
5	You have completed this procedure.

—End—

Initiating a recovery back to the cluster

Prerequisites

It is expected that the primary server is in the shut-down mode.

If the server was previously a CBM and contains billing files not already sent to a down-stream billing server, using the cluster server, these files should be copied to a downstream server prior to performing "Installing the remote backup server" (page 130). Otherwise these files and the billing records will be lost. Contact next level of support for assistance

Target

When completed, this procedure will restore the HA cluster and backup server.

Action

Initiating a recovery back to the cluster

At your workstation

Initiating a recovery back to the cluster

Step	Action
1	Follow the "Installing the remote backup server" (page 130)procedure. In this case, the unit0 server of the cluster is used as a remote backup server. Use the same hostname and IP address that was used to configure the remote backup server in the first place.
2	Follow the "Scheduling automatic backups on the remote server" (page 136)procedure. Use only one automated schedule and make sure to select a time that will not be invoked shortly.
3	Follow the "Performing a manual backup of the target server" (page 134)procedure.
4	Bring down the machine currently active by following the procedure ‘Two-server (cluster) configuration’ in chapter ‘Shutting down an SPFS-based server’ of the document ATM/IP Solution-level Fault Management NN10408-900.
5	Follow the "Initiating a switch over to the remote backup server" (page 127)procedure to bring the services back to unit0 of the cluster.

6 Follow the ‘Cloning the image of one server in a cluster to the other server’ procedure of the document ATM/IP Solution-level Security and Administration NN10402-600.

7 If the server was previously a CBM and contains billing files not already sent to a down-stream billing server, using the remote backup server, these files MUST be copied to a downstream server prior to performing "Installing the remote backup server" (page 130)Otherwise these files and the billing records will be lost. Contact next level of support for assistance.

8 Reinstall the backup server following the "Installing the remote backup server" (page 130)procedure.

9 Reconfigure the backup server following the "Scheduling automatic backups on the remote server" (page 136)procedure.

10 The procedure is complete.

—End—

Initiating a switch over to the remote backup server

Prerequisites

Prior to starting this procedure, shut down the Cluster machine.

Refer to section *Two-server (cluster) configuration* in chapter *Shutting down an SPFS-based server* in NTP NN10408-900, *ATM/IP Solution-level Fault Management*.

The user must be logged in as the root user in order to initiate the switch command.

CAUTION

If configuration, provisioning, patching or other “write”-type operations occurred since the last remote backup, the remote backup system can be out of sync compared to the data in network elements and/or the primary OAM system.

Take actions before initiating the switchover to a remote backup OAM server (that is, response to a geographic or other prolonged outage of the primary OAM system) to halt or prevent “write”-type operations by OSSs and operations personnel until an in-sync status is achieved.

When initiating a switchover to a remote backup OAM server, do not execute configuration, provisioning, patching or other “write”-type operations through the remote backup OAM system until out-of-sync conditions are cleared.

Target

When completed, this procedure reboots the remote backup server as the unit0 of the cluster.

Action

Initiating a switch over to the remote backup server

At your workstation

Step	Action
1	Log in to the server by typing `> telnet <server>` and pressing the Enter key. where

server is the IP address or host name of the SPFS-based remote backup server.

2 When prompted, enter your user ID and password.

3 Change to the root user.

```
su - root
```

4 When prompted, enter the root password.

5 Invoke the switch by typing:

```
$ /opt/sspfs/rbks/switch
```

6 When ready, indicate you want to proceed by typing:

```
OK
```

7

—End—

Installing the remote backup server

Target

Use this procedure to install the remote backup server for Geographic Survivability. Backing up the remote server provides a standby backup system which is ready to provide service if the primary system is unavailable for an extended period of time. The remote server can assume the identity of the primary server with data and files accurate to the last synchronization.

Prequisites

You must have the root user ID and password to perform this procedure.

Use the following table to ensure that you have the information ready for input during this procedure.

System Variable	Actual value
Hostname	
IP address (remote backup server)	
Netmask	
Router (default gateway IP)	
DNS (Yes, No)	
Unit 0 IP address (IP of primary cluster unit 0)	
Daily backup (up to four) in format:**HH:MM** where **HH = hours (00-23)** **MM = minute (00-59)**	
DNS domain	
IP address (DNS server[s])	
DNS search domain(s)	

DNS variables apply only when a DNS server has been configured.

Action

Installing the remote backup server on a Geographic Survivability standby server

At your workstation or the remote server console

Step	Action

1 Determine how to log in to the Sun Netra 240 (N240) server that is installed as the remote backup server.

If you want to log in by means of	Do
ssh	Type ssh -1 root <server> and press the Enter key. Go to step 2
telnet	Type telnet <server> and press the Enter key. Go to step 2
the remote server console	step 2

where

`server` is the name of the N240 server.

2 Log in to the server through the console (port A) and when prompted, enter the root user ID and password.

3 Bring the system to the {0} OK prompt by typing:

```
# init 0
```

4 Enter the following command to verify that the auto-boot option is set to true.

```
{0} ok printenv auto-boot?
```

If it is set to false, enter the following command.

```
{0} ok setenv auto-boot?=true
```

5 Insert disk 1 of the SPFS0** (090) CD set into the DVD drive on the standby unit.

6 Install the remote backup server for Geographic Survivability.

```
{0} OK boot cdrom - rbackup
```

7 Type OK and press Enter to acknowledge restriction on your use of the software.

8 Select the rbackup server profile for the system.

9 Enter no to not select the default settings. The N240 server must be connected to the network and must have access to the default

gateway. This allows you to enter the server's settings for the installation.

10 Enter site-specific information in response to the following prompts. (Refer to the information entered in the table at the beginning of this procedure.)

```
Enter the hostname for this system.
Enter the IP address for the remote backup server.
Enter the subnet mask for this network.
Enter the IP address for this network's router.
Enter the timezone for this system.
```

The default timezone is US/Eastern. Enter ? for a list of supported time zones.

```
Will this system use DNS?
```

11 Enter yes or no. If you answer yes, you are prompted for the DNS domain name, name server IP addresses, and the search domains. You can enter several name servers and search domains. To stop entry, enter a blank line

12 Enter OK to accept current settings.

The installation of the first CD takes approximately 25 minutes. No action is required until the following system response displays:

```
Media:

1.  CD/DVD
2.  Network File System
3.  Skip
Media[1]:
```

13 Enter 1 and then press Enter to select CD/DVD as the Media type for the installation of Solaris 9.

The system ejects disk 1 CD automatically.

14 Remove SPFS disk 1 CD from the server.

15 Insert SPFS disk 2 CD (the second SPFS CD in the set of 3 disks) into the DVD drive and then press Enter.

This step takes approximately 15 minutes to complete.

16 Enter 2 to continue with the installation.

17 Press Enter to reboot the system.

The installation of the Solaris Patches starts after the system reboots.

18 The installation of the second CD takes approximately 20 minutes. No action is required until the system prompts you to enter the third CD.

```
Done Installing Solaris Patches...
Insert SSPFS Deadstart CD ROM Disk 3 in the Drive.
Type "ok" when Ready.
```

19 Remove SPFS disk 2 CD from the server.

20 Insert SPFS disk 3 CD (the third SPFS CD in the set of 3 disks) into the DVD drive.

21 Enter OK and then press Enter to start the installation of the third CD.

The installation of the third CD takes approximately 50 minutes. You could be required to press Enter to reprint the login prompt to the screen after the reboot.

```
<Hostname> console login:
```

22 Log in to the server using the root user ID and password.

23 Remove SPFS disk 3 CD from the server.

```
eject cdrom
```

24 Enter the command line interface (CLI) tool.

```
cli
```

25 Enter the number next to the Configuration option in the menu.

26 Enter the number next to the Succession Element Configuration option in the menu.

27 Enter the number next to the PSE Application Configuration option in the menu.

28 Enter the number next to the Configure PSE option in the menu.

29 Enter the primary/cluster IP address of CS 2000 Management Tools server. This is the address of the NPM server.

30 Enter Y to confirm the IP address.

Ignore the following error message if it displays.

```
Can't configure PSE on remote backup unit to enable NPM
```

31 Enter X to exit each level until you have exited from the cli tool.

32 Start the PSE server.

```
# pse start
```

33 Verify that the server has started. If the server does not start, contact your next level of support.

```
# pse status
```

34 If an SPFS MNCL CD is to be installed, refer to the documentation included with the CD for complete installation instructions.

35 Enter NPM on the CS 2000 Management Tools server and follow patching procedures to apply all relevant patches.

—End—

Performing a manual backup of the target server

Target

Use this procedure to perform a manual backup of the primary server. Backing up the primary server provides a standby backup system which is ready to provide service if the primary system is unavailable for an extended period of time. The remote server can assume the identity of the primary server with system configuration data and files accurate to the last synchronization.

ATTENTION
This procedure is for use with Geographic Survivability only.

Action

Performing a manual backup of the remote server

At your workstation or the remote server console

Step Action

1 Determine how to log in to the Sun Netra 240 (N240) server that is installed as the remote backup server.

If you want to log in by means of	Do
ssh	Type ssh -l root <server> and press the Enter key. Go to step 2
telnet	Type telnet <server> and press the Enter key. Go to step 2
the remote server console	step 2

where

`server` is the name of the N240 server.

2 When prompted, enter the root password.

3 Start the command line interface tool.

```
cli
```

The system responds by displaying a menu.

4 Select the Configuration menu.

The system displays the Configuration menu.

5 Select the Remote Backup option.

```
Remote Backup Configuration
1-rbackup_display (Display Remote Backup Configuration)
2-rbackup_config (Remote Backup Configuration)
3-rbackup_exec (Execute Remote Backup Now)
4 - rbackup_cancel (Cancel Running Remote Backup)
X-exit
```

6 Select

```
3-rbackup_exec (Execute Remote Backup Now)
```

7 An automatic backup is made.

Pressing 4 during execution of the backup halts the process and performs necessary clean-up operations.

8 Exit the Remote Backup Configuration level.

```
x
```

—End—

Scheduling automatic backups on the remote server

Target

Use this procedure to schedule automatic backups to the remote server. Backing up the primary server provides a standby backup system which is ready to provide service if the primary system is unavailable for an extended period of time. The remote server can assume the identity of the primary server with data and files accurate to the last synchronization.

ATTENTION
This procedure is for use with Geographic Survivability only.

Action

Scheduling automatic backups of the remote server

At your workstation or the remote server console

Step **Action**

1 Determine how to log in to the Sun Netra 240 (N240) server that is installed as the remote backup server.

If you want to log in by means of	Do
ssh	Type ssh -l <server> and press the Enter key. Go to step 2
telnet	Type telnet <server> and press the Enter key. Go to step 2
the remote server console	step 2

where

`server` is the name of the N240 server.

2 When prompted, enter the root password.

3 Start the command line interface tool by entering:

```
cli
```

4 Select the Configuration menu.

The system displays the Configuration menu.

5 Select the Remote Backup option.

Response:

```
Remote Backup Configuration
```

```
1 - rbackup_display (Display Remote Backup Configurati
on)
2-rbackup_config (Remote Backup Configuration)
3-rbackup_exec (Execute Remote Backup Now)
4 - rbackup_cancel (Cancel Running Remote Backup)
X-exit
```

6 Select:

```
2-rbackup_config (Remote Backup Configuration)
```

The system responds with the IP address of the primary server that is currently configured as the remote server, and the times that are currently configured for automatic backups.

7 Enter the unit 0 IP address of the primary server to be backed up.

```
<nnn.nnn.nnn.nnn> is alive
```

where

nnn.nnn.nnn.nnn is the IP address that you entered.

8 Use the following table to determine your next step.

If the system	Do
prompts you to accept the ssh key	Enter yes. Go to step 9
does not prompt you to accept the ssh key	Go to step 9

```
Enter a time for a daily backup to occur (HH:MM):
```

where

HH is hours. Valid values are 00 to 23.
MM are minutes. Valid values are 00 to 59.

9 Enter the first time for a daily backup to occur

You can configure up to four times for daily backup to occur.

Response:

```
Enter a second time for a daily backup to occur (HH:MM)
or enter "x" to stop provisioning backup times:
```

10 Use the following table to determine your next step

If you	Do
want to enter another time for a remote backup to occur	Enter a second time for a daily backup to occur. Go to step 11
do not want to enter another time for a remote backup to occur	Enter x. Go to step 13

11 Use the following table to determine your next step

If you	Do
want to enter another time for a remote backup to occur	Enter a third time for a daily backup to occur. Go to step 12
do not want to enter another time for a remote backup to occur	Enter x. Go to step 13

12 Use the following table to determine your next step

If you	Do
want to enter another time for a remote backup to occur	Enter a fourth time for a daily backup to occur. Go to step 13
do not want to enter another time for a remote backup to occur	Enter x. Go to step 13

13 Use the following table to determine your next step

If you want to	Do
commit changes	Go to step 14
exit	Enter quit. Go to step 15
re-enter settings	Enter anything other than ok or quit. Go to step 9

14 Enter

```
ok
```

```
=== "rbackup_config"completed successfully
```

15 Exit the Remote Backup Configuration level.

```
x
```

—End—

Viewing configuration information for remote server backups

Target

Use this procedure to view the current configuration information for remote server backups. The system displays the IP address of the target system and the times in which automatic backups of the target system will occur.

ATTENTION
This procedure is for use with Geographic Survivability only.

Action

Viewing configuration information for remote server backups

At your workstation or the remote server console

Step	Action
1	Determine how to log in to the Sun Netra 240 (N240) server that is installed as the remote backup server.

If you want to log in by means of	Do
ssh	Type ssh -l <server> and press the Enter key. Go to step 2
telnet	Type telnet <telnet> and press the Enter key. Go to step 2
the remote server console	step 2

where

`server` is the name of the N240 server.

2 Start the command line interface tool by entering:

```
cli
```

The system responds by displaying a menu.

3 Select the Configuration menu.

The system displays the Configuration menu.

4 Select the Remote Backup option.

Response:

```
Remote Backup Configuration
1-rbackup_display (Display Remote Backup Configuration)
```

```
2-rbackup_config (Remote Backup Configuration)
3-rbackup_exec (Execute Remote Backup Now)
4 - rbackup_cancel (Cancel Running Remote Backup)
X-exit
```

5 Select

```
1-rbackup_display (Display Remote Backup Configuration)
```

Response:

```
Current settings:
Target system is:  <nnn.nnn.nnn.nnn>
Back up times are:  <Time 1>...<Time n>
```

where

<nnn.nnn.nnn.nnn> is the IP address of the remote server

where

<Time 1>...<Time n> is the set of times at which automated backups occur.

6 Exit the Remote Backup Configuration level by typing:

x

—End—

Viewing logs from a remote backup

Target

Use this procedure to view logs associated with a backup of the remote server. Logs are created during automatic and manual backups of the remote server.

Action

Viewing logs from a remote backup

At your workstation or the remote server console

Step	Action

1 Determine how to log in to the Sun Netra 240 (N240) server that is installed as the remote backup server.

If you want to log in by means of	Do
ssh	Type ssh -l <server> and press the Enter key. Go to step 2
telnet	Type telnet <server> and press the Enter key. Go to step 2
the remote server console	step 2

where

`server` is the name of the N240 server.

2 Enter:

```
less /var/adm/messages
```

The system responds by displaying the contents of the log file.

3 The procedure is complete.

—End—

Canceling a running remote backup process

Application

Use this procedure to cancel an existing remote backup process.

Prerequisites

This procedure has no prerequisites.

You must have the root user ID and password to log into the server.

Action

Perform the following steps to complete this procedure.

Step	Action
	At your workstation
1	Establish a connection to the server that is hosting the CS 2000 Management Tools through telnet or SSH, and log in using the root user ID and password. In a two-server configuration, log in to the active server using the physical IP address of the active server, and ensure you are on the active server using the `ubmstat` command. For detailed steps, refer to procedure "Logging in to an SPFS-based server".
2	Launch the command line interface tool by typing `# cli` and pressing the Enter key.
3	From the resulting menu, select the number against the “Configuration” menu option, and press the Enter key.

4 From the resulting menu, select the number against the “Remote Backup Configuration” menu option, and press the Enter key.

5 From the resulting menu, select the number against the “rbackup_cancel (Cancel Running Remote Backup)” menu option, and press the Enter key.

Example response

```
=== Executing "rbackup_cancel"
cleaning up files
unmounting /tmp/.snap/var /tmp/.snap/user_audio_files
/tmp/.snap/opt/nortel /tmp/.snap/opt /tmp/.snap/data/
qca
/tmp/.snap/data/oradata/arch /tmp/.snap/data/oradata
/tmp/.snap/data
/tmp/.snap/backup /tmp/.snap
removing scratch /tmp/.backing_store d99
=== "rbackup_cancel" execution completed
```

6 Exit each menu level of the command line interface tool by typing

```
select - x
```

and pressing the Enter key.

7 You have completed this procedure.

—End—

Configuring Client/Server Ports on an SPFS-Based Server for Secure Firewall Communications

Use this procedure to configure the client-side and server-side ports.

Application

Use this procedure to configure the client-side and server-side ports on a Server Platform Foundation Software (SPFS) based server to facilitate secure firewall communication between client and server applications. You can also use this procedure to list the ports that are currently configured.

ATTENTION

The server-side port has a default value of 10080, and the client-side port has a default value of 10090. If the default value is acceptable, it is not necessary to configure the ports.

Prerequisites

The server-side port must have the same value across all offices in the network. If the ports do not have the same value, the client application GUIs will fail to launch.

Action

Perform the following steps to complete this procedure.

Configure the client- and server-side ports on an SPFS server

Step	Action

At your workstation:

1 Telnet to the server by typing

```
> telnet <server>
```

and pressing the Enter key.

where

`server` is the IP address or host name of the SPFS-based server

2 When prompted, enter your user ID and password.

3 Change to the root user by typing

```
$ su - root
```

and pressing the Enter key.

4 When prompted, enter the root password.

5 Access the command line interface by typing

```
# cli
```

and pressing the Enter key.

Response

```
Command Line Interface
 1 - View
2 - Configuration
3 - Other
X - exit
select -
```

6 Enter the number next to the "Configuration" option in the menu.

Example response

```
Configuration
  1 - NTP Configuration
  2 - Apache Proxy Configuration
  3 - OAMP Application Configuration
  4 - CORBA Configuration
  5 - IP Configuration
  6 - DNS Configuration
  7 - Syslog Configuration
  8 - Remote Backup Configuration
  9 - Database Configuration
 10 - NFS Configuration
 11 - Bootp Configuration
 12 - Restricted Shell Configuration
 13 - Security Services Configuration
 14 - Disk Drive Upgrade
 15 - Login Session
 16 - Location Configuration
 17 - Cluster Configuration
 18 - Succession Element Configuration
 19 - snmp_poller (SNMP Poller Configuration)
 20 - backup_config (Backup Configuration)
X - exit
Select -
```

7 Enter the number next to the "Security Services Configuration" option in the menu.

Example response:

```
Security Services Configuration
1 - Socks Configuration
2 - IEMS Server Location Configuration
3 - PAM Configuration
X - exit
```

```
select -
```

8 Enter the number next to the "Socks Configuration" option in the menu.

Example response:

```
Socks Configuration
1 - config_socks (Modify Socks Security Service)
2 - list_socks (List Socks Security Service)
X - exit
select -
```

9 Enter the number next to the "list_socks" option in the menu to display the server-side and client-side Socks Proxy ports that are currently configured.

Example response:

```
The ports configured for use by socks are:
The Client side SOCKS Proxy will listen on port 10090
The Server side SOCKS Proxy will listen on port 10080
==="list_socks" completed successfully
```

10 Use the following table to determine how to proceed.

If you	Do
want to change the ports	Step 11
do not want to change the ports	you have completed this procedure

11 Enter the number next to the "config_socks" option in the menu.

Example response:

```
The changes of the server side port is a disruptive
action.  If the server side port is changed, the
SOCKS server and all dependent applications must be
restarted.
SOCKS ports in all offices must be configured to the
same port.  Misconfiguration will cause EMS clients to
not function.
Proceed with caution.
Enter the port the Server side SOCKS Proxy will listen
on.  Value must be within [1025 - 655351].  current
Value - 10080 [?, q]
```

12

ATTENTION

Changing the Socks server-side port requires a restart of the SOCKS server and all dependent applications.

Enter the server-side port, or press Enter to leave at the default value (10080).

Example response:

```
Leaving SERVER port at 10080
Enter the port the Client side SOCKS Proxy will listen
on.  Value must be within [1025 - 655351].  Current
value - 10090 [?, q]
```

13

ATTENTION

Changing the Socks client-side port requires that all client workstations already running the application GUIs, be restarted to use the new port.

Enter the client-side port, or press Enter to leave at default the value (10090).

Example response:

```
Leaving CLIENT port at 10090
Leaving both ports at configured values:
           Server side SOCKS Proxy port: 10080
           Client side SOCKS Proxy port: 10090
==="Config_socks" completed successfully
```

14 Exit each menu level of the command line interface to eventually exit the command line interface, by typing

`select - x`

and pressing the Enter key.

15 Use the following table to determine how to proceed.

If you	Do
changed one or both ports	Step 16
did not change the port values	you have completed this procedure

16 Perform one or both of the following substeps depending on whether you changed the server-side or client-side port, or both.

a. After changing the server-side port, restart the Socks server and all dependent server applications (SESM, SAM21EM, and MG9KEM).

Refer to the ATM/IP Solution-level Security and Administration document (NN10402-600), for the Socks server, SESM and SAM21 server applications. Refer to the *MG 9000 Security and Administration* (NN10162-611) document for the MG 9000 Manager server application.

Refer to *Packet MSC Administration and Security* (NN20000-216), for the Socks and dependent server applications.

b. After changing the client-side port, restart any client workstations already running the application GUIs.

—End—

Installing optional software on a CBM 850

Purpose

This is a generic procedure that is used for installing optional software packages on the CBM 850.

After completing this procedure you need to run patch audit to get the applicable patches for the packages you just installed.

Prerequisites

You must have root user permissions to perform this procedure.

For information on how to log in to the CBM as an authorized user or how to display information about a user or role group, review the procedures in the following table.

Procedure	Document
Logging in to the CBM	*Core and Billing Manager 850 Security and Administration*, NN10358-611
Displaying actions a role group is authorized to perform	*Core and Billing Manager 850 Security and Administration*, NN10358-611

Procedure

Use the following procedure to install optional software on a Core and Billing Manager (CBM) 850.

Action

ATTENTION

Instructions for entering commands in this procedure do not show the prompting symbol, such as #, >, or $, displayed by the system through a GUI or on a command line.

Installing optional software on a CBM 850

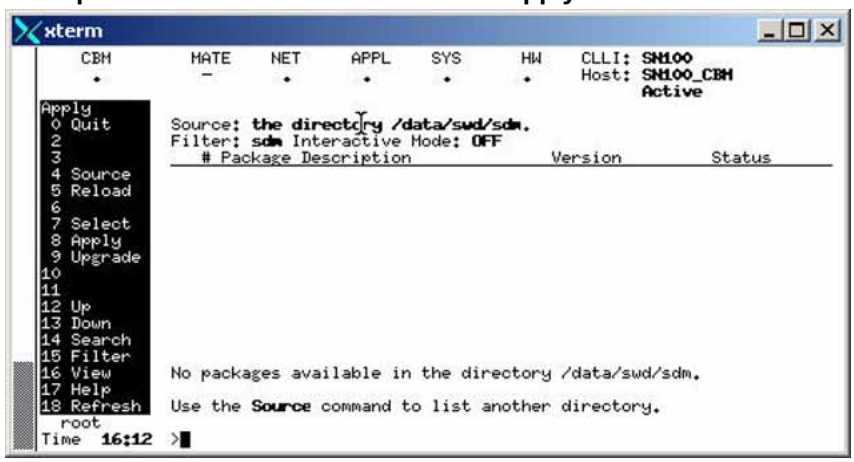
Step	Action
	At your workstation
1	Log into the CBM.
2	From the command line prompt, access the apply level of the cbm maintenance interface:

cbmmtc apply

The system displays the apply level screen of the cbm maintenance interface, which shows a list of the packages, if any exist, in the default source directory.

Up to 12 software packages can be displayed at a time. Use the Down command (command 13 as shown in the following example) to view other packages.

Example of cbm maintenance interface apply level



3 Use the following table to determine your next step.

If	Do
CD-ROM is being used to deliver the CBM software	step 4, and specify: /cdrom/cdrom/applications/cbm/packages as the <source_directory_name>
you want to exit from the cbm maintenance interface	step 14

4 Insert the CD-ROM into the CD drive if it is not already present in the drive.

5 At the command line located at the bottom of the cbmmtc user interface screen, type:

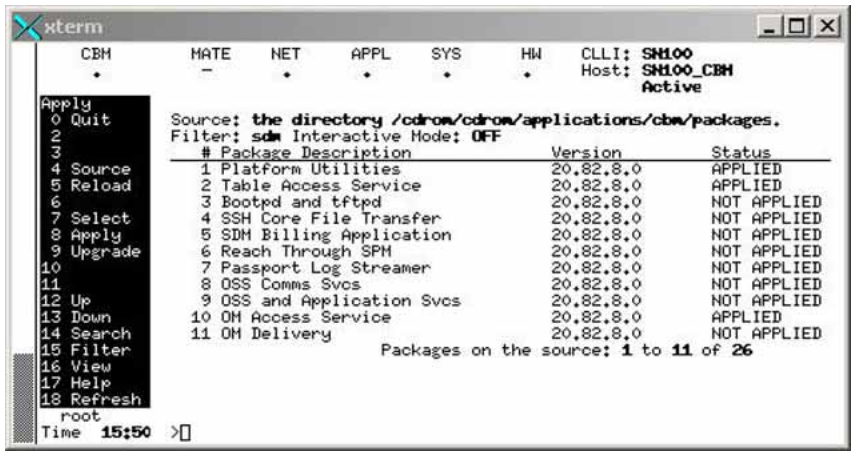
source <source_directory_name>

where

<source_directory_name> *is the full pathname of the directory containing the package that you want to apply. Since CD-ROM is being used for the installation, specify /cdrom/cdrom/applications/cbm/packages as the source_directory_name*

As shown in the following example, the system displays the apply level screen of the cbm maintenance interface, which shows a list of all packages in the source directory that you specified.

Example of apply level showing the CD-ROM source directory



6 In the list of packages, locate the packages to be applied and take note of their numbers (located next to the names of the packages). Select the packages that you have decided to apply:

select <package number> ... <package number>

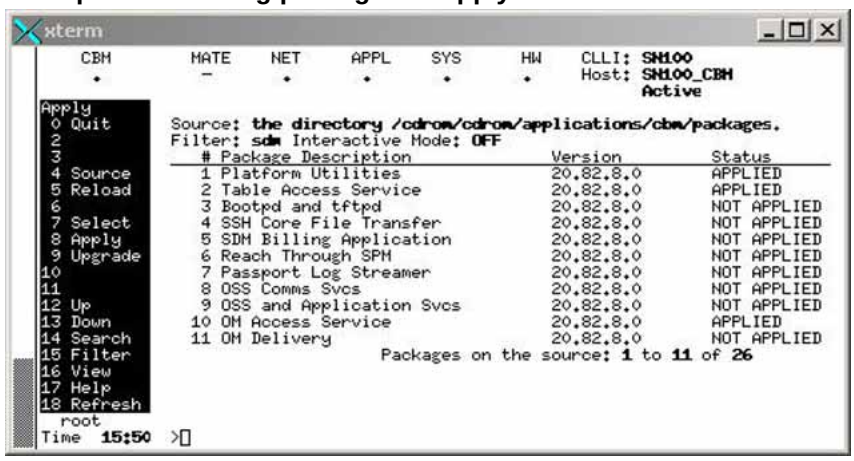
where

<package number> is the number associated with a package, that you noted. Each package number is separated by preceding and succeeding spaces.

To select the Reach Through SPM application, which is number 6, and OM Delivery, which is number 11 in the sample screen display shown in the previous figure, enter
select 6 11
To de-select any packages that you selected, re-enter the select command for the packages you want to de-select. The highlighting on the packages that you de-select will be removed.

The packages you selected are highlighted on the cbmmtc apply screen, as shown in the following figure.

Example of selecting packages to apply

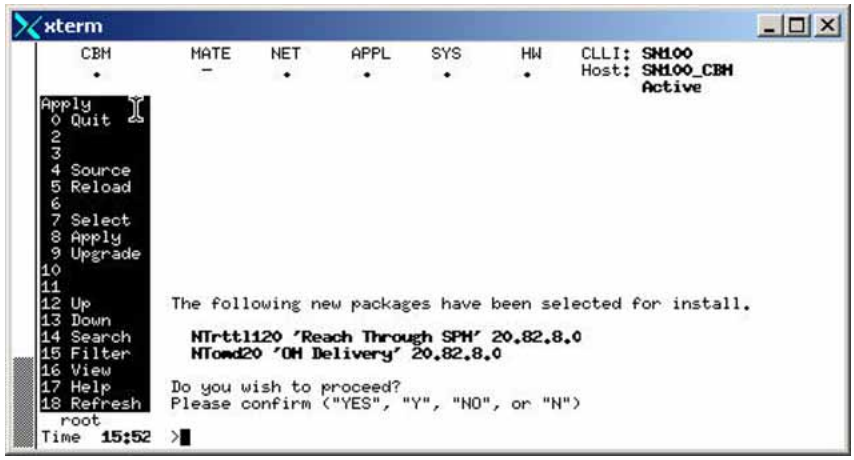


7 Apply the selected packages:

```
apply
```

8 If a prerequisite package for the package(s) you have selected to apply is not already been applied on the system, the system SWIM tool will automatically select and apply the pre-requisite package unless the package is currently selected to be applied.

Example of results screen after applying packages



The system prompts if you want to continue with applying the selected packages.

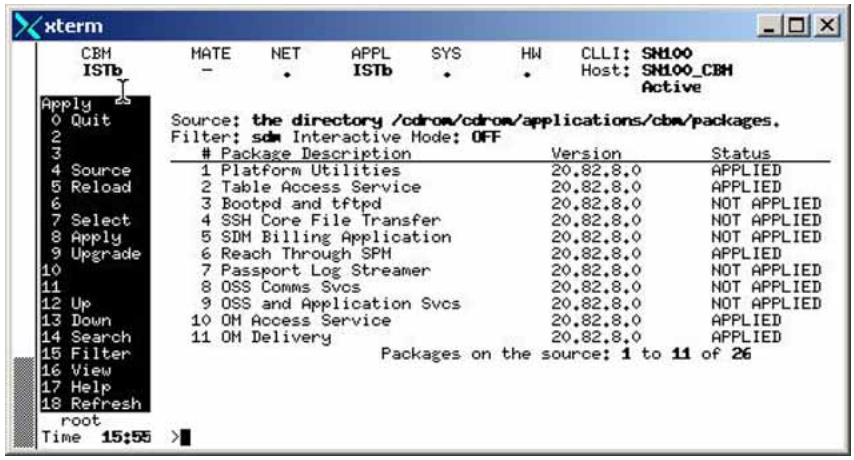
9 Use the following table to determine your next step

If	Do
you want to continue the package application	step 10
you do not want to continue the package application	step 13

10 Type yes in response to the prompt.

The status of each package application displays on the cbmmtc apply screen, as shown in the following figure.

Example apply level showing the status of applied packages



11 When the application is completed, the installed packages will appear in the list that displays when you enter the cbmmtc packages level. Verify that the status of the new packages indicates Applied under the Status column.

ATTENTION

It is important that packages installed on the system not be left with a Partial status. If any package installed application fails or otherwise shows a Partial status, contact your next level of support for assistance.

12 If applicable, review details about the CBM package application by performing procedure "Using Patch Audit to ensure CBM SN09 and higher loads are patch-current" in NN10358-611, Security and Administration for CBM, otherwise continue with step 13.

13 Type no in response to the prompt.

14 Exit from the cbm maintenance interface:

```
quit all
```

15 Ensure that your CBMs are patch-current.

For patching procedures, refer to ATM/IP Solution-level Security and Administration, NN10402-600.

.

16 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

—End—

Carrier VoIP

Core and Billing Manager 850 Configuration Management

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