CS 2000 Core Manager Administration and Security

Administration and security strategy

In a Succession network, the CS 2000 Core Manager provides security and administration management for the Communication Server 2000 as well as SPM-based equipment.

Tools and utilities

The CS 2000 Core Manager lets you perform the following tasks:

- configure CS 2000 Core Manager software
- access administration tasks from the maintenance interface for DMS and SPM-based equipment
- perform time and date administration tasks
- perform user administration tasks
- backup and restore
- install, update, remove and configure equipment
- enable and disable remote access
- upgrade CPU controller modules
- configure and maintain DCE cell configuration
- use Enhance Terminal Access, ASCII Terminal Access, and Secure file transfer

Administration and security procedures

Specific administration and security and administration procedures are found in the modules located within this Security section.

Creating an administration account

Application

CAUTION
Possible failure when using sdm_admin account
After you have established your new cell, you must always create an sdm_admin account immediately after. For an existing cell, you can create one or more sdm_admin accounts for the client workstations. If you are using the sdm_admin account that does not exist to perform a task, the applied procedure fails.

ATTENTION
Do not use the sdm_admin account to configure DCE on a DCE client machine. The sdm_admin account does not have enough privileges to perform that procedure. Use the cell_admin account to configure or un-configure DCE in a normal DCE client machine except CS 2000 Core Manager.

Use this procedure to create an administration account (default is sdm_admin). You can use the sdm_admin account to perform DCE administration activities related to the CS 2000 Core Manager. The sdm_admin account only has some of the privileges of a cell_admin account.

This procedure allows you to create an sdm_admin account for CS 2000 Core Manager administration routine tasks. Use this procedure to

- separate the CS 2000 Core Manager administration tasks from the DCE administration tasks
- prevent a normal CS 2000 Core Manager operator from destroying the DCE system-wide data

The sdm_admin account can perform the following procedures:

- configure a CS 2000 Core Manager in a DCE cell
- remove a CS 2000 Core Manager from a DCE cell
- create a DCE user
- delete a DCE user
- configure a CS 2000 Core Manager application server

- remove a CS 2000 Core Manager application server
- manage an application's extended registry attributes (ERA)
- set access permission for secure file transfer (SFT)
- optionally perform like a DCE user account
- optionally remove a CS 2000 Core Manager from a DCE cell previously configured by a different sdm_admin account

The sdm_admin account cannot:

- delete a DCE user previously created by a cell_admin account
- set up a DCE cell
- assign or reassign a new DCE server

The cell_admin account can perform all the procedures that the sdm_admin account can and cannot perform. Refer to the corresponding sections when using the sdm_admin or cell_admin accounts to perform any procedure.

Note: The cell_admin account cannot run client applications.

The following conditions must be met before you can create an sdm_admin account:

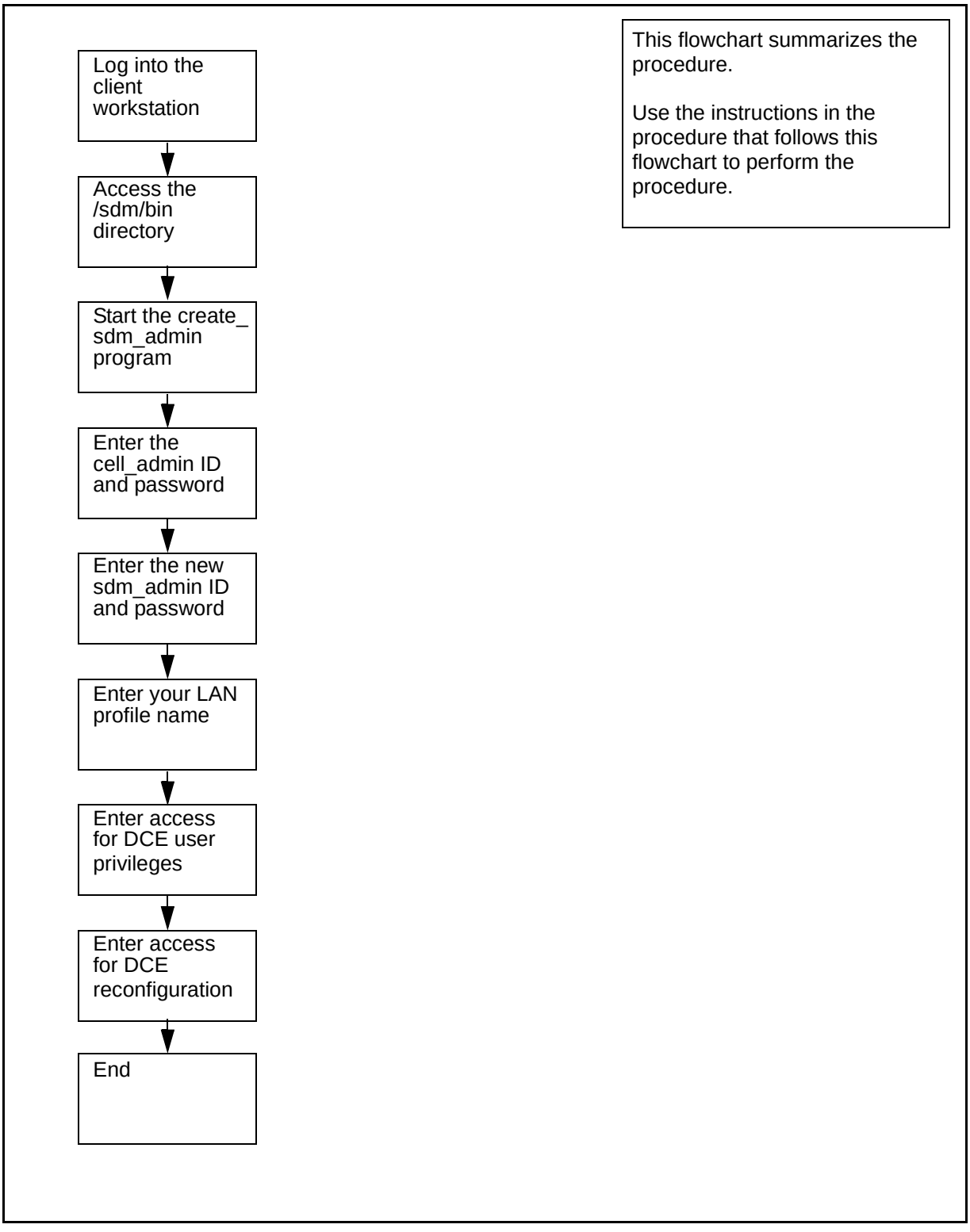
- you have set the DCE cell and configured at least one remote client machine as the DCE client within the cell
- the DCE cell has cell_admin privileges

Note: You only need to perform this procedure once within your DCE cell.

Action

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

Summary of creating an administration account



Creating an administration account

At the remote client workstation

1 Access the bin directory by typing

```
> cd /sdm/bin
```

and pressing the Enter key.

2 Create an sdm_admin account by typing

```
> ./create_sdm_admin
```

and pressing the Enter key.

3 Enter the DCE cell_admin user name, and press the Enter key.

Note: If you do not enter a user ID, the system uses the default value.

4 Enter the DCE cell_admin password, and press the Enter key.

5 Enter the sdm_admin user name that you want to create, and press the Enter key.

If you do not specify a user name, the system enters sdm_admin as the default value.

6 Enter the password for the sdm_admin account you entered in the previous step, and press the Enter key.

7 Re-enter the password for the sdm_admin account again, and press the Enter key.

8 Enter the name of your LAN profile (the LAN profile you used to create your DCE cell), and press the Enter key.

Note: Use the same LAN profile name as the one you used to create your DCE cell to configure a node and CS 2000 Core Manager within the DCE cell. If you use a different LAN profile name, this procedure fails. If you do not specify a LAN profile, the system enters lan_profile as the default value

Response:

```
Do you wish to provide sdm_admin with
“sdm-users” group privileges. (y/n):
```

9 Use the following table to determine your next step.

If you	Do
want the sdm_admin user to have DCE user privileges	type y, press the Enter key, and continue with step 10
do not want the sdm_admin user to have DCE user privileges	type n, press the Enter key, and continue with step 10

Response:

```
Do you wish to provide sdm_admin with “config”
group privileges. (y/n):
```

10 Use the following table to determine your next step.

If you	Do
want the sdm_admin user to be able to reconfigure the CS 2000 Core Manager that is configured by another sdm_admin user	type y, and press the Enter key
do not want the sdm_admin user to be able to reconfigure the CS 2000 Core Manager that is configured by another sdm_admin user	type n, press the Enter key

Example response:

```
Creating principal “sdm_admin”...

Adding “sdm_admin” as a member of the
“sdm-admin” organization...

Adding “sdm_admin” as a member of the
“sdm-admin” group...

Creating account for “sdm_admin”...

Adding “sdm_admin” as a member of the
“sdm-users” organization...

Adding “sdm_admin” as a member of the
“sdm-users” group...

Setting “sdm-admin” ACLs for AIX mkdce and rmdce
routine...

Setting “sdm-admin” ACLs for add_sdm_server
script...
```

```
Setting “sdm-admin” ACLs for pre-existing SDM
server principals...

Setting “sdm-admin” ACLs for all other DCE
script objects...

Setting “sdm-admin” ACL for SDM servers that use
ERA...

Setting “sdm-admin” ACL for the SDM ETA
server...

Adding “sdm_admin” as a member of the “config”
security group...

The SDM administrator user ID “sdm_admin” has
been created.
```

11 You have completed this procedure.

Creating ATA user accounts

Depending on the platform of the workstations on which you will be installing the ATA client application, you must first create the generic ATA user account. Use the following table to determine which procedure to use to create the ATA user account.

Procedures for creating an ATA user account

Platform	Procedure
Hewlett-Packard 700/800 series workstations running the HP-UX 10.20 operating system or higher	Creating the ATA user account with SAM on HP-UX 10.20
Sun SPARC workstations running the Solaris 2.6 operating system or higher	Creating the ATA user account with Admintool on Solaris 2.7, 2.8, 2.9 and higher
IBM RS6000 (AIX 4.3.3) workstations running the AIX 4.1 operating system or higher	Creating the ATA user account with the System Maintenance Interface on the IBM RS6000

Creating the ATA user account with SAM on HP-UX 10.20

At the client workstation

1. Log into the client workstation as the root user.
2. Start the System Administration Manager (SAM) by typing

   `sam &`

   and pressing the Enter key. The SAM window appears.
3. Double click the “Accounts for Users and Groups” icon. The Accounts for Users and Groups window appears. Double click the “Local Users” icon and a list of user accounts appears in the list box of the window.
4. From the Actions menu in the Accounts for Users and Groups window, select the Add... menu item. The Add a user account window appears.
5. In the Login name text box, type

   `ata`
6. Change the startup program to read

   `/sdm/bin/ata`

7 Click on the Set Password Options button. A window for setting password options appears.

8 Select the No restrictions (Normal Behavior) item and click OK.

9 Click the OK button in the Add a user account window. The Set user password window appears prompting for a password.

10 Click the OK button without setting a password. A confirmation window appears.

11 Click the Yes button and the user ata is added to the system.

12 You have completed the procedure. You must proceed to the section "Managing ETA extended registry attributes after setting up your workstations.

Creating the ATA user account with Admintool on Solaris 2.7, 2.8, 2.9 and higher

At the client workstation

1 Log into the client workstation as the root user.

2 Start the Admintool by typing

`admintool`

and pressing the Enter key.

The Admintool: Users window appears.

3 Select Add. from the edit menu.

The Admintool: Add User window appears.

4 In the User Name box, type

`ata`

5 Select Other from the login shell pop-up menu. In the default login shell text box that appears to the right of the login shell pop-up menu, type

`/sdm/bin/ata`

6 Select the No password -- setuid only for password option.

7 Select the Create home dir radio button. In the Path text box, type

`/users/ata`

8 Click the Apply button to add the new user to the system.

9 Click OK button to close the Admintool:Add User window.

10 Exit the Admintool application.

11 Add an entry to the.rhosts file in the ata directory by typing

```
cat >> .rhosts
```

and pressing the Enter key.

12 Type a hostname and a user name, separated by a space, and press the Enter key.

13 Press Ctrl-D to close the file.

14 Change permissions of the.rhosts file to be readable only by typing

```
chmod 644 rhosts
```

and pressing the Enter key.

15 You have completed the procedure. You must proceed to the section Managing ETA extended registry attributes after setting up your workstations.

Creating the ATA user account with the System Maintenance Interface on the IBM RS6000

At the client workstation

1 Log into the client workstation as the root user.

2 Start the administration tool by typing

```
smit mkuser
```

and pressing the Enter key.

The Add User window appears.

3 Select Add. from the edit menu.

The Admintool: Add User window appears.

4 In the User Name field, type

```
ata
```

5 In the HOME Directory field, type

```
/users/ata
```

6 In the Initial PROGRAM field, type

```
/sdm/bin/ata
```

7 Exit smit by pressing Esc-0 or the F10 key.

8 Access the ata user's home directory by typing

```
cd /users/ata
```

and pressing the Enter key.

9 Create a ".rhosts" file by typing

```
cat > .rhosts
```

and pressing the Enter key.

10 Type a host name and user name separated by a space, and press the Enter key.

11 Press Ctrl-D to close the ".rhosts" file.

12 Change the permissions of the ".rhosts" file by typing

```
chmod 644 .rhosts
```

and pressing the Enter key.

13 Establish a blank password for the ata account as follows:

a Access the smit password screen by typing

```
smit passwd
```

b In the user name field, type

```
ata
```

c Leave the password field blank, and press the Enter key to confirm ata's new blank password (make sure the field is blank).

d Press the Enter key again to confirm a blank password for the ata account.

14 Exit smit by pressing Esc-0 or the F10 key.

15 Log in to the client machine as the ATA user (leave the password box empty and press the Enter key when prompted)

16 Confirm the blank password when prompted by pressing the Enter key.

17 You have completed this procedure.

Creating system image backup tapes (S-tapes)

Application

ATTENTION
This procedure must be performed ONLY from a local console by a trained AIX system administrator with root user privileges to access the CS 2000 Core Manager.

ATTENTION
All volume groups on the CS 2000 Core Manager must be fully mirrored (Mirrored) before performing this procedure. If you attempt to perform this procedure when disk mirroring is not Mirrored, an error message is displayed.

ATTENTION
If your system includes the SuperNode Billing Application (SBA), Nortel recommends that you use tape drive DAT0 to perform this procedure.

ATTENTION
The files under the /data file system are excluded from system image backup. The files under the /data file system are temporary files that do not require backing up.

Use this procedure to create a system image backup tape (S-tape). The system image includes the following:

- boot (startup) files
- AIX operating system
- system configuration data
- CS 2000 Core Manager software

Nortel Networks recommends that you perform a system image backup after the following:

- initial installation and commissioning of the CS 2000 Core Manager
- changes to the configuration of disks or logical volumes

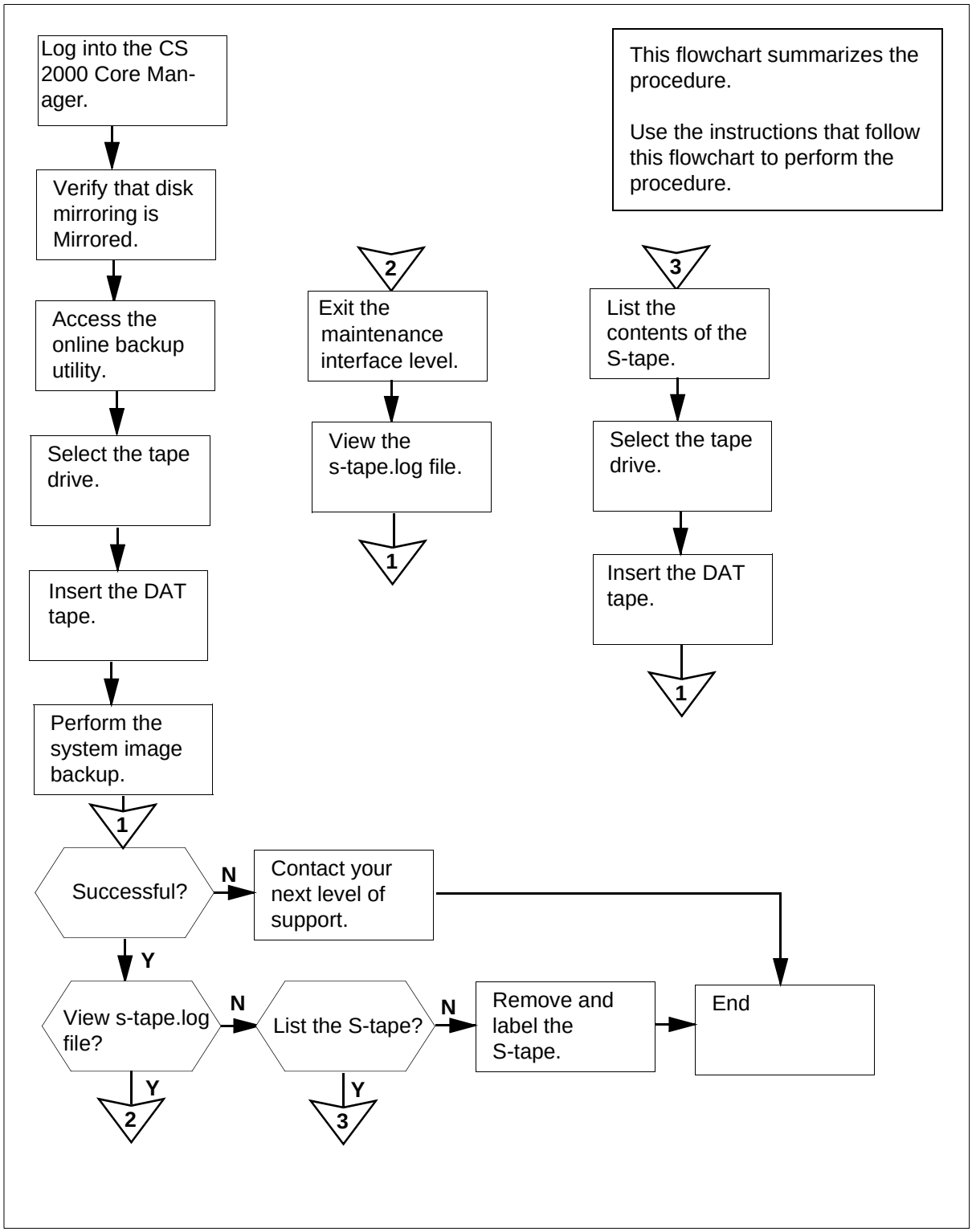
- installation of a new version of CS 2000 Core Manager platform software
- installation of new hardware
- changes or upgrades to existing hardware

A system image backup takes a minimum of 10 min. to complete, depending on the size of your file systems.

Action

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

Summary of creating system image backup tapes (S-tapes)



Creating system image backup tapes (S-tapes)

At the local VT100 console

1 Log into the CS 2000 Core Manager as the root user.

2 Access the maintenance interface by typing

```
# sdmmtc
```

and pressing the Enter key.

3 Access the storage menu level by typing

```
> storage
```

and pressing the Enter key.

Example response:

```
Volume Group                Status
Free(MB)
rootvg                    Mirrored              608
Logical Volume   Location     Size(MB)
%full/threshold 1 /          rootvg    20
25/ 80
2 /usr           rootvg      192              85/ 90
3 /var           rootvg      64               11/ 80
4 /tmp           rootvg      24                6/ 90
5 /home          rootvg      300               4/ 70
6 /sdm           rootvg      300              44/ 90
Logical volumes showing: 1 to 6 of 6
```

4 Use the following table to determine your next step.

If the disks	Do
are “Mirrored”	step 6
are not “Mirrored”	step 5

5 You cannot perform this procedure until disk mirroring of all volume groups is Mirrored. If necessary, contact the personnel responsible for your next level of support. When disk mirroring is Mirrored, continue this procedure.

6 Access the administration (Admin) menu level of the RMI by typing

```
> admin
```

and pressing the Enter key.

7 Access the System Image Backup and Restore Menu by typing

> backup

and pressing the Enter key.

Example response:

```
Currently there is a backup running on
bnode73.Please execute yours later.
Exiting . . .
```

Note: If another person attempts to use the Backup and Restore utility when it is in use, an error message is displayed.

8 From the System Image Backup and Restore Menu, select "Create a System Image on Tape (S-tape)" by typing

> 2

and pressing the Enter key.

9 After you select option 2, you are prompted to select the tape drive.

Response:

```
Select the tape drive you wish to use:

Enter 0 to return to previous menu
Enter 1 for tape drive DAT0 in Main Chassis-Slot
2
Enter 2 for tape drive DAT1 in Main Chassis-Slot
13
( 0, 1 or 2 ) ==>
```

Note: Nortel recommends that you use tape drive DAT0 (option 1) if your system also includes SBA.

10 Select the tape drive you wish to use, by typing

> <*n*>

and pressing the Enter key.

where

n
is the option (1 or 2) for the tape drive you wish to use

Response:

```
You have selected DAT 1. This is the default DAT
drive for the Billing application, and may
currently be in use for the emergency storage of
billing records.

If you continue to use DAT 1, make sure that the
correct tape is in the drive, and that billing
records will not be lost during the backup
restore operation.

Do you wish to continue with DAT 1? ( y | n )
```

If you wish to continue using DAT1, type “y” and press the Enter key.

If you do not wish to use DAT1, type “n” and press the Enter key. The system prompts you to return to the System Image Backup and Restore Menu if you do not wish to use DAT1.

Note: If your system includes SBA, and you still wish to use tape drive DAT1 (option 2), the following message is displayed:

11 After you select the tape drive, you are prompted to insert a tape in the drive you have selected.

Example response:

```
Please insert a 4mm DAT tape into the tape drive
DAT0.

Caution:
This action will overwrite the content on the
inserted tape.Do you want to proceed? ( y | n )
==>
```

At the CS 2000 Core Manager

12

CAUTION
System image backup tape
Creating a system image overwrites the contents of the inserted tape. Ensure that you are using the correct tape before starting the system image backup. If your system includes SBA and you are using DAT1, ensure that the tape drive does not contain an SBA tape.

Ensure that the appropriate CS 2000 Core Manager tape drive contains a 4-mm digital audio tape (DAT) either 90 m or 120 m long. This tape will be designated as the system image backup tape (S-tape).

At the local console

13 When you are certain you are using the correct tape, type

> y

and press the Enter key.

14 Read the system message to determine if there is enough room on the temporary directory for the system image backup to proceed.

Example response:

```
Rewinding the tape...

    The /tmp directory is not big enough.
    Trying to expand /tmp by 6600KB...

Failed to expand the /tmp directory because
there isn't enough free disk space left on the
rootvg.

Please erase some files under /tmp directory to
create at least 6600KB for the full system image
backup.

Enter any key and return to exit ==>
```

If there is	Do
enough disk space	step 17
not enough disk space	step 15

Note: If there is not enough room on the temporary directory, an error message appears.

15 Erase enough files from the temporary directory to create the required amount of disk space specified in the error message by typing

```
> rm -rf /tmp/*
```

and press the Enter key.

Note: If you have trouble erasing files from the temporary directory to free up disk space, contact the personnel responsible for your next level of support.

16 Execute the system image backup again.

17 The system image backup begins.

Example response:

```
Rewinding the tape...

Starting the system image backup on bnode73.

The backup takes a minimum of 10 minutes,
depending on the size of your file systems.

When the backup is complete, you will be asked
to remove the tape from the tape drive.

System image backup is in progress ...
```

Note: This backup process takes approximately 10 min. to complete, depending on the amount of data stored on the disk.

18 Read the system message.

If the backup	Do
is successfully completed	step 19
fails	contact your next level of support

19 The system informs you if the backup is successful. When the backup is complete, the system also prompts you to remove the tape and label it as an S-tape.

Example response:

```
The tape backup started on Wed Oct 16 08:21:15
EDT 1997
completed successfully on Wed Oct 16 08:37:37
EDT 1997.
A log file /tmp/s-tape.log has been created.

Please remove the backup tape from the tape
drive.
Label the tape as shown below and store it in a
safe place.
```

```
        System Image Tape (S-tape)
        The Machine Node Id: bnode73
        Date: Wed Oct 16 08:37:37 EDT 1997

Eject the S-tape from the tape drive? ( y | n )
==>
```

20 Determine if you wish to eject the S-tape. Type “y” to eject the tape, and “n” if you do not wish to eject the tape.

If you eject the tape, the screen displays “Tape ejected.” below the information displayed in step 19. You are then prompted to return to the System Image Backup and Restore Main Menu.

Response:

```
Tape ejected.

    Would you like to return to the previous
menu? ( y | n)
```

Nortel recommends that you place the write-protected tab of the S-tape in the open position, to prevent accidental erasing.

Note: If you wish to list the contents of the tape, do not eject the tape. Go to step 32.

21 When you are ready for the system to return to the System Image Backup and Restore Main Menu, type

> y

and press the Enter key.

22 Determine if the backup is successful. The system informs you if the system image backup is successful, as shown in the response in step 19. You may also wish to view the s-tape.log file or list the files on the S-tape.

If	Do
you wish to view the s-tape.log file	step 23
you wish to list the S-tape	step 32
the backup is successful	step 40
the backup fails	contact your next level of support

23 Exit the System Image Backup and Restore Main Menu by typing

`> 0`

and pressing the Enter key.

24 Exit the RMI by typing

`> quit all`

and pressing the Enter key.

25 Access the s-tape.log file by typing

`# cd /tmp`

at the prompt and pressing the Enter key.

26 Scroll through the file by typing

`# more s-tape.log`

and pressing the Enter key. This screen informs you that the system image backup was completed successfully.

Example response:

```
bosboot:  Boot image is 5881 512 byte blocks.
0+1 records in.
1+0 records out.

Backing up the system...
.....................................................
............
0512 038 mksysb: Backup Completed Successfully.

The S-tape backup started on Wed Oct 16 09:24:07
EDT 1997
completed successfully on Wed Oct 16 09:36:03
EDT 1997
```

27 Determine if you wish to list the S-tape.

If you	Do
wish to list the S-tape	step 28
do not wish to list the S-tape	you have completed this procedure

28 Return to the login directory by typing

`# cd`

and pressing the Enter key.

29 Access the RMI by typing

 # sdmmtc

and pressing the Enter key.

30 Access the administration (Admin) menu level of the RMI by typing

> admin

and pressing the Enter key.

31 Access the System Image Backup and Restore Menu by typing

> backup

and pressing the Enter key.

32 From the System Image Backup and Restore Menu, select “List Contents of the System Image Tape (S-tape)” by typing

> 3

and pressing the Enter key.

33 After you select option 3, you are prompted to select the tape drive.

Response:

```
Select a tape drive you wish to use:

       Enter 0 to return to previous menu
       Enter 1 for tape drive DAT0 in Main
Chassis-Slot 2
       Enter 2 for tape drive DAT1 in Main
Chassis-Slot 13
      ( 0, 1 or 2 ) ==>
```

Note: Nortel recommends that you use tape drive DAT0 (option 1) if your system also includes SBA.

34 Select the tape drive you wish to use, by typing

> *n*

and pressing the Enter key.

where

n
is the option (1 or 2) for the tape drive you wish to use

Response:

```
You have selected DAT 1. This is the default DAT
drive for the Billing application, and may
currently be in use for the emergency storage of
billing records.

If you continue to use DAT 1, make sure that the
correct tape is in the drive, and that billing
records will not be lost during the backup
restore operation.

Do you wish to continue with DAT 1? ( y | n )

If you wish to continue using DAT1, type “y” and
press the Enter key.

If you do not wish to use DAT1, type “n” and
press the Enter key. The system prompts you to
return to the System Image Backup and Restore
Menu.
```

Note: If your system includes SBA, and you still wish to use DAT1 (option 2), the following message is displayed:

35 After you select the tape drive, you are prompted to insert the S-tape into the tape drive you selected in step 34.

Example response:

```
Please insert your System Image Backup tape
(S-tape) into the tape drive DAT0 and allow at
least 5 minutes to complete the listing.

A log file will be saved in /tmp/s-tape.toc.

Are you ready to proceed? ( y | n )
```

At the CS 2000 Core Manager

36 Insert the S-tape into the tape drive you selected.

Note: Wait until the tape drive stabilizes (yellow LED is off) before you proceed.

At the local VT100 terminal

37 When you are ready to continue this procedure, type

```
> y
```

and press the Enter key.

38 The contents of the S-tape are displayed. When the listing is complete, the system prompts you to return to the System Image Backup and Restore Menu.

Response:

```
Would you like to return to the previous menu?
( y | n )
```

39 Return to the System Image Backup and Restore Menu, by typing

```
> y
```

and pressing the Enter key.

At the CS 2000 Core Manager

40 If you have not already done so, remove the S-tape from the tape drive by pressing the eject button on the tape drive. Label the tape according to your office procedures, and store it in a safe location. If you ejected an SBA tape, reinsert the tape.

At the local VT100 terminal

41 Exit the System Image Backup and Restore Menu, by typing

```
> 0
```

and pressing the Enter key.

Note: If you wish to exit the RMI, type QUIT ALL and press the Enter key.

42 You have completed this procedure.

Creating a DCE user

Application

ATTENTION
You must be a trained Distributed Computing Environment (DCE) system administrator to perform this procedure.

ATTENTION
Use either the master administration account (cell_admin) or a DCE sub administrator account (sdm_admin) to perform this procedure. You cannot use the sdm_admin account to delete a DCE user created by a cell_admin account. The cell_admin account can delete any DCE users created by either a cell_admin or an sdm_admin account.

Use this procedure to create a DCE user account for a user that runs CS 2000 Core Manager graphical user interface (GUI) client programs.

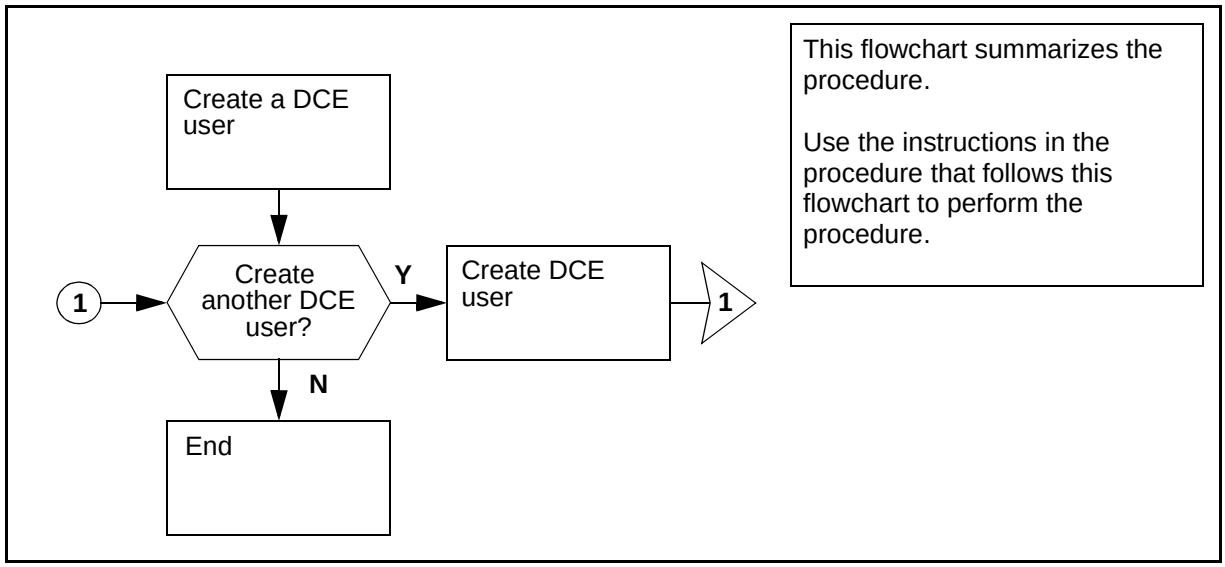
The create_dce_user command creates a new DCE user and makes the user a member of a indicated group.[1] You can use these groups for access control purposes to categorize users with similar job functions. You only need a DCE account to run a CS 2000 Core Manager GUI program. There may be some exceptions for specific CS 2000 Core Manager applications. For any exceptions, refer to the *OSF DCE Command Reference* that is provided with the application.

Action

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

[1] You must use the cell_admin account if the indicated group has to be created.

Summary of creating a DCE user account



Creating a DCE user

At the client workstation

1 Create a DCE user by typing

```
> /sdm/bin/create_dce_user
```

Note: When running the “create_dce_user” script, place the new dce user ONLY into the “sdm-users” group.

2 Enter the DCE administrator user ID, and press the Enter key.

Note: If you do not enter a user name, the system enters sdm_admin as the default value.

3 Enter the DCE administrator password, and press the Enter key.

4 Enter the DCE user ID you want to create, and press the Enter key.

5 Enter a password for the DCE user ID, and press the Enter key.

6 Re-enter the password, and press the Enter key.

Example response:

```
Full name of the person associated with “joe”
```

7 Enter the full name of the person associated with the user ID, and press the Enter key.

8 Enter the user group for the DCE user you just created, and press the Enter key.

Note: If you do not enter a user group, the system enters sdm-users as the default value.

Example response:

```
Creating principal “joe”...

Adding “joe” as a member of the “sdm-users” organization...

Adding “joe” as a member of the “sdm-users” group...

Creating account for “joe”...

Setting “joe” ACL for SDM server to use ERAs...

Setting “joe” ACL for the SDM ETA server...

The DCE user ID “joe” has been created.
```

9 You have completed this procedure.

Connecting to the Core with ATA

Use the following procedure to use ASCII Terminal Application (ATA) to connect to the Core.

Prerequisites

This procedure requires the following information:

- access to the machine where the ATA client resides
- your DCE userid
- your DCE password
- the CLLI of the switch with the Core you want to access

Procedure

Perform the following steps to complete this procedure.

At your workstation

1 Log into the application client machine.

2 Change the directory to the sdm/bin directory by typing

```
> cd /sdm/bin
```

3 Start the ATA application by typing

```
> ata
```

and pressing the Enter key.

Response

The system prompts for a DCE principal name.

4 Enter your DCE userid and press the Enter key.

Response

The system prompts for a password.

5 Enter your DCE password and press the Enter key.

Response

The ATA application starts and the prompt changes to `ata>`*.*

Example of prompt

```
ata>
```

6 List the CLLI of the available switches by typing

`ata> list`

and pressing the Enter key.

Response

ATA displays a list of CLLI.

7 Locate the CLLI of the switch with the Core you want to access.

8 Access the Core by typing

`ata> open <switch_clli_name> cm`

and pressing the Enter key

where

<*switch_clli_name*> is the CLLI of the switch with the Core you want to access

Example of command

`open RLGHNC01ECB cm`

Response

ATA connects to the Core

9 You have completed the procedure.

Note 1: Close the CI/MAP session before you quit ATA. To close the CI/MAP session, type **exit** at the prompt and press the Enter key.

Note 2: To quit ATA, type **quit** at the prompt and press the Enter key.

Connecting to the Core with ETA

Use the following procedure to use Enhanced Terminal Application (ETA) to access the Core.

Prerequisites

This procedure requires the following information:

- access to the machine where the ETA client resides
- your DCE userid
- your DCE password
- the CLLI of the switch with the Core you want to access

Procedure

Perform the following steps to complete this procedure.

At your workstation

1 Log into the application client machine.

2 Go to the directory with the ETA application client by typing

```
> cd /sdm/bin
```

and pressing the Enter key.

3 Start the ETA application client by typing

```
> ./eta
```

and pressing the Enter key.

Response

The system displays a copyright window.

4

ATTENTION

If the system displays a window with an error message and a Trace Back button, a serious software error may have occurred. Ask your system administrator to click the Track Back button, record the response for analysis, and click the OK button to continue. If necessary, contact Nortel Networks for assistance.

Wait about 10 seconds.

ETA displays the DCE Login window.

Note: *If you do not want to log in, click the* ***Abort*** *button. The system returns to the UNIX prompt.*

5 Log in to DCE.

a Enter your DCE userid in the field **Principal name**.

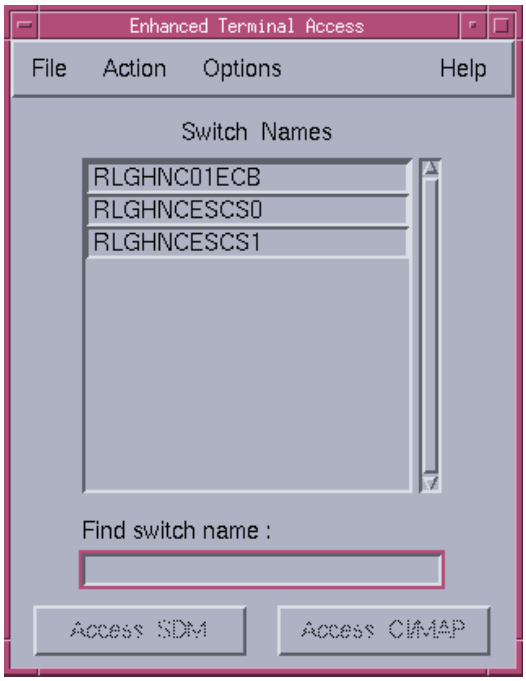
b Enter your DCE password in the field **Password.**

c Click the **OK** button.

Response

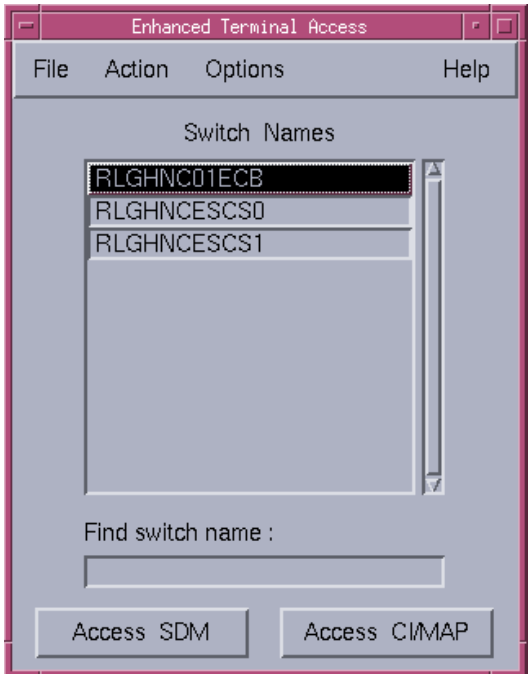
ETA displays a list of available CLLI.

Example of screen



6 Select the CLLI of the switch with the Core you want to access. If necessary, use the scroll bar on the right side of the list.

Example of screen



7 Access the Core by clicking the **Access CI/MAP** button.

Response

ETA connects to the Core and displays a CI prompt.

8 You have completed this procedure.

Note 1: Close all CI/MAP sessions before you quit ETA. To close the CI/MAP session with the Core, type **logout** at the CI prompt and press the Enter key.

Note 2: To quit ETA, select **Exit** from the **File** menu in the main ETA window.

Connecting to the CS 2000 Core Manager with ATA

Use the following procedure to use ASCII Terminal Application (ATA) to connect to the CS 2000 Core Manager.

Prerequisites

This procedure requires the following information:

- access to the machine where the ATA client resides
- your DCE userid
- your DCE password
- the CLLI of the switch with the CS 2000 Core Manager you want to access

Procedure

Perform the following steps to complete this procedure.

At your workstation

1 Log into the application client machine.

2 Change the directory to the sdm/bin directory by typing

```
> cd /sdm/bin
```

and pressing the Enter key.

3 Start the ATA application by typing

```
> ata
```

and pressing the Enter key.

Response

The system prompts for a DCE principal name.

4 Enter your DCE userid and press the Enter key.

Response

The system prompts for a password.

5 Enter your DCE password and press the Enter key.

Response

The ATA application starts and the prompt changes to `ata>`*.*

Example of prompt

```
ata>
```

6 List the available CLLI by typing

`ata> list`

and pressing the Enter key.

Response

ATA displays a list of CLLI.

7 Locate the CLLI of the switch with the CS 2000 Core Manager you want to access.

8 Access theCS 2000 Core Manager by typing

`ata> open <switch_clli_name> sdm`

and pressing the Enter key

where

<*switch_clli_name*> is the CLLI of the switch with the CS 2000 Core Manager you want to access

Example of command

`open RLGHNC01ECB sdm`

Response

ATA connects to the CS 2000 Core Manager.

Example of screen

```
There is 1 local login.
There are 3 ETA logins to the SDM.
There is 1 ETA logins to the CM.

Current SDM status:
SDM     CON     512     NET      APPL     SYS     HW
  .       .      ..       .        .        .       .
                 ..

maint:
```

9 You have completed the procedure.

Note 1: Close the SDM session before you quit ATA. To close the SDM session, type **exit** at the prompt and press the Enter key.

Note 2: To quit ATA, type **quit** at the prompt and press the Enter key.

Connecting to theCS 2000 Core Manager with ETA

Use the following procedure to use Enhanced Terminal Application (ETA) to connect to theCS 2000 Core Manager.

Prerequisites

This procedure requires the following information:

- access to the machine where the ETA client resides
- your DCE userid
- your DCE password
- the CLLI of the switch with the CS 2000 Core Manager you want to access

Procedure

Perform the following steps to complete this procedure.

At your workstation

1 Log into the application client machine.

2 Go to the directory with the ETA application client by typing

```
> cd /sdm/bin
```

and pressing the Enter key.

3 Start the ETA application client by typing

```
> ./eta
```

and pressing the Enter key.

Response

The system displays a copyright window.

4

ATTENTION

If the system displays a window with an error message and a Trace Back button, a serious software error may have occurred. Ask your system administrator to click the Track Back button, record the response for analysis, and click the OK button to continue. If necessary, contact Nortel Networks for assistance.

Wait about 10 seconds.

ETA displays the DCE Login window.

Note: *If you do not want to log in, click the* ***Abort*** *button. The system returns to the UNIX prompt.*

5 Log in to DCE.

a Enter your DCE userid in the field **Principal name**.

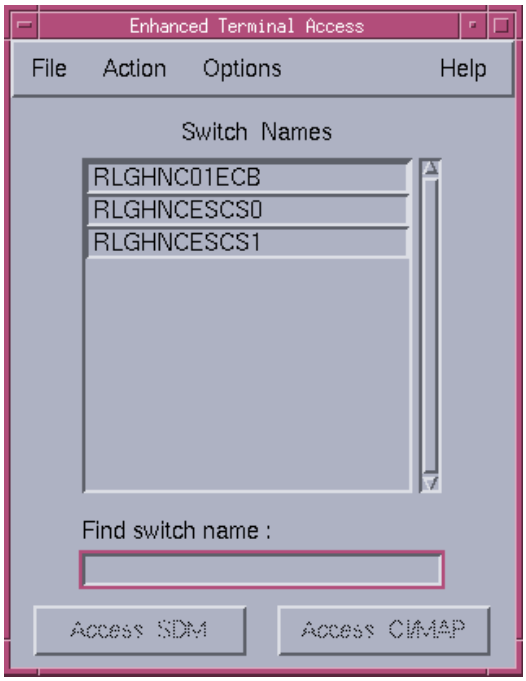
b Enter your DCE password in the field **Password.**

c Click the **OK** button.

Response

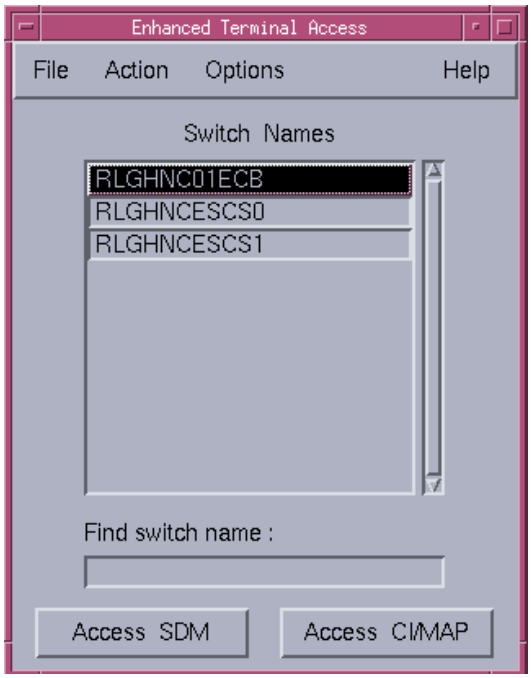
ETA displays a list of available CLLI.

Example of screen



6 Select the CLLI of the switch with the CS 2000 Core Manager you want to access. If necessary, use the scroll bar on the right side of the list.

Example of screen



7 Access the CS 2000 Core Manager by clicking the **Access SDM** button.

Response

ETA connects to the CS 2000 Core Manager.

Example of screen

```
There is 1 local login.
There are 3 ETA logins to the SDM.
There is 1 ETA logins to the CM.

Current SDM status:
SDM     CON     512     NET     APPL     SYS     HW
  .       .      ..       .       .        .       .
                 ..

maint:
```

8 You have completed the procedure.

Note 1: Close all SDM sessions before you quit ETA. To close an SDM session, type **exit** and the command prompt and press the Enter key.

Note 2: To quit ETA, select **Exit** from the **File** menu in the main ETA window.

Connecting to the CS 2000 Core Manager with SDMRLOGIN

Use the following procedure to access the CS 2000 Core Manager from the Core with the **SDMRLOGIN** command.

Prerequisites

This procedure requires the following information:

- CS 2000 Core Manager userid
- CS 2000 Core Manager password

Procedure

Perform the following steps to complete this procedure.

At the MAPCI

1 Start an SDMRLOGIN session. Type

```
> sdmrlogin
```

and press the Enter key.

Response

The Core starts a telnet session to the CS 2000 Core Manager and prompts for a login.

2 Enter your *CS 2000 Core Manager* userid and press the Enter key.

Response

The screen prompts for a password.

3 Enter your CS 2000 Core Manager password and press the Enter key.

Response

The Core connects to the CS 2000 Core Manager.

- *The screen displays login history information*
- *The prompt changes to SDM>.*

4 You have completed this procedure.

Note: Type **logout** to quit the SDMRLOGIN session and return to the MAPCI level where you began this procedure.

Example

The following figure shows an example of an **SDMRLOGIN** session.

```
>sdmrlogin
SDM IP address is 47.245.8.70

SDM Remote Logins command in progress. Please wait...

telnet (brtppycf1)
AIX Version 4
(C) Copyrights by IBM and by others 19982, 1994.
login:
>maint
Password:
>
*************************************************************
**
**
**               This is a private database.
**          All activity is subject to monitoring.
**      Any UNAUTHORIZED access or use is PROHIBITED.
**
**
*************************************************************
Last unsuccessful login: Wed Jul 2 11:02:26 EDT 1997 o
Last login: Thu Jul 3 12:05:35 EDT 1997 on /dev/pts/2
SDM>
```

Connecting to another node as a passthru user

Use following procedures to connect to another node through the CS 2000 Core Manager as a passthru user. These procedures support the following types of connections:

- Telnet to a node logically behind the CS 2000 Core Manager
- File Transfer Protocol (FTP) to the Core

A passthru connection occurs through the CS 2000 Core Manager. A passthru connection does not allow you to perform functions on the CS 2000 Core Manager.

Prerequisites

This procedure requires the following information and applications:

- Passthru userid and password

  Note: Password requirements are when the passthru userid is created. FTP access to the Core requires a password.

- Userid and password of destination node

  Note: FTP access to the Core does not require a destination userid and password.

- Secure File Transfer (SFT) installed on the CS 2000 Core Manager if you wish to FTP to the Core.

Procedures

Connecting to another node using telnet

At the workstation

1 Telnet to the CS 2000 Core Manager, and log in using your passthru user ID and password (if prompted).

A telnet connection is established to the destination node.

2 At the prompt, enter your user ID and password to log in to the destination node.

3 You have completed the procedure.

Connecting to the Core using FTP

At the workstation

1 FTP to the CS 2000 Core Manager, and log in using your passthru user ID and password.

Response

The prompt changes to `ftp>`.

2 Connect to the Core by typing.

```
ftp> site cm
```

and pressing the Enter key.

Note: If required, refer to procedure “Transferring and retrieving files using SFT” in the Security section.

3 You have completed the procedure.

Adding CM userIDs and passwords for ETA and ATA clients

ATTENTION
To complete this procedure, you must have already created the DCE principals for those users that will be using this application. Refer to procedure Creating a DCE user in the Security and Administration section.

You must set CM userIDs and passwords and add them to a list of ERA values for each ETA client principal account. When the ATA or ETA client requests a MAP/CI session, the ETA server obtains the client CM userID and password ERA values, and uses them to log in to the switch for the client. Use the following procedure to add ERA values for CM userIDs and passwords.

Adding CM userIDs and passwords

At the client workstation

1 Log into the client workstation.

2 Log into DCE using the administrator userID by typing

`dce_login <DCE_admin_user>`

and pressing the Enter key.

where

DCE_admin_user
is the administrator userID

3 Enter your DCE password, and press the Enter key.

4 Access the bin directory by typing

`cd /sdm/bin`

and pressing the Enter key

5 Add the ERA value for the CM userID and password by typing

`./add_cm_userid <principal_name> <CM_userID_list> <CM_password_list>`

and pressing the Enter key.

where

principal_name
is the DCE userID

CM_userID_list
is the CM userIDs

CM_password_list
is all CM passwords (optional)

Note 1: A CM userID can appear more than once.

Note 2: The CM password list is optional. If you do not provide this information, the add_cm_userid command automatically assigns * for each password. The password can then be changed through the ATA or ETA client (refer to procedure “Changing CM passwords from the ETA client” and “Changing CM passwords from the ATA client” in the Security and Administration section). If you provide this information, align each CM userID and password so that the first password corresponds to the first userID.

Example
./add_cm_userid joe “admin cmap5 cmap8” “a_pwd pwd_5 pwd_8“

Three CM user accounts are created for the ATA or ETA client “joe”. The password for the admin userID is a_pwd; for the cmap5 userID, pwd_5; for the cmap8 userID, pwd_8.

Example
./add_cm_userid joe “admin admin admin” “a_pwd pwd_5 pwd_8”

The CM admin userID has three different passwords (pwd_1, pwd_2 and pwd_3). Each password is used to access different switches.

6 You have completed this procedure.

You can proceed to the procedure Adding SDMCS 2000 Core Manager userIDs and passwords for ETA and ATA clients if you want to allow users access to the CS 2000 Core Manager using the ETA application.

Adding disks and creating a logical volume in datavg

Application

ATTENTION
This procedure must be performed by a trained Advanced Interactive Executive (AIX) system administrator who has root user privileges to access the CS 2000 Core Manager.

ATTENTION
Perform this procedure after your system has been installed with the required I/O controller modules installed, in pairs, in the appropriate slots in the main or I/O expansion chassis. If you have not installed the required modules, refer to the procedure “Adding I/O controller Modules” in the Upgrades section.

Use this procedure if you want to

- add disks to the data volume group (datavg)
- create a new logical volume in the datavg

Note: The maximum number of datavg disks that can be provisioned on a CS 2000 Core Manager is 11 pairs.

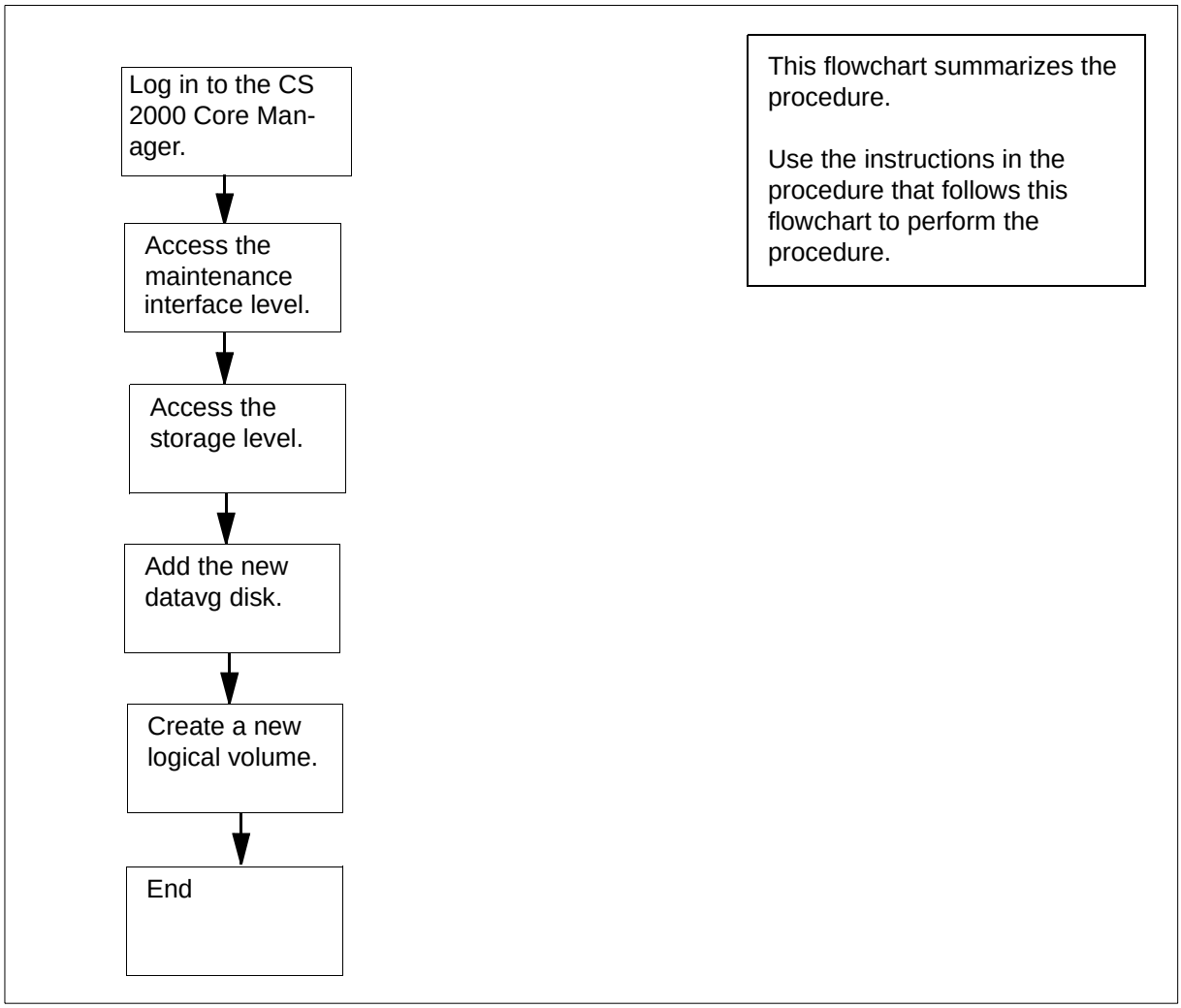
If you have a root volume group (rootvg) system, and you want to add datavg to your system, use the procedure “Migrating from a rootvg system to a rootvg/datavg system” in the Upgrades section.

ATTENTION
The logical volume management feature prevents you from creating more than 32 logical volumes. There is no impact on functionality and no increased risk of jeopardizing data. The amount of free space displayed in the un-allocated field of the storage menu level screen always displays the correct data.

Action

The following flowchart provides an overview of the procedure. Use the instructions in the step-action procedure that follows the flowchart to perform the task.

Summary of adding disks and creating a logical volume in datavg



Adding disks and creating a logical volume in datavg

At the local VT100 console

1 Log in to the CS 2000 Core Manager as the root user.

2 Access the maintenance interface by typing

```
# sdmmtc
```

and pressing the Enter key.

3 Access the storage menu level by typing

`> storage`

and pressing the Enter key.

Example response:

```
Volume Group            Status              Free
(MB)   rootvg              mirrored
608
datavg                  mirrored             7872

Logical Volume   Location
1 /             rootvg     20              25/ 80
2 /usr          rootvg     192             85/ 90
3 /var          rootvg                     11/ 80
4 /tmp          rootvg     24               6/ 90
5 /home         rootvg     300              4/ 70
6 /sdm          rootvg      300            44/ 90
7 /data         datavg     300            20/ 80
Logical volumes showing: 1 to 7 of 7
```

Note: The example response shows part of the information displayed at the storage level.

4 Use the following table to determine your next step.

If	Do
you have added an Input/Output (I/O) module and you want to add the module to the datavg before you create your logical volume, then	step 5
you have not added an I/O module and you have enough free disk space for the logical volume that you want to create, then	step 6

5 Add a new disk by typing

> add vg

and pressing the Enter key.

Example response:

```
The following disks will be added to the system:

Datavg is currently being created...
```

The system informs you when the disk has been added successfully.

Example response:

```
All disks were successfully added.

Command complete.
```

Note 1: This step automatically adds the new disks to the datavg.

Note 2: An error message is displayed if the disks are not added successfully. If this occurs, contact the personnel responsible for the next level of support.

6 Create the new logical volume by typing

> add lv <*xxx*> <*Mbyte*>

and pressing the Enter key.

where

xxx
is the new logical volume name

Mbyte
is the size of the logical volume in Mbyte

Example response:

```
Creating volume XXX.
```

Example response:

```
Creating Volume XXX ...
Volume Successfully Created...
Volume was created...
Command complete
```

7 You have completed this procedure.

Adding or removing a maintenance user

Application

Use this procedure to add or remove a maintenance class user. This procedure must be performed by the root user.

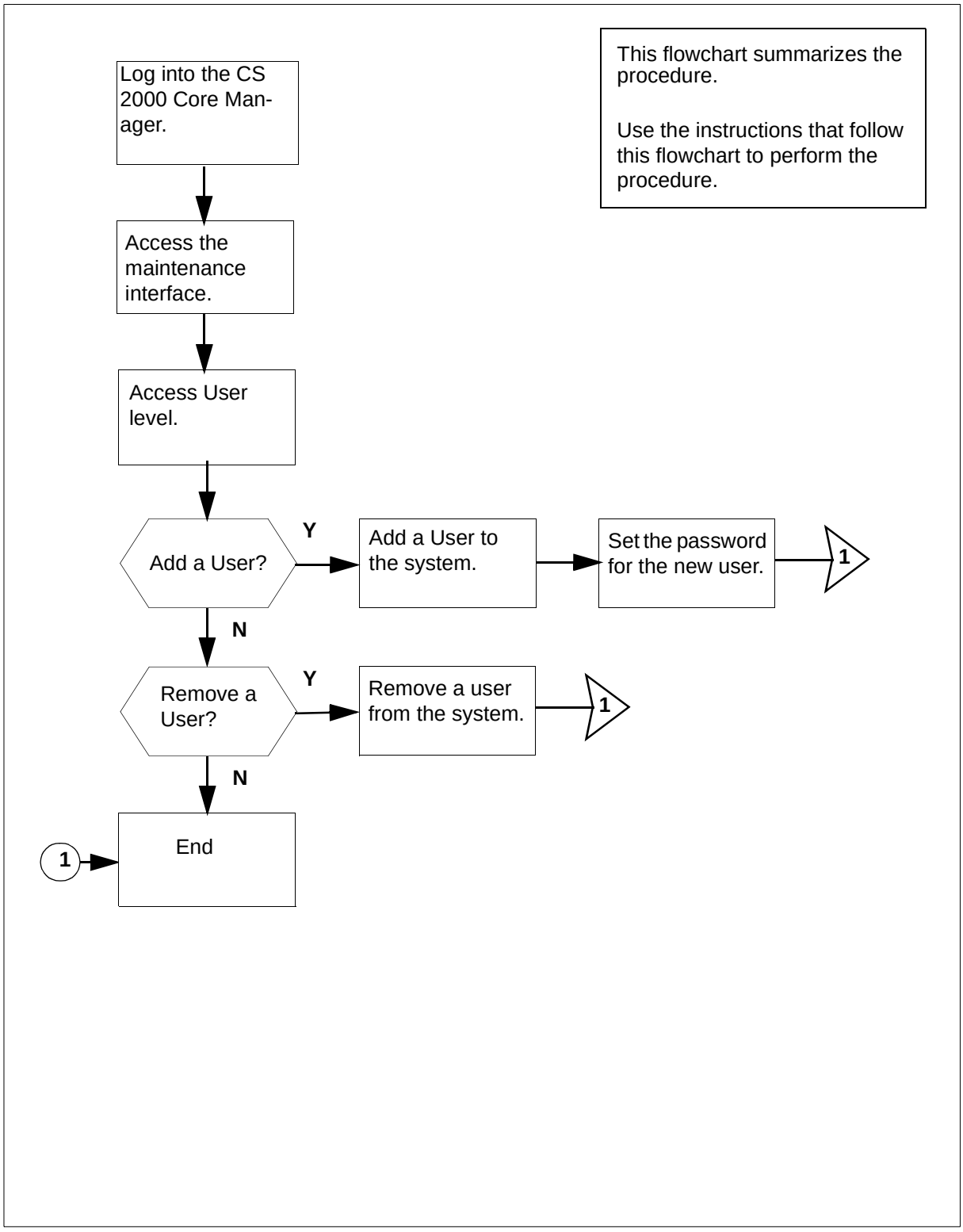
ATTENTION

For the *current release*, there is *no limit* to the number of telnet sessions allowed for maintenance and passthru users. For previous releases, a total of 16 telnet sessions is allowed.

Action

The following flowchart provides an overview of the procedure. Use the instructions in the step-action procedure that follows the flowchart to perform the task.

Summary of Adding or removing a maintenance user



Adding or removing a maintenance user

At the local or remote VT100 console

1 Log into the CS 2000 Core Manager as the root user.

2 Access the maintenance interface by typing

```
# sdmmtc
```

and pressing the Enter key.

3 Access the User level by typing

```
> user
```

and pressing the Enter key. The User menu is displayed.

4 Use the following table to determine your next step.

If you want to	Do
add a user	step 5
remove a user	step 10

5 Add a maintenance class user by typing

```
> add <userID>
```

and pressing the Enter key.

where

userID
is the userID of the new user

Note: To activate a user, you need to set the password. Use the change command to set the password.

6 Set password for the user by typing

```
> change <userID>
```

and pressing the Enter key.

where

userID
is the userID of the user for whom you are setting the password

Note: If no userID is specified, the system will change the password of the root user.

7 Enter the new password for the user, and press the Enter key.

The password must be at minimum a six-character string containing at least one alphabetic character, and at least one

numeric or special character. Although a password can contain more than eight characters, only the first eight characters are considered.

8 Retype the password and press enter.

9 Press Enter again to continue.

If you	Do
want to add another user	step 5
do not want to add another user	step 12

10 Remove a user by typing

`> delete <userID>`

and pressing the Enter key.

where

userID
is the userID of the user you are deleting

Response:

Are you sure you want to delete this user?

Do you wish to proceed?

Please confirm ("YES", "Y", "NO", or "N"):

11 Confirm that you want to delete the user by typing

`> y`

and pressing the Enter key.

If you	Do
want to delete another user	step 10
do not want to delete another user	step 12

12 Exit the maintenance interface by typing

`> quit all`

and pressing the Enter key.

13 You have completed this procedure.

Adding or removing passthru users

A passthru user is a user ID created on the CS 2000 Core Manager, and is used to connect to a node that is logically behind the CS 2000 Core Manager in a network, for example, the CM or XA-Core. A passthru user cannot perform any functions on the CS 2000 Core Manager itself.

ATTENTION

For the *current release*, there is *no limit* to the number of telnet sessions allowed for maintenance and passthru users. For previous releases, a total of 16 telnet sessions is allowed.

You can set up a passthru user ID with or without a password, however, to transfer or retrieve files to or from a node using FTP, a password is required. Additionally, the Secure File Transfer (SFT) application must be installed on the CS 2000 Core Manager to use FTP with a passthru user ID, and it must be configured in either “Normal FTP access” mode or “Secure and Normal FTP access” mode. Refer to the following SFT procedures:

- “Installing the SFT server software” in the Configuration section
- “Configuring the SFT server application software” in the Configuration section
- “Transferring and retrieving files using SFT” in the Security and Administration section

Note: The Distributed Computing Environment (DCE) is not required for SFT, but it can add more security to the file transfer environment.

Use the following procedure to add or remove one or more passthru users. You can change the information for an existing passthru user using the Change command.

Adding or removing passthru users

At the CS 2000 Core Manager

1 Log into the CS 2000 Core Manager using the root user ID an password.

2 Access the passthru level by typing

```
# sdmmtc passthru
```

and pressing the Enter key.

3 Use the following table to determine your next step.

If you want to	Do
add a passthru user	step 4
delete a passthru user	step 14

4 Add a passthru user by typing

```
> add
```

and pressing the Enter key.

5 When prompted, type the user name for the new user (for example, `cmusr`), and press the Enter key.

6 When prompted, type the real name for the passthru user (for example, `CM passthru`), and press the Enter key.

7 When prompted, type the Telnet command arguments for the passthru user, and press the Enter key.

Note: The telnet command arguments can be the hostname or the IP address of the destination node. If you are adding a user ID that will be used to connect to the CM or XA-Core, the telnet command arguments must be "`cm`".

8 When prompted, indicate whether a password is required, and press the Enter key.

Note: A password is required for user IDs that will be used to connect to the CM or XA-Core using FTP.

9 When prompted, confirm the data you entered by typing

```
> y
```

and pressing the Enter key.

If you indicated a password	Do
is required	step 10
is not required	step 13

10 When prompted to set the initial password, press the Enter key.

11 When prompted, type a password, and press the Enter key.

12 When prompted, re-type the password to confirm it, and press the Enter key.

Note: The user who accesses the CS 2000 Core Manager for the first time using this new passthru user ID, is first prompted for the initial password and then prompted to change it.

13 Use the following table to determine your next step.

If you	Do
want to add another user	step 4
do not want to add another user	you have completed this procedure

14 Delete the passthru user by typing

> **delete <username>**

and pressing the Enter key.

where

<username>
is the user ID of the user you want to delete

15 When prompted, confirm you want to delete the user by typing

> **y**

and pressing the Enter key.

16 Use the following table to determine your next step.

If you	Do
want to delete another user	step 14
do not want to delete another user	you have completed this procedure

Adding CS 2000 Core Manager userIDs and passwords for ETA and ATA clients

You must set an ERA value for the CS 2000 Core Manager userID of the ETA client using the add_sdm_userid command. When an ATA or ETA client requests an CS 2000 Core Manager session, the ETA server obtains the ERA value for the CS 2000 Core Manager userID of that client, and uses it to start a CS 2000 Core Manager session. Use the following procedure to set an ERA value for an CS 2000 Core Manager userID.

ATTENTION

To complete this procedure, you must have already created the DCE principals for those users that will be using this application. Refer to procedure Creating a DCE user in the Security and Administration section.

Adding userIDs for the ATA and ETA client

At the client workstation

1 Log into the client workstation.

2 Log into DCE using the administrator userID by typing

`dce_login <DCE_admin_user>`

and pressing the Enter key.

where

DCE_admin_user
is your administrator userID

3 Enter your DCE password, and press the Enter key.

4 Access the bin directory by typing

`cd /sdm/bin`

and pressing the Enter key

5 Add the ERA value for the userID by typing

`./add_sdm_userid <principal_name> <sdm_userid>`

and pressing the Enter key.

where

principal_name
is the DCE userID you wish to set ERA values for

sdm_userid
is the userID you wish to have

6 You have completed this procedure.

Assigning the master server for DCE

Application

ATTENTION
This procedure can cause some side effects on your DCE cell. You must be a Distributed Computing Environment (DCE) system administrator to perform this procedure. Perform this procedure with caution.

Use this procedure to perform one of the following items:

- assign a new master CDS clearinghouse
- exclude a replica CDS clearinghouse
- assign a new master security server
- remove a replica security server

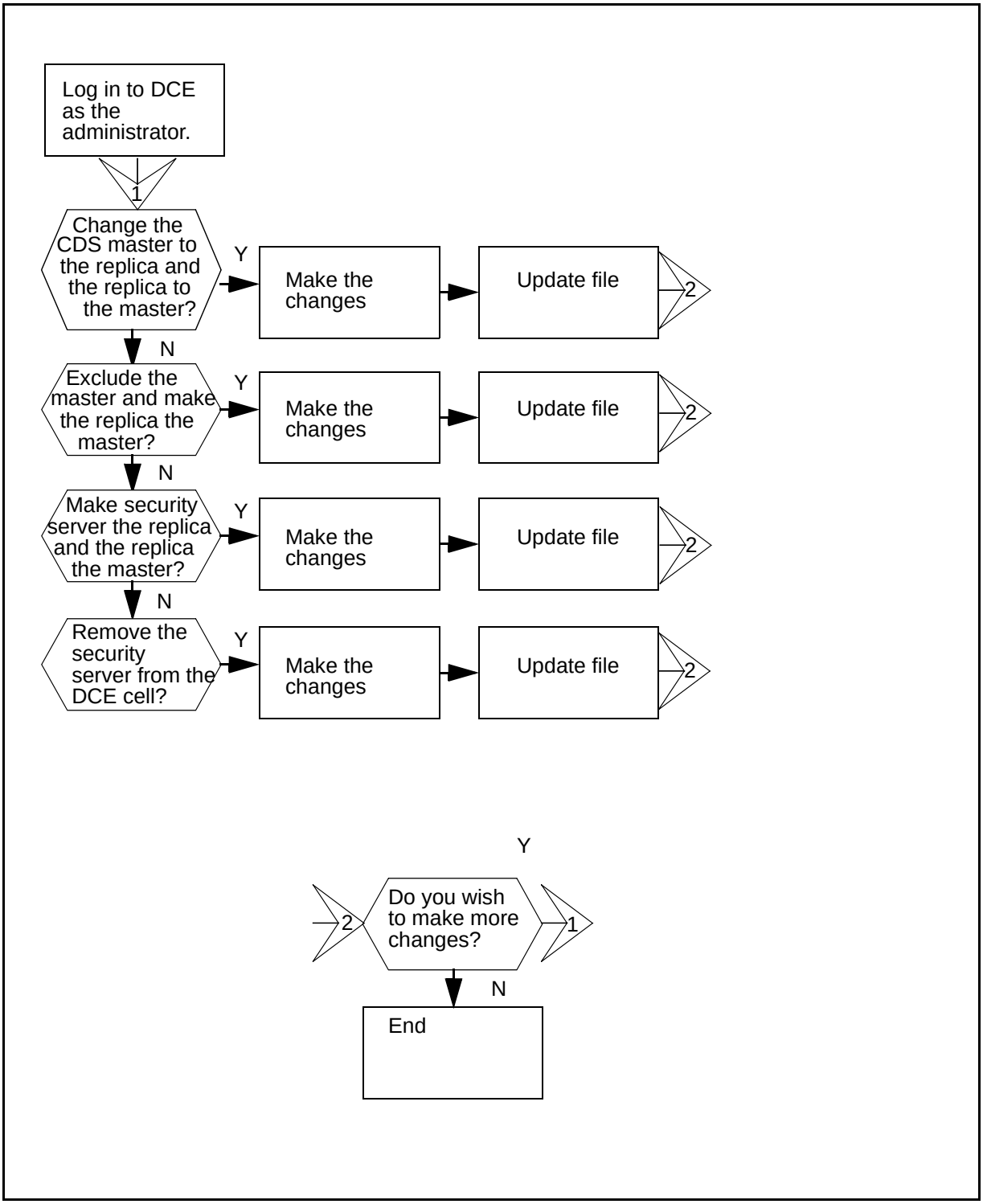
Interval

Perform this procedure when you want to reconstruct the DCE cell.

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 routine maintenance procedure.

Summary of assigning the master server for DCE



Assigning the master server for DCE

At the local or remote VT100 console

1 Login to the DCE cell as an administrator by typing

`> dce_login <principal name>`

and pressing the Enter key.

where

principle name
is the user ID of the administrator.

2 Determine which DCE re-mastering script to run.

If	Do
you are assigning a new master CDS clearinghouse	step 3
you are excluding a replica CDS clearinghouse	step 6
you are assigning a new master security server	step 8
you are removing a replica security server	step 10
you are not making any changes	step 12

3 Assign a new master CDS clearinghouse by typing

`> /sdm/bin/remaster_cds_server master <new_master_hostname> replica <replica_hostname_list>`

and pressing the Enter key.

where

new_master_hostname
is the host name of the master server.

replica_hostname_list
is the list of hostnames for replica servers that remain in the CDS replica clearinghouse set.

4 Confirm the request by typing

> yes

and pressing the Enter key.

After you confirm your request, the system displays the following response:

```
Remastering CDS server...
   Remastering/.:...
   Remastering/.:...
```

5 Update the cds_cache.wan file by typing

> .sdm/bin/update_cds_cache_wan

and pressing the Enter key.

Return to step 2 to determine your next step.

6 Exclude a list of replica CDS clearinghouses by typing

> /sdm/bin/remaster_cds_server master <*master_host_name*> replica <*replica_hostname_list*> exclude <*exclude_replica_hostname_list*>

and pressing the Enter key.

where

master_hostname
is the host name of the new master server.

replica_hostname_list
is the list of host names for replica servers.

exclude_replica_hostname_list
is the list of host names of replica servers you want to exclude from the CDS replica clearinghouse set.

7 Update the cds_cache.wan file by typing

> /sdm/bin/update_cds_cache_wan

and pressing the Enter key.

Return to step 2 to determine your next step.

8 Assign the new master security server by typing

`> /sdm/bin/remaster_sec_server <new_master_server_hostname>`

and pressing the Enter key.

where

new_master_server_hostname
is the hostname of the new DCE master security server.

9 Update the cds_cache.wan file by typing

`> /sdm/bin/update_pe_site`

and pressing the Enter key.

Return to step 2 to determine your next step.

10 Remove the replica security server by typing

`> /sdm/bin/remove_sec_server_data <replica_security_server_hostname>`

and pressing the Enter key.

where

replica_security_server_hostname
is the hostname of the replica security server you want to remove from the DCE cell.

11 Update the cds_cache.wan file by typing

`> /sdm/bin/update_pe_site`

and pressing the Enter key.

Return to step 2 to determine your next step.

12 You have completed this procedure.

Using an FTP client

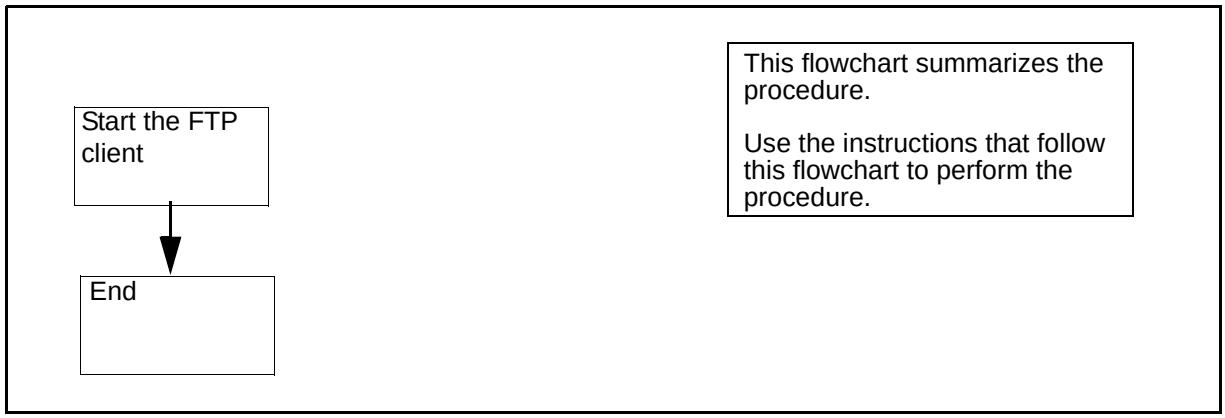
Starting an FTP client

The following procedure describes how to start an FTP client.

Note 1: Nortel Networks recommends that you use the SFT client. FTP userIDs and passwords are passed unencrypted across the network. Standard FTP cannot determine which users are allowed to transfer files to and from the CM.

Note 2: To complete the procedure for starting an FTP client, perform the step-action procedures that follow the flowchart.

Summary of Starting an FTP client



Starting an FTP client

At a UNIX prompt:

1 Start the FTP client workstation by typing

`> ftp <address>`

and pressing the Enter key.

where

address
is the IP address, or the DNS address of the FTP server.

Note: The location of the FTP client varies.

2 You have completed this procedure.

For additional instructions on FTP client usage, refer to the documentation of the client application. For instructions on using CM FTP, refer to section CM FTP server.

CM FTP server

SFT clients and FTP clients can both access the CM FTP server by typing SITE CM.You can use standard FTP commands with some exceptions. A list of exceptions follows.

Command limits and restrictions

The following describes limits to standard FTP commands when accessing the CM FTP server.

- The user command is intercepted and disallowed by the SFT server. A user does not have to log in manually.
- The mkdir and rmdir commands are not supported by the CM FTP server. The CM file system only contains volumes. It does not support directory hierarchies within the volume.
- Files transferred to SFDEV are owned by the user $$SYS$$.
- SFT performs a clean-up routine after the SFT application is returned to service. If you attempt to use the SITE CM command immediately after the RTS command is issued, you may experience a delay of about 20 seconds before access to the CM is given.
- File names and volume names are case sensitive. Volume names are always in uppercase, for example, S01DVOL1. File names are usually in uppercase.

Note: For more information on commands, refer to the commands glossary.

Allowing ATA and ETA to operate across a firewall

Special measures must be taken for DCE-based applications to work when the CS 2000 Core Manager is separated by a firewall or some other filtering device or from either

- the DCE cell's security and cell directory servers (CDS)
- a workstation that runs an ETA client program

ETA operates by having the ETA server on the CS 2000 Core Manager connect back to the ATA or ETA client, in response to a request to establish a session from the client. It is necessary to control the TCP port that the client uses for the reverse connection.

Restricting ports for incoming connections works in combination with firewalls by implementing a packet-filtering technique. Consult the firewall vendor documentation to determine whether your firewall can be used in this manner.

Restricting the port range

Use the following procedure to restrict the ATA and ETA client reverse connection ports on the client workstation.

Restricting the port range

At the local or remote VT100 console

1 Log into the client workstation as the root user.

2 Change to the ETA directory by typing

`cd /sdm/bin`

and pressing the Enter key

3 Execute the port range configuration script by typing

`./eta_port_range`

Response:

```
 ENHANCED TERMINAL ACCESS PORT RANGE
CONFIGURATION
This configuration script allows you to control
the ETA Client reverse connection ports on the
client workstation.
The current port restriction range for the ETA
Client is:
Range start: -
  Range end:   -
```

```
   (no port restriction range)
Set a new port restriction range by entering two
numbers (and pressing [Enter]) which represent
the start and end of the port restriction range.
To remove the port restriction, type 'None' and
press [Enter]. To quit this program, type
'Quit' and press [Enter].
Port restriction range:
```

4 At the "Port restriction range:" prompt, type two numeric values separated by a space:

`Port restriction range: <a> <b>`

and press the Enter key.

where

a
is the beginning the range for ports (must be greater than 1024)

b
is the end of the range for ports (must be less than 32 000)

Note 1: These values are not range checked. Check that the values range from 1024 to 32 000. Enter the lowest value first.

Note 2: The range size is determined by the maximum number of simultaneous instances of the ETA client program that are expected to run on the machine where the client is installed. This number is the number of ETA client instances, not the number of CS 2000 Core Manager console sessions or Communication Server 2000 MAP terminal sessions, because all sessions started by an ETA client instance share the same port number.

5 Exit the program by entering

`quit`

and pressing the Enter key.

6 You have completed this procedure.

Changing a DCE user password

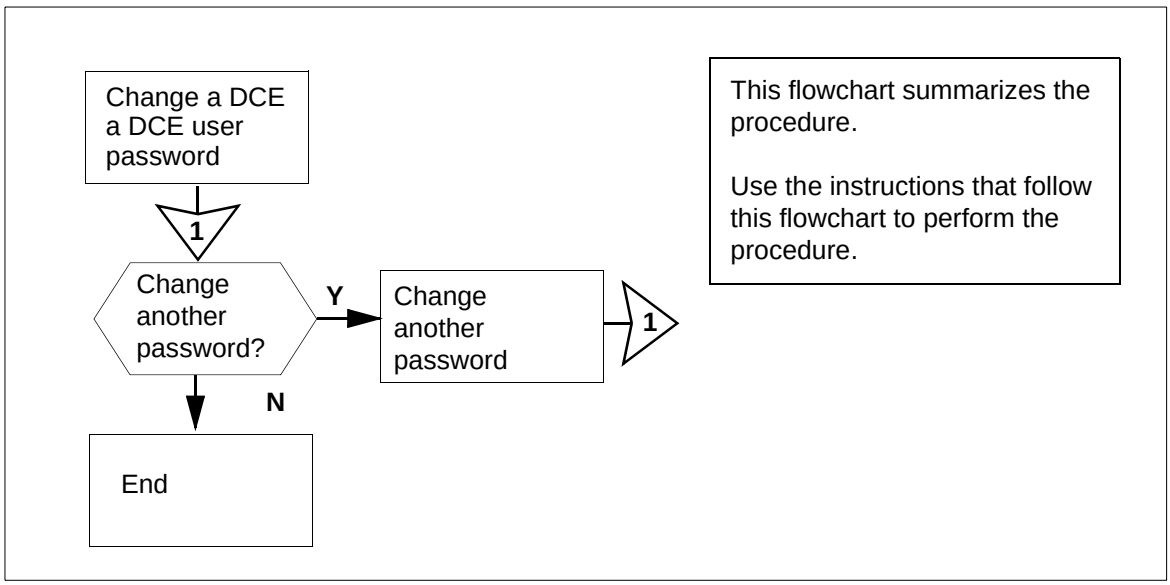
Application

Use this procedure to change a DCE user password.

Action

The following flowchart provides an overview of the procedure. Use the instructions in the step-action procedure that follows the flowchart to perform the task.

Summary of changing a DCE user password



Changing a DCE user password

At the CS 2000 Core Manager client workstation

1 Change a DCE user password by typing

```
> /sdm/bin/change_dce_password
```

Response:

```
DCE user ID:
```

2 Enter the user ID of the user for whom you are changing the password, and press the Enter key.

Response:

```
Old password:
```

3 Enter the old password, and press the Enter key.

Response:

```
New password:
```

4 Enter the new password, and press the Enter key.

Response:

```
Re-enter password:
```

5 Re-enter the user password, and press the Enter key.

Example response:

```
The password for “joe” has been changed.
```

6 You have completed this procedure.

Changing a user password on the CS 2000 Core Manager

Application

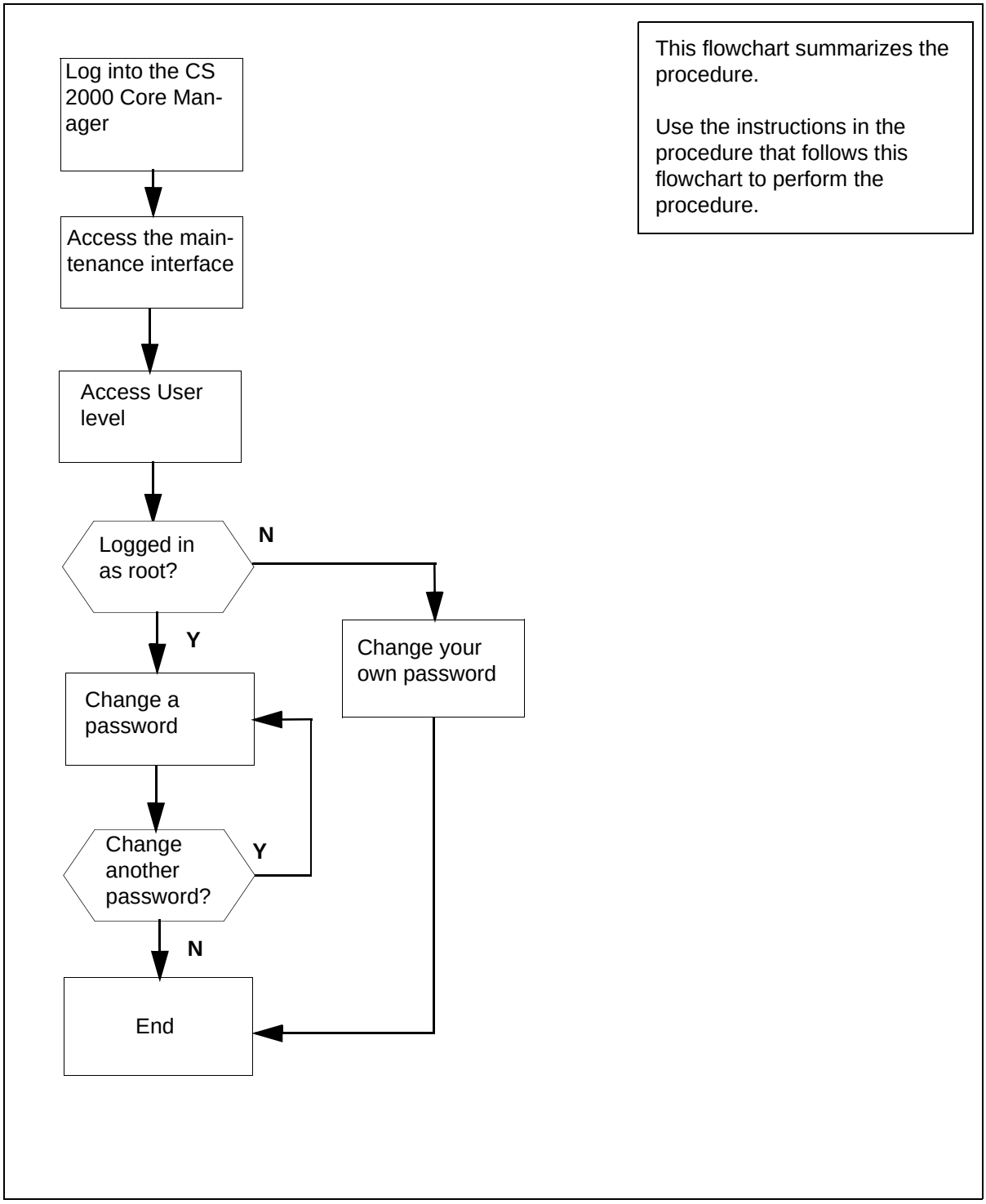
Use this procedure to change a user password on the CS 2000 Core Manager, or to set up a temporary password for a new user.

Maintenance class users and root users can change their own password if they know their current password. The root user can change the password of any other user on the system at any time without knowing the current password of the account.

Action

The following flowchart provides an overview of the procedure. Use the instructions in the step-action procedure that follows the flowchart to perform the task.

Summary of Changing a user password



Changing a user password

At the local or remote VT100 terminal

1 Log in to the CS 2000 Core Manager as either the root user or a maint class user.

2 Access the maintenance interface by typing

```
# sdmmtc
```

and pressing the Enter key.

3 Display the User screen by typing

```
> user
```

and pressing the Enter key.

4 Use the following table to determine your next step.

If you are a	Do
maint class user	step 9
root user	step 5

5 Change a user password by typing

```
> change <userID>
```

and pressing the Enter key.

where

userID
is the userID of the user for whom you are changing the password

Note: If no userID is specified, the system will change the password of the current root user.

6 When prompted, enter a new password.

Note: The password must be at minimum, a six-character string containing at least one alphabetic character, and at least one numeric or special character. Although a password can contain more than eight characters, only the first eight characters are considered.

7 When prompted, re-enter the password.

Note: If the root user changes a maint class user's password, the change is temporary. The maint class user will be asked to change the password again at the next login.

8 Press Enter to continue.

If you	Do
want to change another password	step 5
do not want to change another password	step 14

9 Change your password by typing

```
> change
```

and pressing the Enter key.

10 When prompted, enter your old (current) password.

11 When prompted, enter a new password.

Note: The password must be at minimum, a six-character string containing at least one alphabetic character, and at least one numeric or special character. Although a password can contain more than eight characters, only the first eight characters are considered.

12 When prompted, re-enter the new password.

13 Press Enter to continue.

14 Exit the maintenance interface by typing

```
> quit all
```

and pressing the Enter key.

15 You have completed this procedure.

Changing CM passwords from ATA client

Changing CM passwords consists of Changing CM passwords in the DCE security database and Changing the CM password on the DMS switchCommunication Server 2000. ASCII Terminal Access (ATA) clients can change their own user passwords.

Note: You can change the CM password on the Communication Server 2000 before or immediately after you have changed the CM password in the DCE security database.

Changing CM passwords in the DCE security database

Use the following procedure to change your CM password in the DCE security database.

Changing CM passwords in the DCE security database

At the client workstation

1. Log into the client workstation.
2. Log into DCE by typing

   `dce_login <DCE_user>`

   and pressing the Enter key.

   where

   DCE_user
   is the DCE administrator user ID
3. Enter your DCE password, and press the Enter key.
4. Access the bin directory by typing

   `cd /sdm/bin`

   and pressing the Enter key

5 Change the CM password by typing

`./ata -passwd`

and pressing the Enter key.

Example response

```
This operation will only change your MAP/CI
password in the central database. Make sure you
have the same password for the user ID on the
DMS.

Available MAP/CI User Ids:
   user1 user2 user3 user4
```

Note: You can also change the CM password from the ATA prompt.

Example
ata>passwd

6 When prompted, enter the MAP/CI user ID associated with the password you want to change, and press the Enter key.

7 When prompted, enter the old password for the user ID you selected, and press the Enter key.

8 When prompted, enter the new password for the user ID you selected, and press the Enter key.

9 When prompted, enter the new password again to confirm, and press the Enter key.

response

```
Password change successful.

Continue Change Password (y/n):
```

If you	Do
want to change another password	type y, press the Enter key, and repeat steps 6 through 9
do not want to change another password	step 10

10 Exit the password command by typing

n

and pressing the Enter key.

11 You have completed this procedure

Changing the CM password on the Communication Server 2000

Use the following procedure to change your CM password. You must complete this procedure before or immediately after you change your CM password in the DCE security database.

Changing the CM password on the Communication Server 2000

At the ATA prompt:

1 Log in to the Communication Server 2000 by typing

```
ata> <clli name> cm
```

and pressing the Enter key.

2 Change the CM password on the Communication Server 2000 by typing

```
> password
```

and pressing the Enter key.

3 Type your new password, and press the Enter key.

Response:

```
Please enter new password again to verify.
```

4 Type your new password again, and press the Enter key.

Response:

```
Enter your current password to verify.
```

5 Type your old (current) password, and press the Enter key.

A message informs you that the password has been successfully changed, and that it must be changed in 30 days.

6 You have completed this procedure.

Changing CM passwords from ETA client

Changing CM passwords consists of Changing CM passwords in the DCE security database and Changing the CM password on the DMS-100 switch. ETA clients can change their own user passwords at the ETA main window.

Note: You can change the CM password on the Communication Server 2000 before or immediately after you have changed the CM password in the DCE security database.

Changing CM passwords in the DCE security database

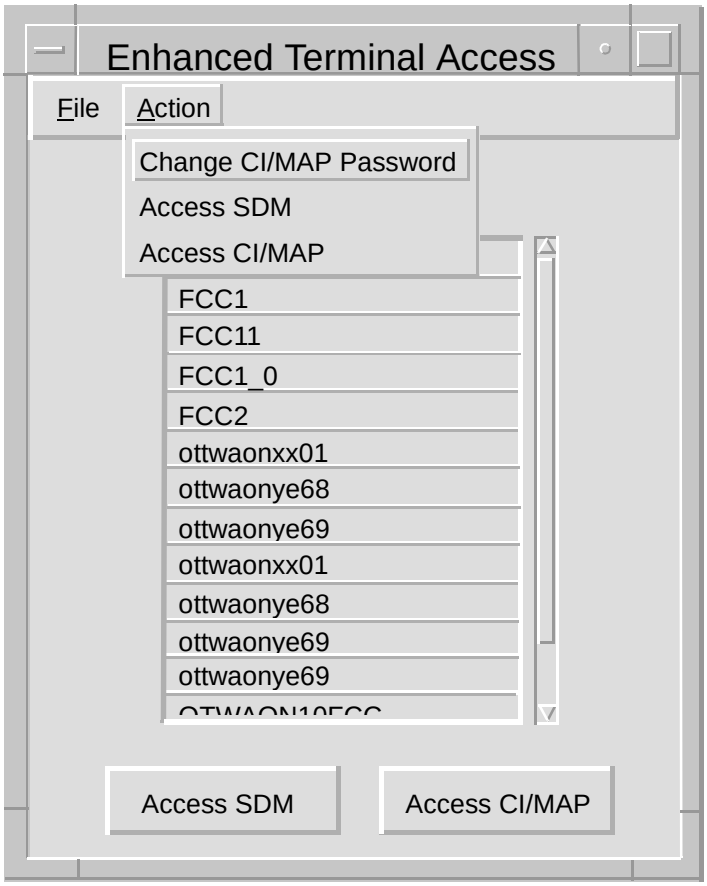
Use the following procedure to change your CM password in the DCE security database.

Changing CM passwords in the DCE security database

At the ETA main window

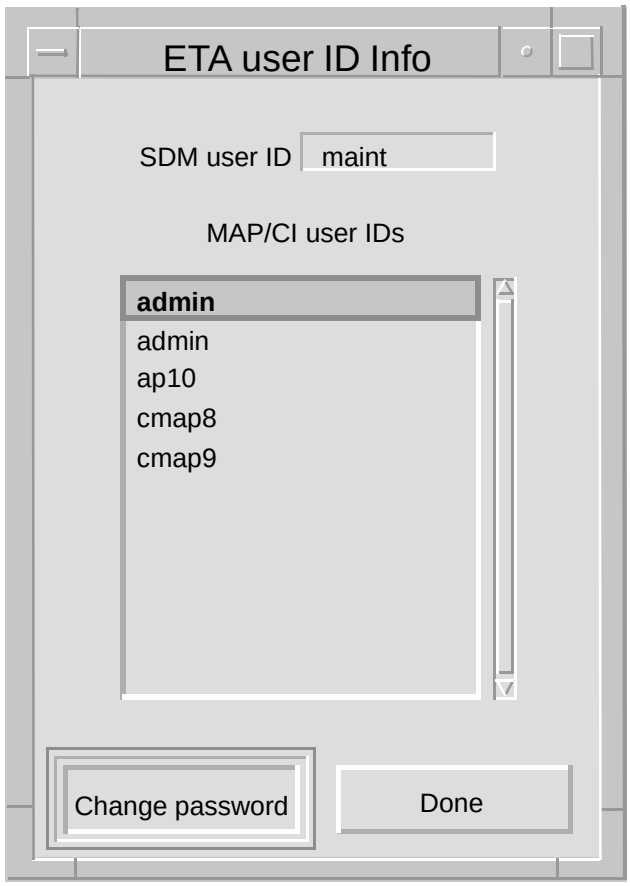
1 Select Change CI/MAP Password from the Action pull-down menu.

The ETA user ID Info window appears.



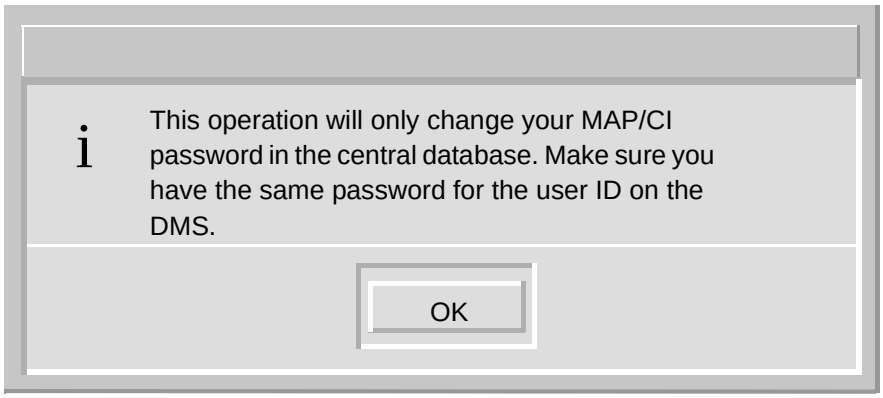
2 Click on the CM user ID for which you want to change the password.

Example of window



3 Click on Change password button.

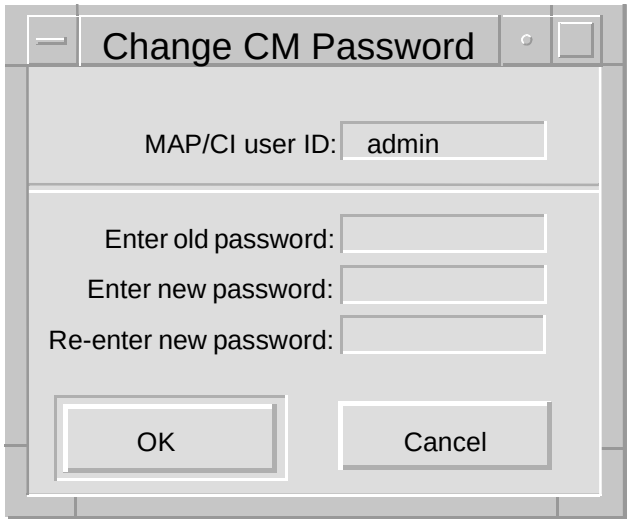
A warning message appears.



4 Click on OK to continue.

Note: The two administration user IDs are used to access different Communication Server 2000. This allows multiple passwords to be used with each CM user ID.

The Change CM Password window appears.



5 Enter the old password, the new password, and re-enter the new password. Click on OK when you are finished.

The Change CM Password window disappears after you click on Ok.

6 Use the following table to determine your next step.

If you are	Do
changing another password	step 2
finished changing passwords	step 7

7 Click on Done from the ETA User ID Info window.

8 You have completed this procedure.

Changing the CM password on the Communication Server 2000

Use the following procedure to change your CM password. You must complete this procedure before or immediately after you change your CM password in the DCE security database.

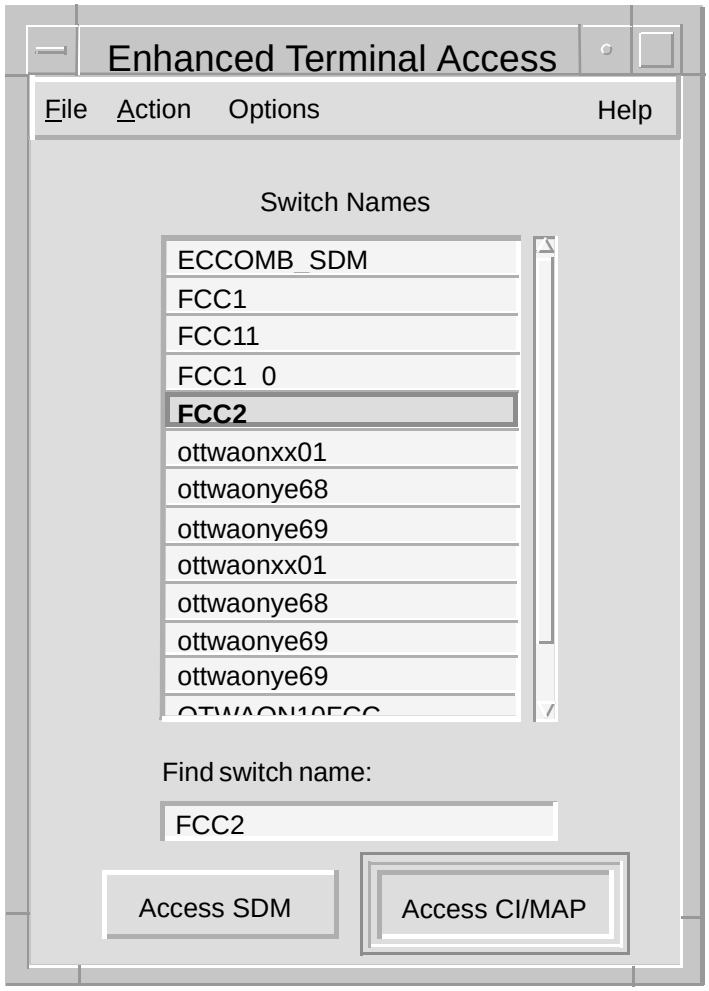
Note: Under certain conditions, the CM response from a user-entered command and subsequent user keyboard input compete for the display cursor. The CM output and the user input may be interleaved causing “garbled” data to appear. This limitation also exists on the telnet sessions off an Ethernet Interface Unit (EIU). To correct this problem refresh the screen. This limitation does not corrupt data or user commands on the CM.

Changing the CM password on the DMS-100 switch

At the ETA main window:

1 Select the name of the Communication Server 2000.

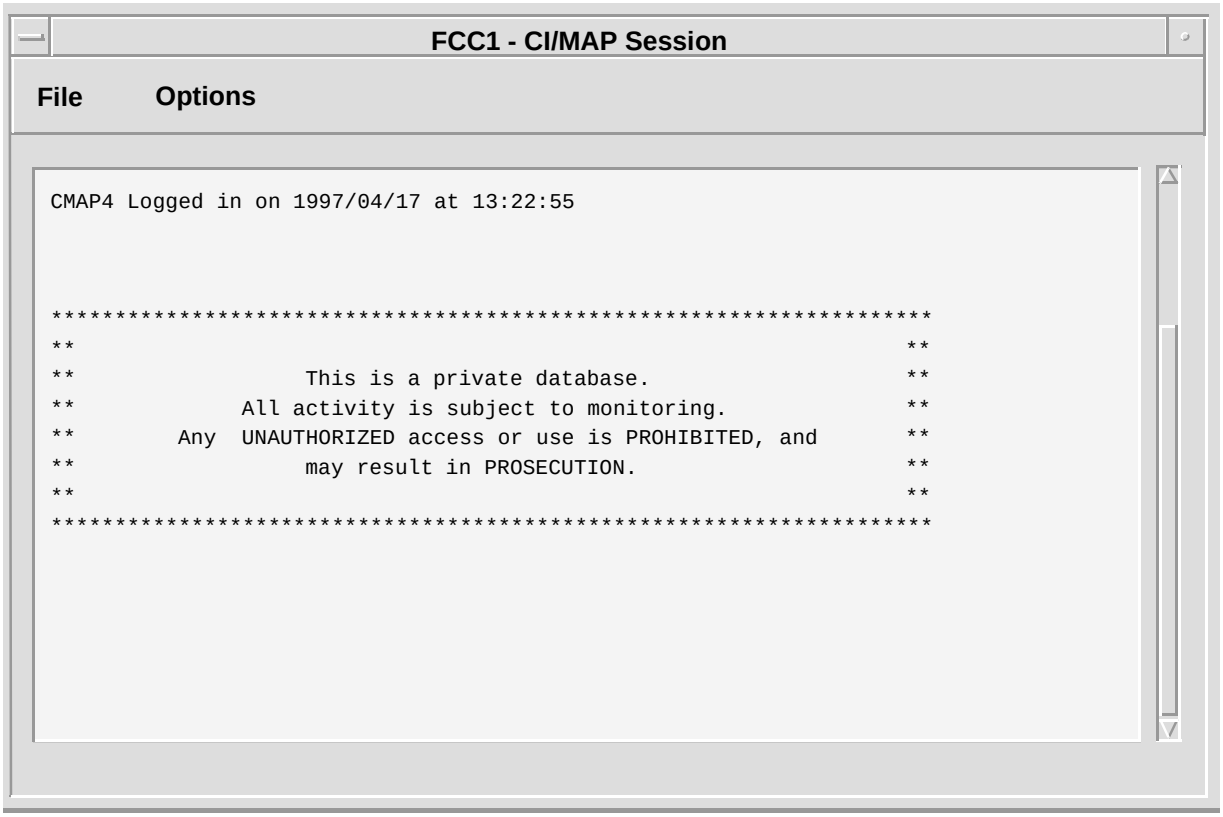
Example of window



2 Click on the Access CI/MAP button.

A CI/MAP session window appears.

Example CI/MAP session window



3 Change the CM password on the Communication Server 2000 by typing

> password

and pressing the Enter key.

4 Enter your new password, and press the Enter key.

Response:

```
Please enter new password again to verify.
```

5 Enter your new password again, and press the Enter key.

Response:

```
Enter your current password to verify.
```

6 Enter your old (current) password, and press the Enter key.

A message informs you that the password has been successfully changed, and that it must be changed in 30 days.

7 You have completed this procedure.

Changing logical volume thresholds

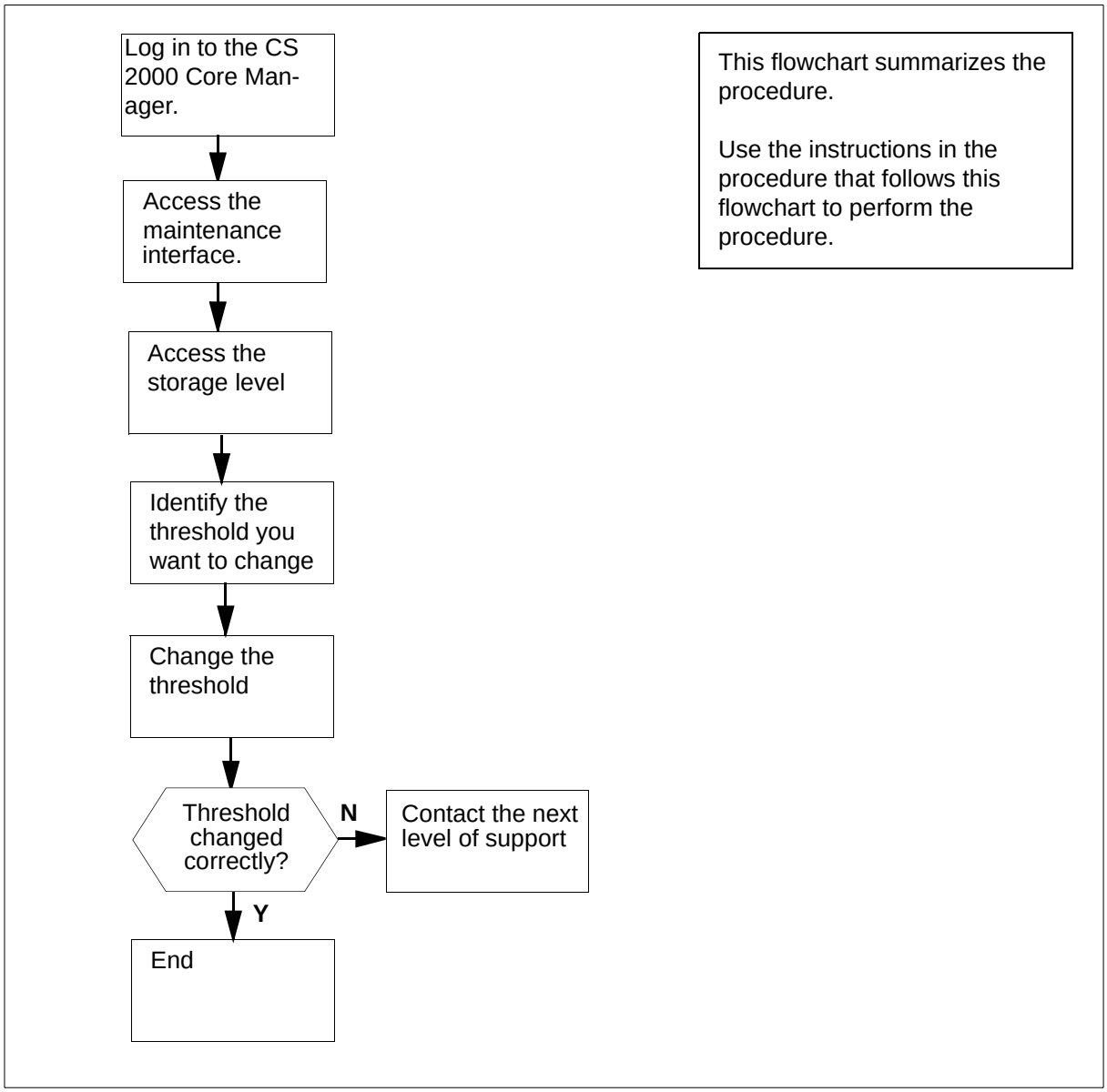
Application

Use this procedure to change CS 2000 Core Manager logical volume thresholds.

Action

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

Summary of changing logical volume thresholds



Changing system thresholds

At the local VT100 console

1 Log into the CS 2000 Core Manager.

2 Access the maintenance interface by typing

```
# sdmmtc
```

and pressing the Enter key.

3 Access the storage level by typing

> storage

and pressing the Enter key.

Example Response:

```
Volume Group        Status          Free (MB)
rootvg              Mirrored        1932
datavg              Mirrored        7760

Logical Volume  Location   Size(MB)    % full/
threshold
1 /           rootvg     88              25/ 80
2 /usr         rootvg     600             85/ 90
3 /var         rootvg     200             11/ 80
4 /tmp         rootvg     24               6/ 90
5 /home        rootvg     304              4/ 70
6 /sdm         rootvg     504             44/ 90
7 /data        datavg     208              6/ 80
               Logical volumes showing: 1 to 7
of 7
```

4 Identify which logical volume threshold you want to change. Note the entry number of the logical volume on the left of the storage menu.

5 Change the logical volume threshold by typing

> change <*n*> <*x*>

and pressing the Enter key.

where

n
is the entry number of the logical volume for which you want to change the threshold

x
is the new threshold value

Example input:

> change 5 80

6 Wait 5 sec. Check to see that the logical volume threshold changed to the value that you entered.

If the logical volume threshold did not change correctly, contact your next level of support.

7 You have completed this procedure.

Changing system thresholds

Application

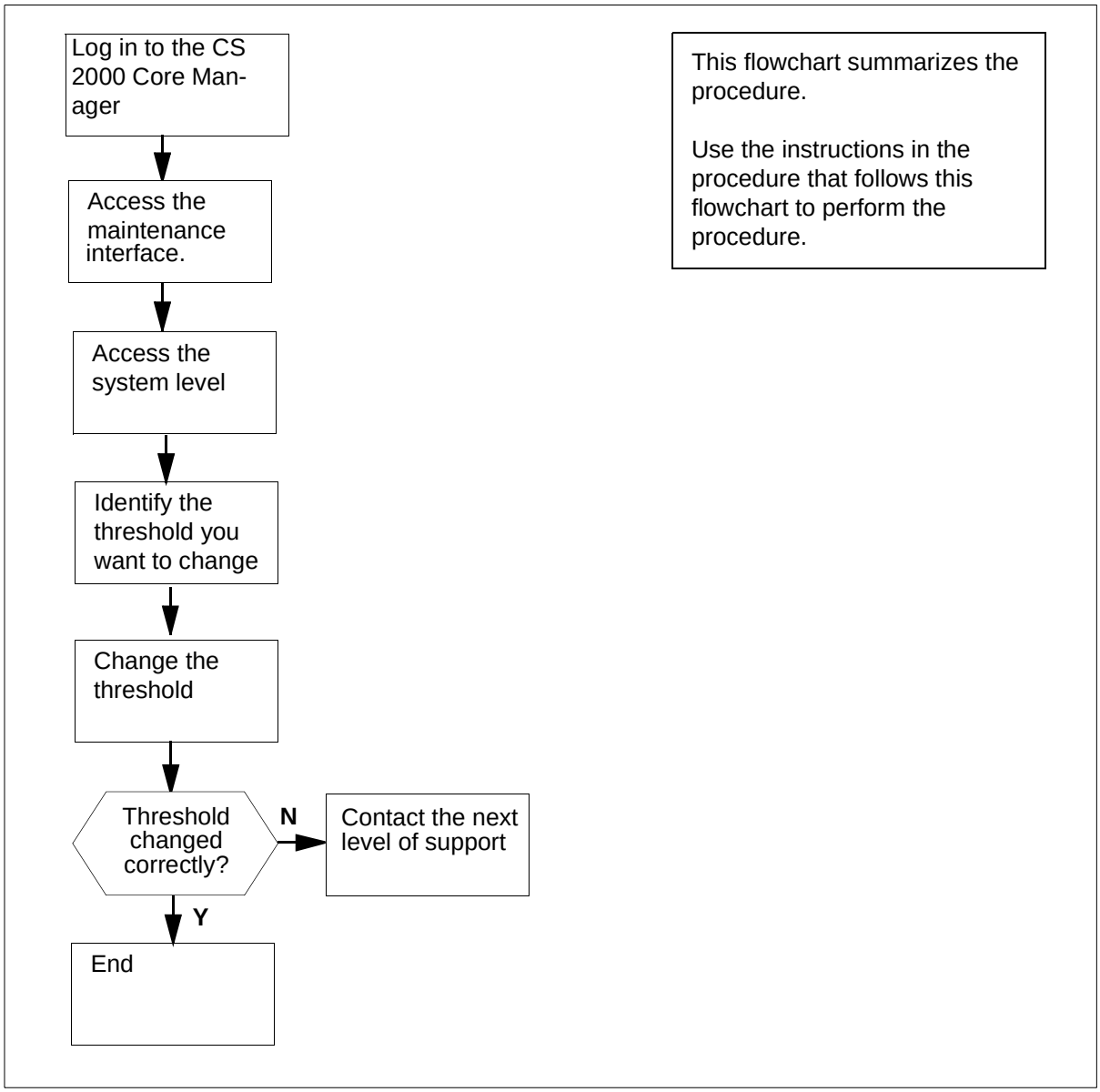
Use this procedure to change CS 2000 Core Manager system thresholds. You can change the following CS 2000 Core Manager system thresholds at the system menu level of the Remote Maintenance Interface (RMI):

- CPU (run queue entries)
- Number of Processes
- Number of Zombies
- Swap Space (% full)
- Number of Swap Queue Entries

Action

The following flowchart provides an overview of the procedure. Use the instructions in the step-action procedure that follows the flowchart to perform the task.

Summary of changing system thresholds



Changing system thresholds

At the local VT100 console

1 Log into the CS 2000 Core Manager.

2 Access the maintenance interface by typing

```
# sdmmtc
```

and pressing the Enter key.

3 Access the system (Sys) level by typing

> sys

and pressing the Enter key.

Response:

```
SDM Storage State:          .

#
Description                          Current/Thres
hold
1 CPU (run queue entries):                 1/  5
2 Number of Processes:                    63/250
3 Number of Zombies:                       0/  3
4 Swap Space (% full):                    72/ 70*
5 Number of Swap Queue Entries:            0/  2
```

4 Identify which system threshold you want to change. Note the entry number of the system threshold on the left System menu. The number is shown under the header “#”.

In the example in step 3, the entry number for CPU threshold is 1. The entry number for the Number of Processes threshold is 2. The entry number for the Number of Zombies is 3. The entry number for the Swap Space threshold is 4 and the entry number for Number of Swap Queue Entries is 5.

The current threshold value is shown in the right column under the header “Current/Threshold”.

5 Change the system threshold by typing

> change <*n*> <x>

and pressing the Enter key.

where

n
is the entry number of the threshold you want to change

x
is the new threshold value

Example input:

> change 4 80

6 Wait 5 sec. Check to see that the system threshold changed to the value that you entered.

If the system threshold did not change correctly, contact your next level of support.

7 You have completed this procedure.

Recovering the system when root password unknown

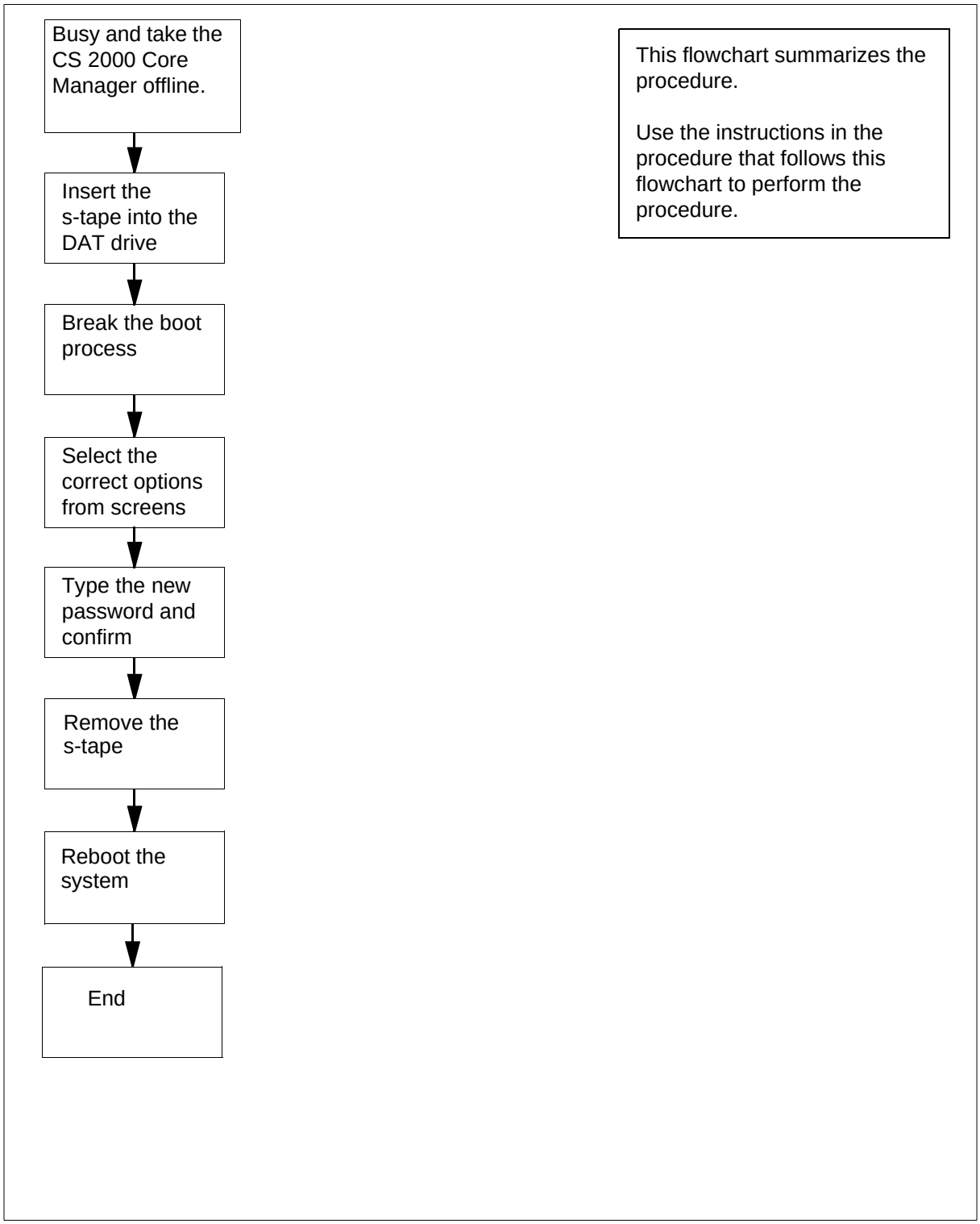
Application

Use this procedure to change the root user password when it is not known. If the ETA application is installed and in service, use that application to open a root user session. Then, use the procedure “Changing a user password” in this section to change the root password.

Action

The following flowchart summarizes the procedure. Use the instructions in the step-action procedure that follows the flowchart to perform the task.

Summary for recovering the system when root password unknown



Recovering the system when root password unknown

At the SDM level of the MAP display

1 Busy the CS 2000 Core Manager by typing

```
> bsy
```

and pressing the Enter key.

You are prompted to confirm whether you want to busy the CS 2000 Core Manager.

2 Confirm that you want to busy the CS 2000 Core Manager by typing

```
> y
```

and pressing the Enter key.

At the CS 2000 Core Manager

3 Insert the latest system backup tape (s-tape) into DAT drive 0 (slot 2).

Note: Wait until the tape drive stabilizes (yellow LED is off) before you proceed.

At the SDM level of the MAP display

4 Reboot the CS 2000 Core Manager by typing

```
> rebootsdm
```

and pressing the Enter key.

At the local console

5 When the system displays “COLD Start”, press the Break key or the Esc key twice to interrupt the boot process.

6 Reboot the system by typing

```
Fx-Bug> pboot 1 50
```

and press the Enter key.

The system displays various messages. When they are completed, proceed to the next step.

Note: In case of any failures, contact your next level of support.

7 At the “Please define the system console” screen, type

```
> 1
```

and press the Enter key.

8 At the second interactive screen, select 1 for English.

9 At the “Welcome to base operating system installation and maintenance” screen, select 3 to begin the maintenance mode for system recovery.

10 At the Maintenance screen, select 1 to access a root volume group.

11 At the Warning screen, select 0.

12 The “Access a Root Volume Group” screen displays the volume groups with the disks they contain. Each disk has a name, (for example, hdisk0) and a location code (for example 4056 c1-f2-00-0,0).

Type the number of the volume group whose location code contains the characters “c1-f2”. Press the Enter key.

```
Example output:
1) Volume Group 002e43cdaa6655f5 contains these
disks:       hdisk1 4056 c1-f4-00-0,0    hdisk2
4056 c1-f4-00-1,0        hdisk3 4056
c1-f4-00-0,0  hdisk4 4056c1-f15-00-1,0
2) Volume Group 002e43cda6d92fc7 contains these
disks:       hdisk0  4056 c1-f2-00-0,0  hdisk3
4056c1-f13-00-0,0
```

13 At the Volume group information screen, select 1 to access the volume group and start a shell.

14 At the UNIX prompt type

```
# passwd root
```

and press the Enter key. The system prompts you for a new root password.

15 Type the new root password. When prompted, re-enter the new root password.

16 Confirm the password change by typing

```
# ls -l /etc/passwd
```

and pressing the Enter key.

```
Example output:
-rw-r--r--1 root root11539 Jul 912:37
/etc/passwd
```

17 Check that the date and time that are displayed as a result of step 16 are the current date and time.

If the current date and time	Do
are displayed	step 18
are not displayed	contact your next level of support

18 Remove the s-tape.

19 Reboot the system by typing

```
# shutdown -Fr
```

and pressing the Enter key.

When the reboot completes, the login prompt appears. You must then use the new password to log in as the root user. Go to step 20.

20 You have completed this procedure.

Changing the system date or time

Application

Use this procedure to change the system date or time on the CS 2000 Core Manager. This procedure does not replace the commissioning procedure Changing the system time zone and daylight savings time parameters.

ATTENTION
This procedure is for in-operation CS 2000 Core Managers only. If you are configuring the CS 2000 Core Manager for the first time, use the procedure Changing the system time zone and daylight savings time parameters.

ATTENTION
To change the date or time the node state must either be ManB or OffL and the node must not be DCE synchronized. If the node is DCE synchronized, change the time on the DCE server. The DCE server controls the time change for all nodes under its control in the DCE cell.

ATTENTION
This procedure cannot be used to change the date or time while the CS 2000 Core Manager is in split-mode.

Interval

Perform this procedure to change the system date or time when the CS 2000 Core Manager is in operation and not controlled by a DCE server.

Action

Ensure that the CS 2000 Core Manager is either ManB or OffL.

Changing the system date or time

At the local VT100 terminal

1 Log in to the CS 2000 Core Manager.

2 Access the maintenance interface level by typing

```
# sdmmtc
```

and pressing the Enter key.

3 Access the admin level by typing

```
> admin
```

and pressing the Enter key.

4 Select “Time” from the menu by typing

```
> 9
```

and pressing the Enter key.

The Time screen is displayed with one menu option “Change.”

Note: You must select the “Time” menu item to change the date or the time.

5 Select “Change” from the menu by typing

```
> 5
```

and pressing the Enter key.

6 Use the following table to determine your next step.

If you want to	Do
accept the specified “Year”	press Enter, and proceed to step 7
change the specified “Year”	edit the value, press Enter, and proceed to step 7

7 Use the following table to determine your next step

If you want to	Do
accept the specified “Month”	press Enter, and proceed to step 8
change the specified “Month”	edit the value, press Enter, and proceed to step 8

8 Use the following table to determine your next step.

If you want to	Do
accept the specified “Day”	press Enter, and proceed to step 9
change the specified “Day”	edit the value, press Enter, and proceed to step 9

9 Use the following table to determine your next step.

If you want to	Do
accept the specified “Hour”	press Enter, and proceed to step 10
change the specified “Hour”	edit the value, press Enter, and proceed to step 10

10 Use the following table to determine your next step.

If you want to	Do
accept the specified “Minutes”	press Enter, and proceed to step 11
change the specified “Minutes”	edit the value, press Enter, and proceed to step 11

11 Accept the new date and time by typing

> y

and pressing the Enter key.

12 You have completed this procedure.

Stopping and restarting an application

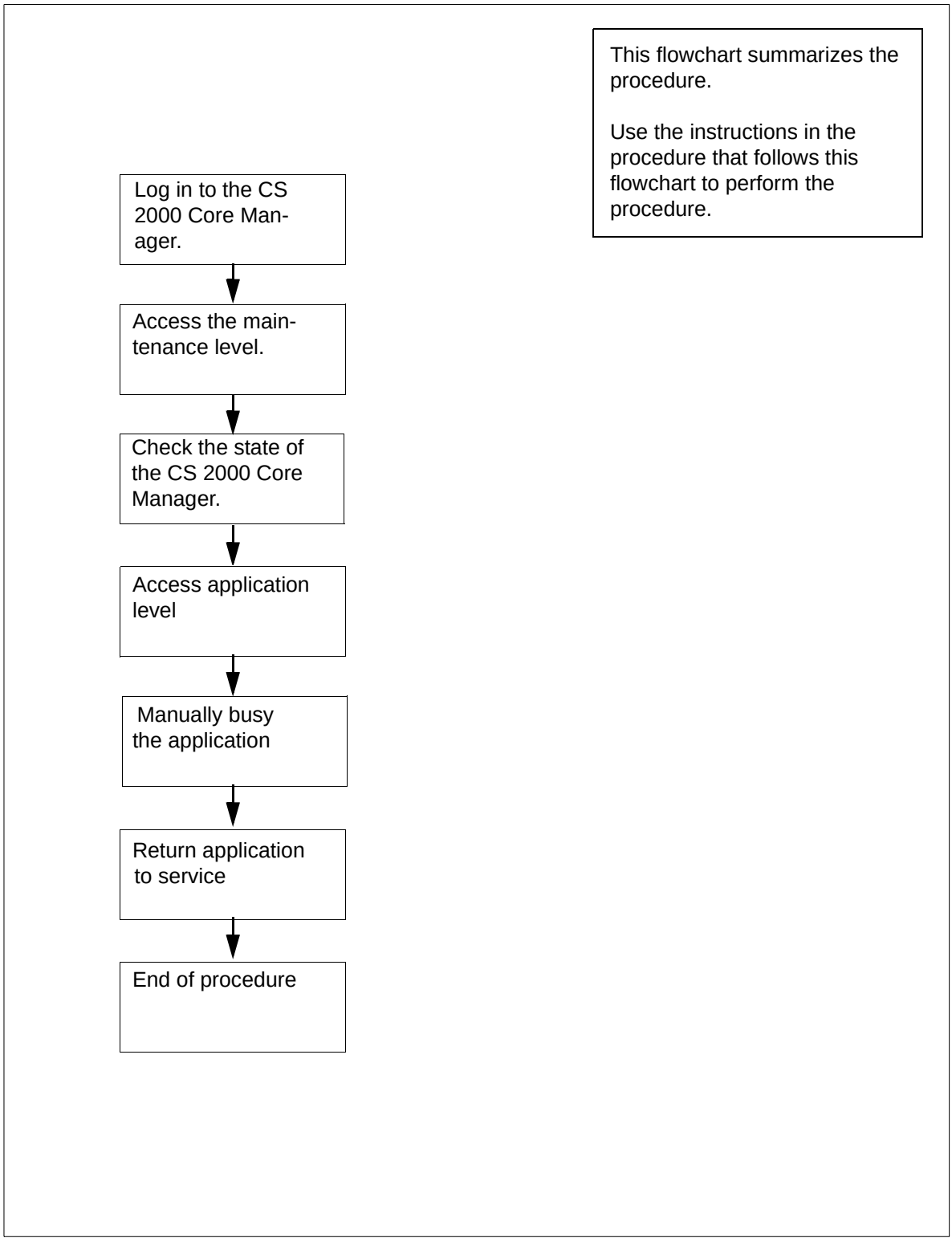
Application

Use this procedure to stop (manually busy) and restart (return to service) CS 2000 Core Manager software applications.

Action

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

Summary of stopping and restarting an application



Stopping and restarting an application

At the local or remote VT100 terminal

1 Log in to the CS 2000 Core Manager as the root user or a maint class user.

2 Access the maintenance interface by typing

```
# sdmmtc
```

and pressing the Enter key.

3 Access the application level by typing

```
> appl
```

and pressing the Enter key.

4 Busy the software application by typing

```
> bsy <n>
```

and pressing the Enter key.

where

n
is the number next to the application you want to busy

Example response:

```
The application is in service.
This command will cause a service interruption.
Please confirm (“YES”, “Y”, “NO”, or “N”):
```

Note: Busying the application as shown performs an orderly shutdown and can take up to 2 min.

5 Confirm the Busy command by typing

```
> y
```

and pressing the Enter key.

After you confirm the Bsy command, the following is displayed:

Response:

```
Application Bsy- Command initiated.Please wait...
```

Response:

```
Application Bsy - Command complete.
```

6 Return the application to service by typing

`> rts <n>`

and pressing the Enter key.

where

n
is the number next to the application you want to return to service

Response:

```
Application RTS - Command initiated.
Please wait...
```

Response:

```
Application RTS - Command complete.
```

7 You have completed this procedure.

Deleting a DCE user

Application

ATTENTION
You must be a trained Distributed Computing Environment (DCE) system administrator to perform this procedure.

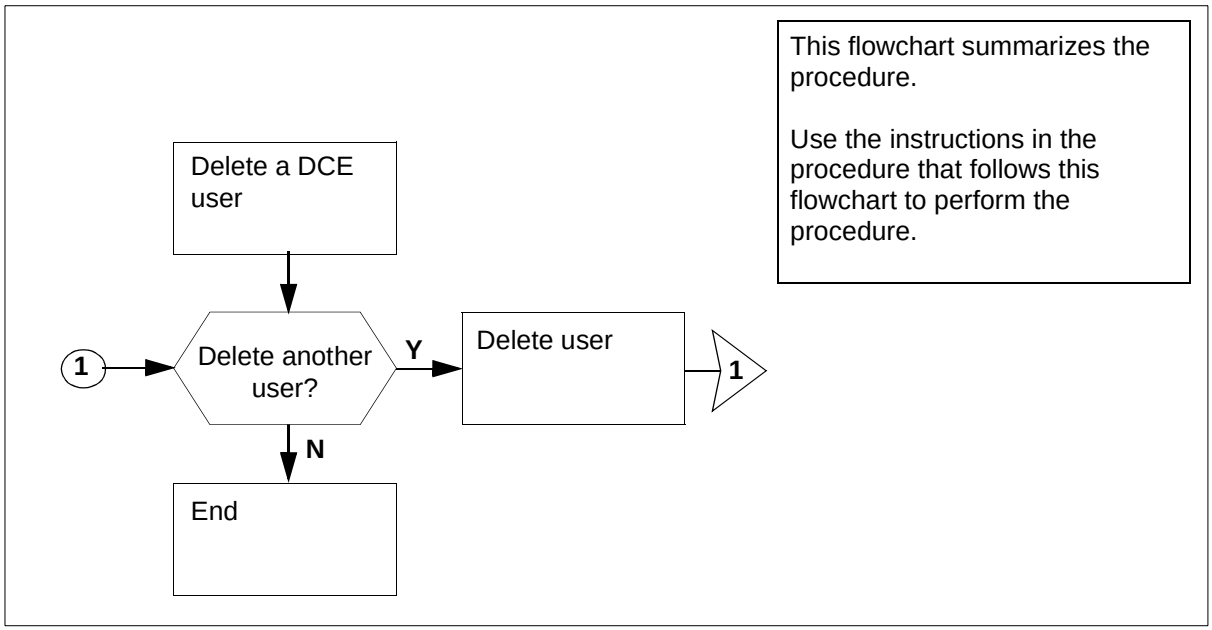
ATTENTION
Use a DCE master administration account (cell_admin) or a DCE sub administrator account (sdm_admin) to perform this procedure. You cannot use the sdm_admin account to delete a DCE user created by a cell_admin account. The cell_admin account can delete any DCE users created by either the cell_admin or sdm_admin account.

Use this procedure to delete a DCE user.

Action

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

Summary of Deleting a DCE user



Deleting a DCE user

At the CS 2000 Core Manager remote client workstation

1 Delete a DCE user by typing

```
> /sdm/bin/delete_dce_user
```

Response:

```
DCE administrator user ID [sdm_admin]:
```

2 Type the DCE user ID, and press the Enter key.

Note: If you do not enter a user ID, the system enters the default value (sdm_admin).

Response:

```
sdm_admin password:
```

3 Type your DCE administrator password, and press the Enter key.

Response:

```
DCE user ID to be deleted:
```

4 Type the DCE user ID you want to delete, and press the Enter key.

Example response:

```
The DCE user ID “joe” has been deleted.
```

5 You have completed this procedure.

Establishing a modem connection

Application

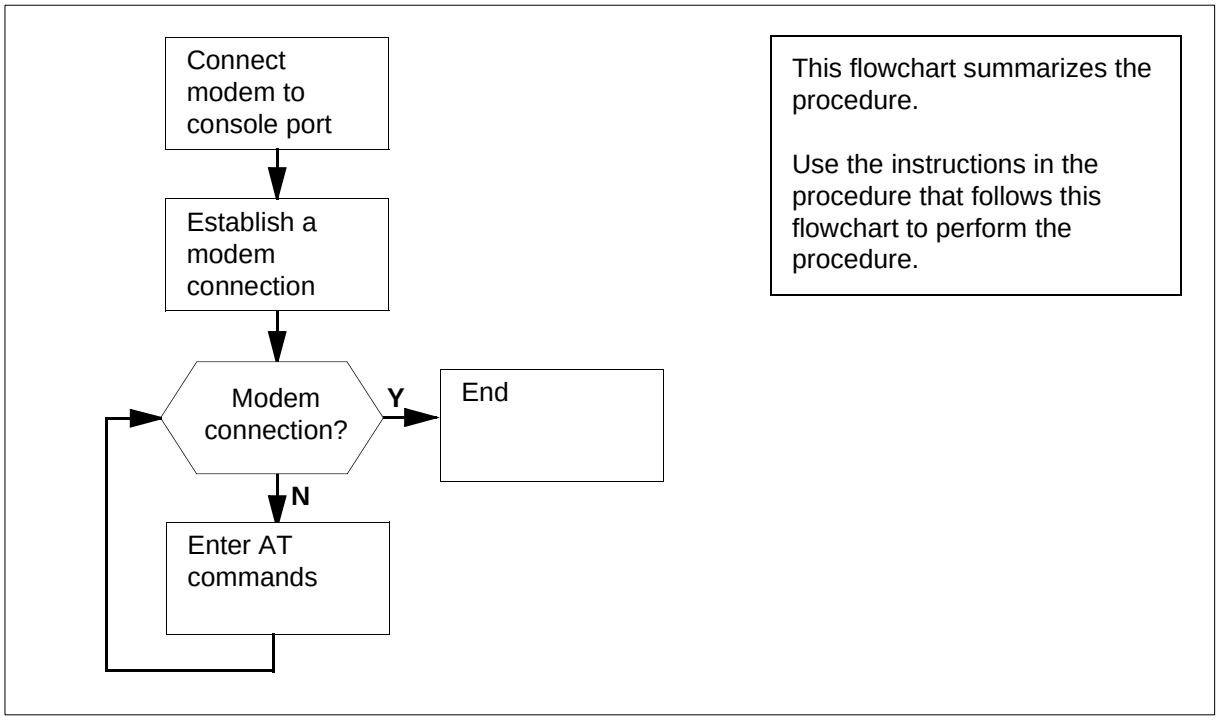
Nortel Networks recommends that you use the General DataComm (GDC) maintenance modem provided with the CS 2000 Core Manager equipment whenever a console dial-up modem connection to the CS 2000 Core Manager from a remote location is required. The GDC maintenance modem is installed and configured as part of the installation of the CS 2000 Core Manager.

Use the following procedure to establish a dial-up modem connection to the CS 2000 Core Manager from a remote location.

Action

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

Summary of establishing a modem connection

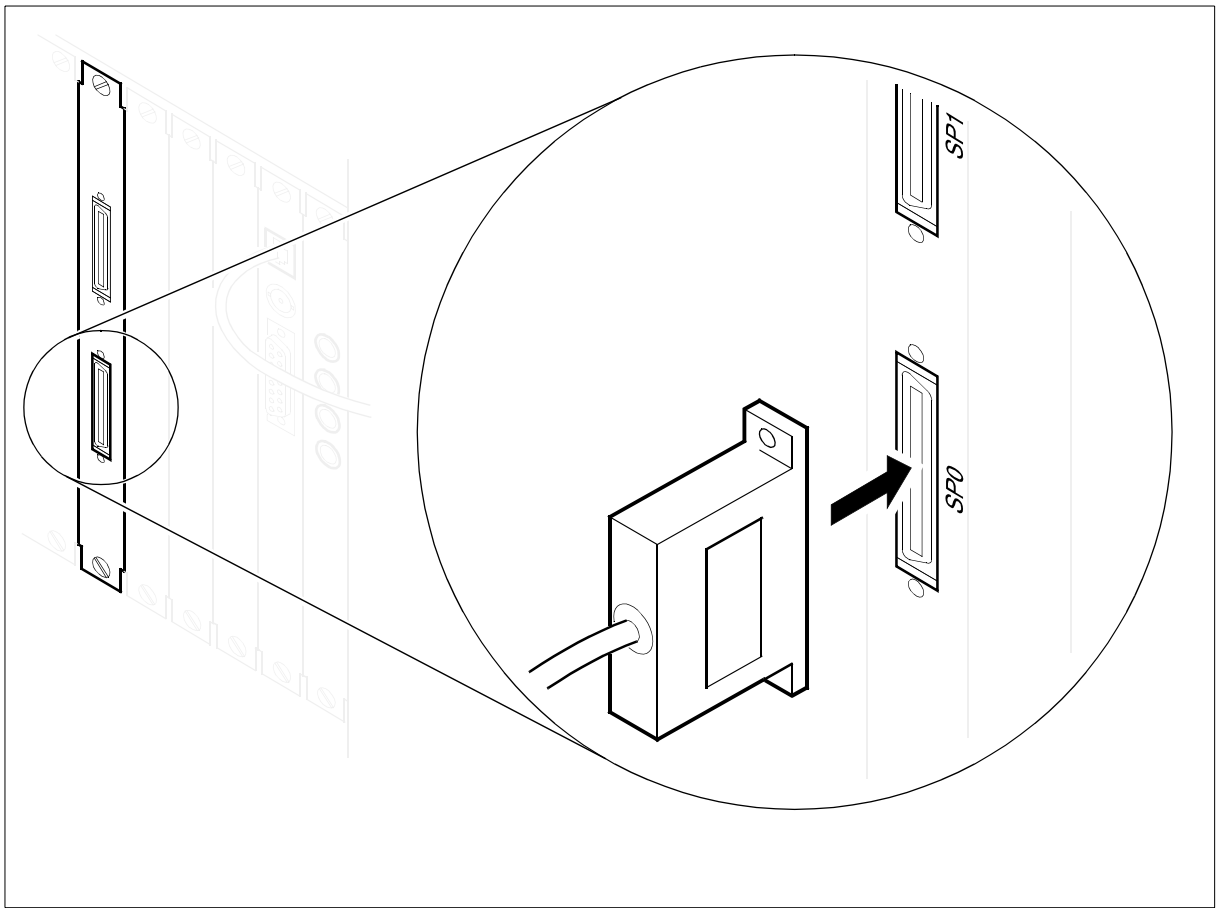


Establishing a modem connection

At the CS 2000 Core Manager

1 If necessary, connect the GDC maintenance modem to the CS 2000 Core Manager by first ensuring no other terminal device cables are connected to console port SP0 on the CPU personality module. Connect the NTRX5093 cable connected to the GDC maintenance modem to port SP0, and ensure a phone line is connected to the GDC maintenance modem.

Note: The modem is located in the appropriate MIS frame.



At a remote VT100 console

2 Use a terminal connected to a V.34 Hayes-compatible modem or other appropriate communications equipment connected to a V.34 modem, to establish remote connection to the CS 2000

Core Manager console port. Establish a modem connection to the CS 2000 Core Manager by typing

> atdt <*dial_in_number*>

and pressing the Enter key.

where

dial_in_number
is the telephone number for the modem attached to serial port 1

Note: For information on establishing a modem-to-modem connection, refer to the instructions for establishing a dial-up connection provided with the communications equipment you are using.

3 Determine if the connection has been established.

If you	Do
get a login prompt	log in using your user ID and password you have completed this procedure
do not get a login prompt	step 4

4 Execute the following steps to reconfigure your modem, starting at step 5. If you have already executed these commands, and are still having problems, contact your next level of support.

5 Reconfigure the GDC maintenance modem by connecting a VT100 console set to communicate at 9600 baud directly to the DTE connector on the GDC maintenance modem. Then enter the AT commands by first typing

> AT&F0

and pressing the Enter key.

Note 1: The command may or may not be echoed on the screen, depending on the previous configuration.

Note 2: If you make a mistake when entering the AT commands, restart the procedure at this point.

6 When the modem responds “OK”, type

> AT\T7

and press the Enter key.

7 When the modem responds “OK”, type

> AT&R2

and press the Enter key.

8 When the modem responds “OK”, type

> AT&C1

and press the Enter key.

9 When the modem responds “OK”, type

> ATE0

and press the Enter key.

10 When the modem responds “OK”, type

> AT%K1

and press the Enter key.

Note: This command is not echoed on the screen.

11 When the modem responds “OK”, type

> ATQ1

and press the Enter key.

Note: The modem does not respond after you enter ATQ1. The command is not echoed on the screen.

12 Type

> AT&W0

and press the Enter key.

Note: The modem does not respond after you enter AT&W0. The command is not echoed on the screen.

13 Type

> AT&Y0

and press the Enter key.

Note: The modem does not respond after you enter AT&Y0. The command is not echoed on the screen.

14 Return to step 2 and try to establish a modem connection again.

Getting ERA values for CM userIDs

Use the following procedure to display the ERA values for CM userIDs.

The show_cm_userid command displays an ERA value for CM userIDs. The information generated assists when the administrator resets the ERA values for CM userIDs.

Getting ERA values for CM userIDs

At the client workstation

1 Log into the client workstation.

2 Log into DCE using the administrator userID by typing

`dce_login <DCE_admin_user>`

and pressing the Enter key.

where

DCE_admin_user
is the administrator userID

3 Enter your DCE password, and press the Enter key.

4 Access the bin directory by typing

`cd /sdm/bin`

and pressing the Enter key.

5 Get the ERA value for the CM userID by typing

`./show_cm_userid <principal_name>`

and pressing the Enter key.

where

principal_name
is the CM userID for the CM ERA values you wish to obtain

6 You have completed this procedure.

Getting the ERA value for CS 2000 Core Manager userID

This procedure provides instructions on how to reset the ERA value for the userID.

Getting the ERA value for the userID

At the client workstation

1 Log into the client workstation.

2 Log into DCE using the administrator userID by typing

`dce_login <DCE_admin_user>`

and pressing the Enter key.

where

DCE_admin_user
is the administrator userID

3 Enter your DCE password, and press the Enter key.

4 Change to the bin directory by typing

`cd /sdm/bin`

and pressing the Enter key.

5 Get the ERA value for the userID and password by typing

`./show_sdm_userid <principal_name>`

and pressing the Enter key.

where

principal_name
is the userID for the ERA value you wish to obtain.

6 You have completed this procedure.

Increasing the size of a logical volume

Application

DANGER
Increasing the size of a logical volume may limit future software upgrade capability.
CS 2000 Core Manager logical volumes are pre-engineered to sizes that are adequate for Nortel Networks customers. Do not increase the size of a logical volume unless absolutely necessary. If you need to change the size of a logical volume, do so only with the assistance of Nortel Networks Technical Assistance and Support. Failure to follow this warning may jeopardize future software upgrade capability.

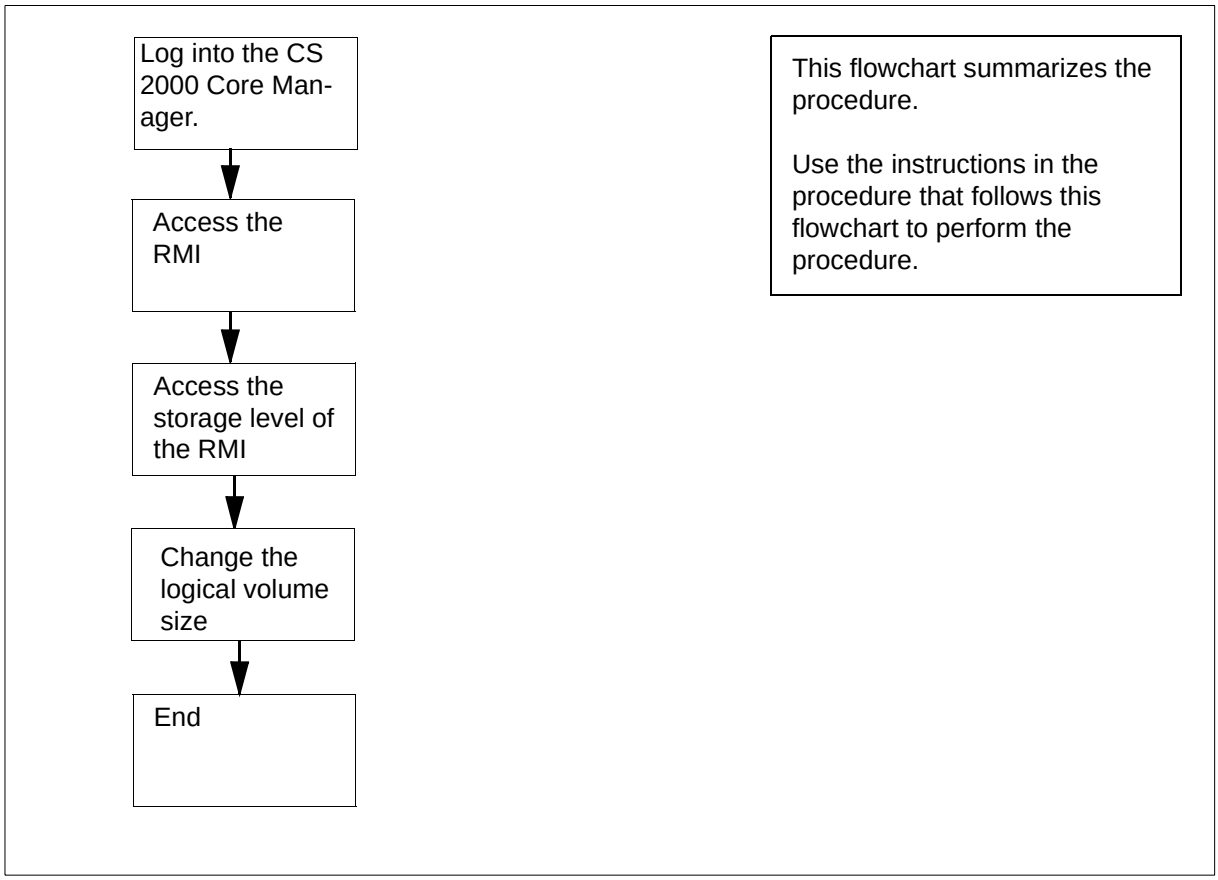
ATTENTION
This procedure must be performed by a trained Advanced Interactive Executive (AIX) system administrator who has root user privileges to access the CS 2000 Core Manager.

Use this procedure to allocate more disk space to a logical volume.

Action

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

Summary of increasing the size of a logical volume



Increasing the size of a logical volume

At the local VT100 console

1 Log into the CS 2000 Core Manager as the root user.

2 Access the top menu level of the remote maintenance interface (RMI) by typing

```
# sdmmtc
```

and pressing the Enter key.

3 Access the system (Sys) menu level of the RMI by typing

```
> sys
```

and pressing the Enter key.

4 Access the storage menu level of the RMI by typing

```
> storage
```

and pressing the Enter key.

Example response:

```
Volume Group      Status      Free (MB)
rootvg            mirrored    1932
datavg            mirrored    7760

Logical Volume    Location     Size (MB) %
full/threshold 1 /         rootvg       88
11/ 80
2 /usr           rootvg      600          28/ 90
3 /var           rootvg      200           7/ 70
4 /tmp           rootvg      24            5/ 90
5 /home          rootvg      304          11/ 90
6 /sdm           rootvg      504          23/ 90
7 /data            datavg       208
   6/ 80
                  Logical volumes showing: 1 to
7 of 7
```

Note: The example response only shows part of the information displayed at the storage menu level of the RMI.

5 Determine if there is un-allocated disk space that can be used to increase a logical volume.

If there is	Do
enough disk space	step 6
not enough disk space	step 8

6 Identify the logical volume whose size you want to increase. Note the volume name of the logical volume on the left of the System menu of the RMI.

7

ATTENTION

A logical volume on the CS 2000 Core Manager must never reach 100% full. System behavior cannot be predicted when a logical volume reaches 100% full. If the occupancy level of the specified logical volume has exceeded its alarm threshold, contact your system administrator to assess the current condition of the logical volume.

Change the size of the logical volume by typing

> change lv /<xxx> <Mbyt>

and pressing the Enter key.

where

xxx
is the name of the logical volume

Mbyte
is the size in Mbytes to be added to the logical volume. The size must be less than the amount of un-allocated disk space.

Example input:

> change lv /home 48

Example response:

```
Expanding Volume /home
Expanding Volume /home - Command complete
```

Note: The CS 2000 Core Manager may round the new size to the nearest 8-, or 16-Mbyte increment. For a 4-Gbyte disk, add 8- or 16-Mbyte multiples. When the logical volume is created, the operating system determines the multiple that has to be used.

8 You have completed this procedure.

Managing ETA extended registry attributes

ATA and ETA client principal account information is stored on the DCE security server and managed by the DCE admin user. Users can change the CM password that belongs to their principal account. You can access one MAP/CI session with each CM userID and password. To bypass this limitation, an ATA or ETA client user can access a pool of CM user accounts (userIDs and passwords) to establish multiple and simultaneous MAP/CI sessions.

Depending on the user profile, an ATA or ETA client user may have one CS 2000 Core Manager userID assigned to a principal account. The CS 2000 Core Manager userID is used to access one or more CS 2000 Core Manager sessions. ATA and ETA clients may share CS 2000 Core Manager user accounts with each other because the CS 2000 Core Manager has a limited and restricted list of user accounts mainly root and maint.

The CS 2000 Core Manager userID, CM userID and CM password information are stored in the extended registry attributes (ERA) of the DCE principal. ERA is administered by the DCE administrator user.

Removing ERA values for CM userIDs and passwords

The remove_cm_userid command removes ERA values for CM userIDs and passwords.

Use the following procedure to remove ERA values for CM userIDs and passwords.

Removing ERA values for CM userIDs and passwords

At the client workstation

1 Log into the client workstation.

2 Log into DCE using the administrator userID by typing

`dce_login <DCE_admin_user>`

and pressing the Enter key.

where

DCE_admin_user
is the administrator userID

3 Enter your DCE password, and press the Enter key.

4 Access the bin directory by typing

`cd /sdm/bin`

and pressing the Enter key.

5 Remove the ERA value for the CM userID and password by typing

`./remove_cm_userid <principal_name>`

and pressing the Enter key.

where

principal_name
is the CM userID for the ERA value you are removing

6 You have completed this procedure.

Removing DCE port restrictions

Application

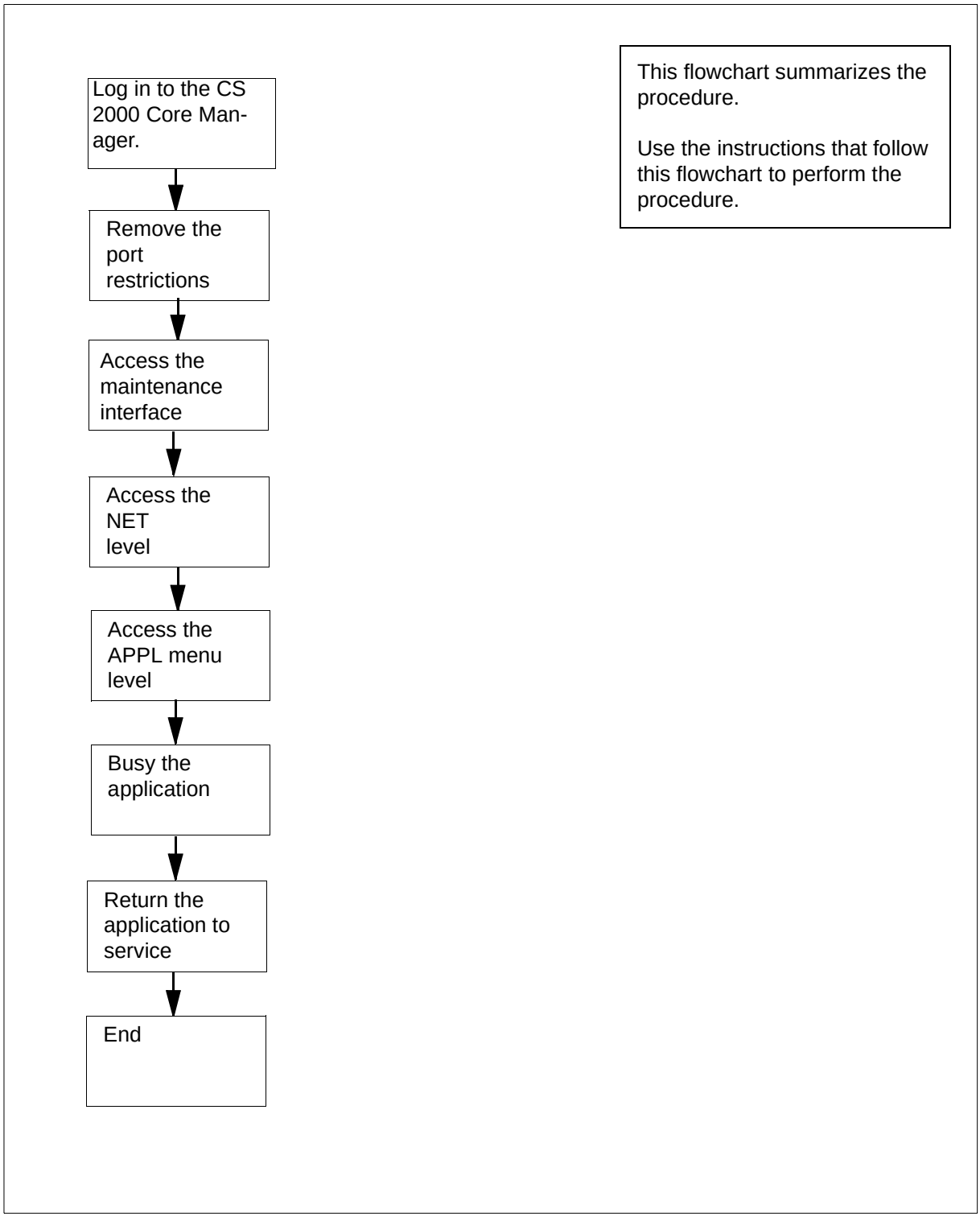
ATTENTION
This procedure must be performed by a trained Distributed Computing Environment (DCE) system administrator who knows DCE administration procedures.

Use the following procedure to return the CS 2000 Core Manager to the system default values. DCE ports will be randomly assigned when you complete this procedure. You must have root user privileges to perform this procedure.

Action

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

Summary of removing DCE port restrictions



Removing DCE port restrictions

At the client workstation

1 Log in to the CS 2000 Core Manager as the root user

2 Restrict the ports to a CS 2000 Core Manager-defined range by typing

```
# restrict_dce_ports unrestricted
```

and pressing the Enter key.

Response:

```
DCE servers port range restrictions have been
removed.
```

3 Access the maintenance interface by typing

```
# sdmmtc
```

and pressing the Enter key.

4 Access the NET level by typing

```
> net
```

and pressing the Enter key.

5 Wait for DCE to go to InSv. This may take several minutes.

Response:

```
DCE State:  .
```

6 Access the application (appl) level by typing

```
> appl
```

and pressing the Enter key.

Example response:

```
#
Application                              State
1 Table Access Service                     .
2 OM Access Service                        .
3 Log Delivery Service                     .
4 Secure File Transfer                     .
5 Enhanced Terminal Access                 .
6 Exception Reporting                      .
```

7 Determine the key number for the application (shown under the header “#”).

8 Manually busy the application software by typing

> bsy <*n*>

and pressing the Enter key.

where

n
is the number next to the application you want to busy

Response:

```
The application is in service.
This command will cause a service interruption.
Do you wish to proceed?
Please confirm (“YES”, “Y”, “NO”, or “N”):
```

Note: Busying the application as shown performs an orderly shutdown and can take up to 2 min.

9 Confirm the Busy command by typing

> y

and pressing the Enter key.

10 After you confirm the Bsy command, the following is displayed:

Response:

```
Application Bsy - Command initiated.
Please wait...
```

When the Bsy command is finished, the “Please wait...” message and the command confirmation disappear. The word “initiated” also changes to “submitted”.

Response:

```
Application Bsy - Command submitted.
```

11 Return the application to service by typing

`> rts <n>`

and pressing the Enter key.

where

n
is the number next to the application you previously busied

Response:

```
Application RTS - Command initiated.
Please wait...
```

When the RTS command is finished, the “Please wait...” message and the command confirmation disappear. The word “initiated” also changes to “submitted”.

Response:

```
Application RTS - Command submitted.
```

12 You have completed this procedure.

Removing the ERA value for the userID

Use the following procedure to remove the ERA value for the userID.

Removing the ERA value for the userID

At the client workstation

1 Log into the client workstation.

2 Log into DCE using the administrator userID by typing

dce_login <*DCE_admin_user*>

and pressing the Enter key.

where

DCE_admin_user
is the administrator userID

3 Enter your DCE password, and press the Enter key.

4 Access the bin directory by typing

cd /sdm/bin

and pressing the Enter key.

5 Remove the ERA value for the userID by typing

./remove_sdm_userid <*principal_name*>

and pressing the Enter key.

where

principal_name
is the userID for the ERA value you are removing

6 You have completed this procedure.

Restricting DCE ports to a predefined range

Application

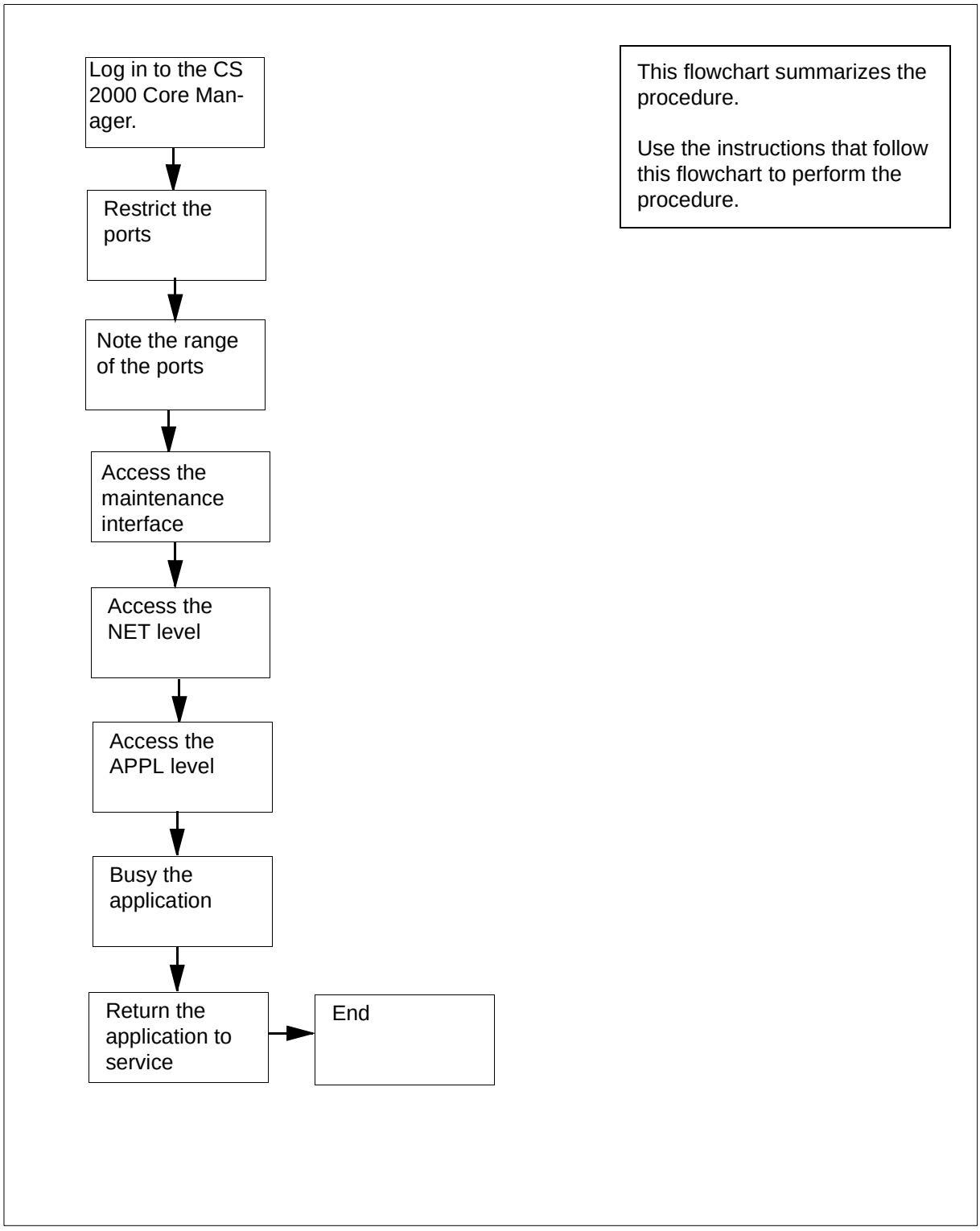
ATTENTION
This procedure must be performed by a trained Distributed Computing Environment (DCE) system administrator who knows DCE administration procedures.

Use the following procedure to restrict the ports to a range that is predefined by the CS 2000 Core Manager software, and a range that will coexist with other CS 2000 Core Manager applications. You must have root user privileges to perform this procedure.

Action

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

Summary of restricting DCE ports to a predefined range



Restricting DCE ports to a predefined range

At the client workstation

1 Log in to the CS 2000 Core Manager as the root user.

2 Restrict the ports to an CS 2000 Core Manager-defined range by typing

```
# restrict_dce_ports system_defined
```

and pressing the Enter key.

Response:

```
The following port ranges have been configured
   TCP: 4500-4540    UDP: 4500-4540
Killing and restarting SDM's DCE daemons for the
change to take effect...
Stopping DCE daemons:
killing dced

Please run sdmmtce tool:
under the Mtc/LAN level: wait for DCE state to
change to InSv.
under the MTC/Appl level: BSY and then RTS any
application that uses DCE.
```

3 Note the range of ports that are printed by the script. Use these values for the firewall configuration.

4 Access the maintenance interface by typing

```
# sdmmtc
```

and pressing the Enter key.

5 Access the NET menu level by typing

```
> net
```

and pressing the Enter key.

6 Wait for DCE to go to InSv. This may take several minutes.

Response:

```
DCE State:    .
```

7 Access the application (Appl) level by typing

> appl

and pressing the Enter key.

Example response:

```
# Application                              State
1 Table Access Service                       .
2 OM Access Service                          .
3 Log Delivery Service                       .
4 Secure File Transfer                       .
5 Enhanced Terminal Access                   .
6 Exception Reporting                        .
```

8 Determine the key number for the application (shown under the header "#").

9 Busy the application software by typing

> bsy <*n*>

and pressing the Enter key.

where

n
is the number next to the application you want to busy

Response:

```
The application is in service.
This command will cause a service interruption.
Do you wish to proceed?
Please confirm ("YES", "Y", "NO", or "N"):
```

Note: Busying the application as shown performs an orderly shutdown and can take up to 2 min.

10 Confirm the Busy command by typing

> y

and pressing the Enter key.

11 After you confirm the Bsy command, the following is displayed:

Response:

```
Application Bsy- Command initiated.
Please wait...
```

When the Bsy command is finished, the “Please wait...” message and the command confirmation disappear. The word “initiated” also changes to “submitted”.

Response:

```
Application Bsy - Command submitted.
```

12 Return the application to service by typing

`> rts <n>`

and pressing the Enter key.

where

n
is the number next to the application you previously busied

Response:

```
Application RTS - Command initiated.
Please wait...
```

When the RTS command is finished, the “Please wait...” message and the command confirmation disappear. The word “initiated” also changes to “submitted”.

Response:

```
Application RTS - Command submitted.
```

13 You have completed this procedure.

Restricting DCE ports to a specific range

Application

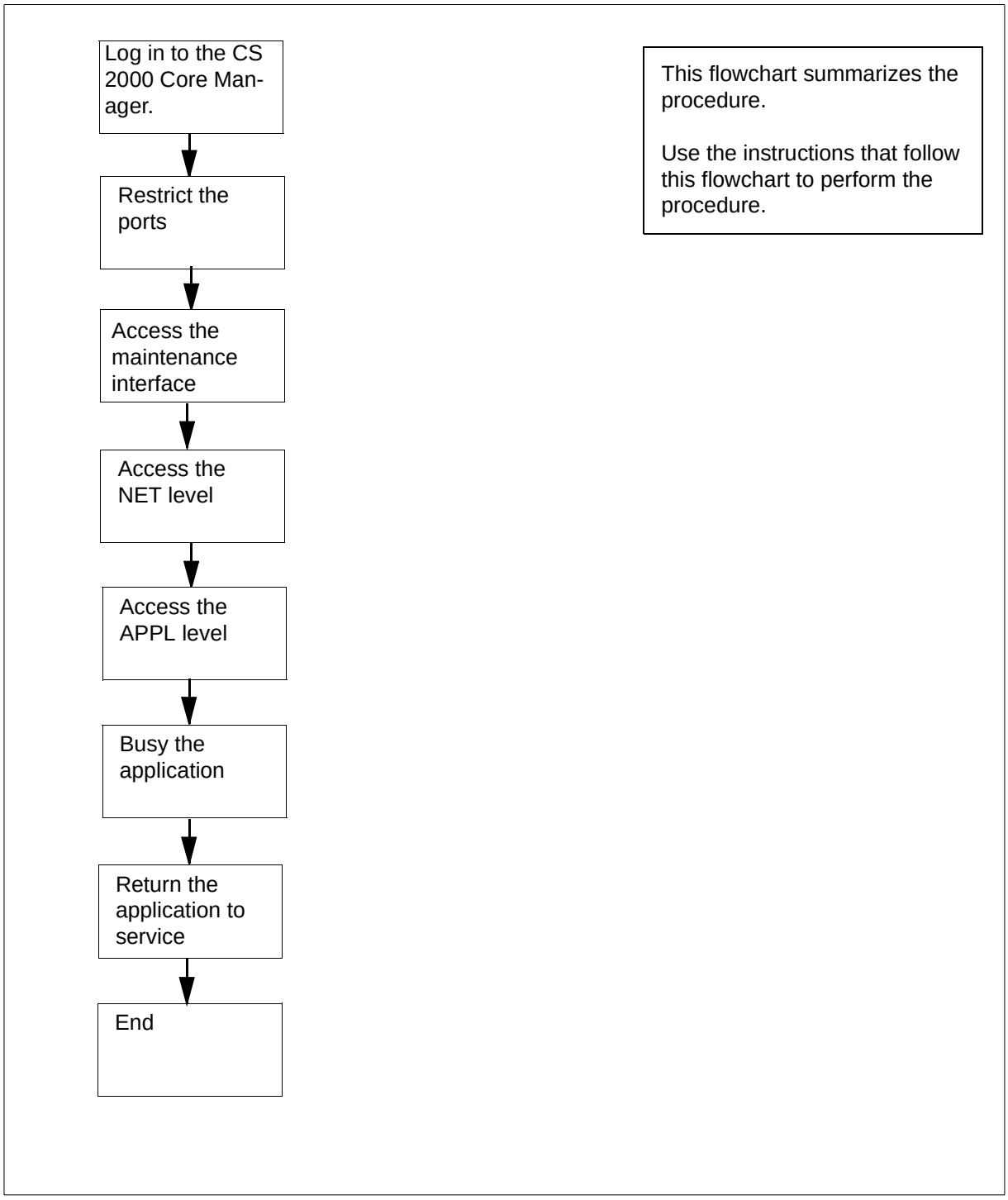
ATTENTION
This procedure must be performed by a trained Distributed Computing Environment (DCE) system administrator who knows DCE administration procedures.

Use the following procedure to restrict the ports to a specific range. You must have root user privileges to perform this procedure.

Action

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

Summary of restricting DCE ports to a specific range



Restricting DCE ports to specific range

At the client workstation

1 Log in to the CS 2000 Core Manager as the root user.

2 Restrict the ports to an CS 2000 Core Manager-defined range by typing

`# restrict_dce_ports tcp <a>:<b> udp <c>:<d>`

and pressing the Enter key.

where

a
is the start of the range for TCP ports (must be greater than 1024

b
is the end of the range for TCP ports (must be less than 32,000)

c
is the start of the range for universal datagram protocol (UDP) ports (must be greater than 1024)

d
is the end of the range for UDP ports (must be less than 32,000)

Example response:

```
The following port ranges have been configured
      TCP: 3000-3050        UDP: 3000-3050
```

3 Access the maintenance interface by typing

`# sdmmtc`

and pressing the Enter key.

4 Access the NET level by typing

`> net`

and pressing the Enter key.

5 Wait for DCE to go to InSv. This may take several minutes.

Response:

```
DCE State:     .
```

6 Access the application (APPL) level by typing

> appl

and pressing the Enter key.

Example response:

```
# Application                              State
1 Table Access Service                       .
2 OM Access Service                          .
3 Log Delivery Service                       .
4 Secure File Transfer                       .
5 Enhanced Terminal Access                   .
6 Exception Reporting                          .
```

7 Determine the key number for the application (shown under the header "#").

8 Busy the application software by typing

> bsy <*n*>

and pressing the Enter key.

where

n
is the number next to the application you want to busy

Response:

```
The application is in service.
This command will cause a service interruption.
Do you wish to proceed?
Please confirm ("YES", "Y", "NO", or "N"):
```

Note: Busying the application as shown performs an orderly shutdown and can take up to 2 min.

9 Confirm the Busy command by typing

> y

and pressing the Enter key.

10 After you confirm the Bsy command, the following is displayed:

Response:

```
Application Bsy - Command initiated.
Please wait...
```

When the Bsy command is finished, the “Please wait...” message and the command confirmation disappear. The word “initiated” also changes to “submitted”.

Response:

```
Application Bsy - Command submitted.
```

11 Return the application to service by typing

`> rts <n>`

and pressing the Enter key.

where

n
is the number next to the application you previously busied

Response:

```
Application RTS - Command initiated.
Please wait...
```

When the RTS command is finished, the “Please wait...” message and the command confirmation disappear. The word “initiated” also changes to “submitted”.

Response:

```
Application RTS - Command submitted.
```

12 You have completed this procedure.

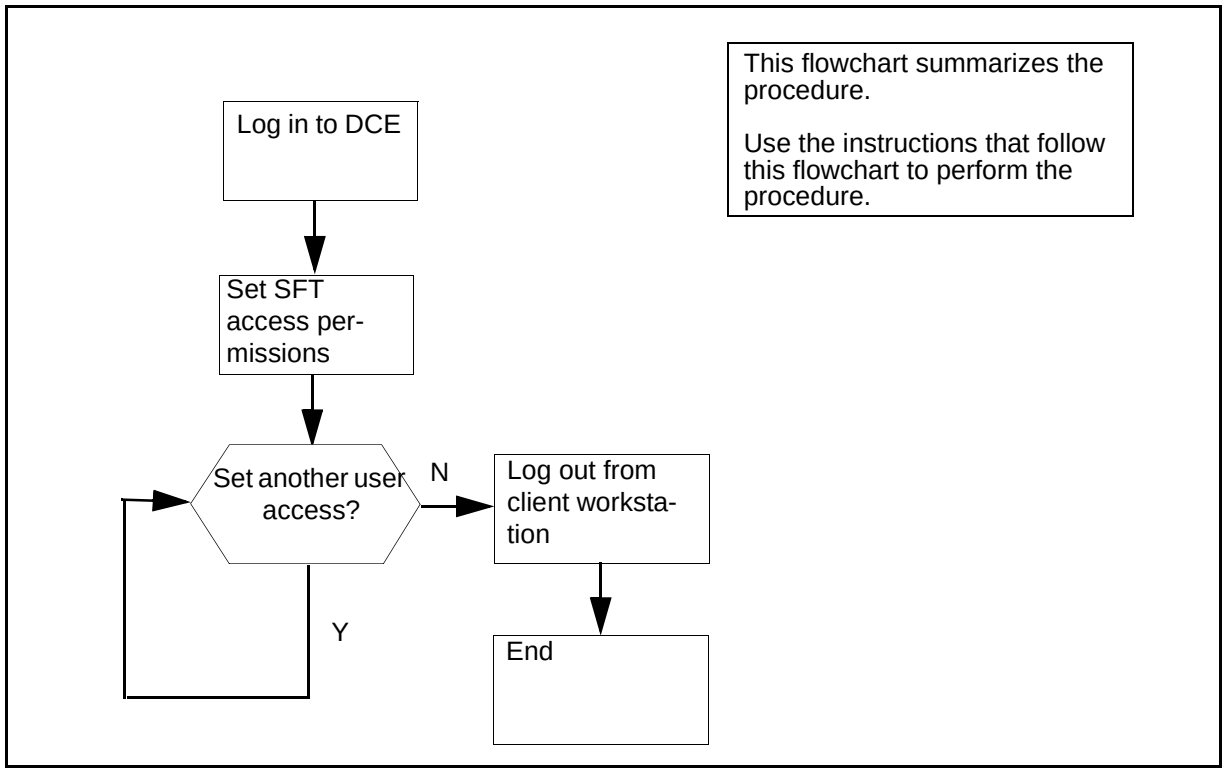
Setting SFT access permissions

Use the following procedure to set the SFT access permissions for an SFT client.

The following flowchart summarizes the procedure. To complete the procedure, perform the procedures that follow the flowchart.

Note: The default permission is “none”. If you do not perform this procedure, the user will not have access to SFT

Summary of setting the SFT access permission



Setting the SFT access permissions

At a UNIX prompt on the client workstation:

1 Log in to DCE as the DCE administrator by typing

`# dce_login <administrator_name>`

and pressing the Enter key.

where

administrator_name
is the userID for the administrator account that you are using.

2 Enter the administrator password, and press the Enter key.

3 Access the /sdm/bin directory by typing

`# cd /sdm/bin`

4 Set the SFT client access permissions for the user by typing

`# ./set_sft_access <DCE_principal> <SFT_permission>`

and pressing the Enter key.

where

DCE_principal
is the DCE userID whose access permissions you are changing.

SFT_permission
is the access permission level for the user. Values are as follows:

- none (access is not permitted to the SFT services - default value)
- sdm_only (access is permitted to the CS 2000 Core Manager
- sdm_cm (access is permitted to both the CS 2000 Core Manager and the CM

5 Repeat step 4 if you want to set SFT access for another user.

6 Log out from the client workstation by typing

`# exit`

and pressing the Enter key.

7 You have completed this procedure.

Starting an FTP client

The following procedure describes how to start an FTP client.

Nortel Networks recommends that you use the SFT client. FTP userIDs and passwords are not encrypted when they are passed across the network. Standard FTP cannot determine which users are allowed to transfer files to and from the CM.

CM FTP server

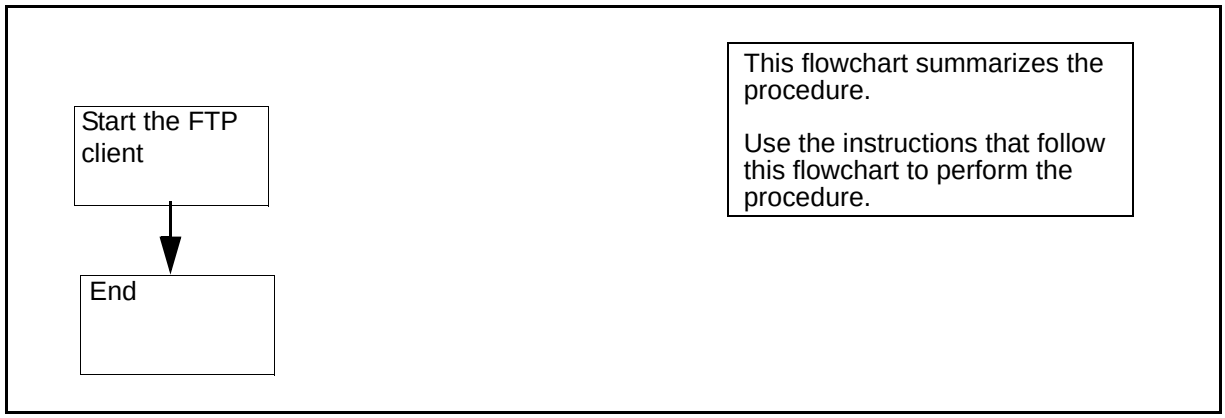
SFT clients and FTP clients can both access the CM FTP server by typing SITE CM. You can use standard FTP commands with some exceptions.

The following describes limits to standard FTP commands when accessing the CM FTP server.

- The user command is intercepted and disallowed by the SFT server. A user does not have to log in manually.
- The mkdir and rmdir commands are not supported by the CM FTP server. The CM file system only contains volumes. It does not support directory hierarchies within the volume.
- Files transferred to SFDEV are owned by the user $$SYS$$.
- SFT performs a clean-up routine after the SFT application is returned to service. If you attempt to use the SITE CM command immediately after the RTS command is issued, you may experience a delay of about 20 seconds before access to the CM is given.
- File names and volume names are case sensitive. Volume names are always in uppercase, for example, S01DVOL1. File names are usually in uppercase.

To complete the procedure for starting an FTP client, perform the procedure that follows the flowchart.

Summary of starting an FTP client



Starting an FTP client

At a UNIX prompt:

1 Start the FTP client workstation by typing

`> ftp <address>`

and pressing the Enter key.

where

address
is the IP address, or the DNS address of the FTP server.

Note: The location of the FTP client varies.

2 You have completed this procedure.

Note: For additional instructions on FTP client usage, refer to the documentation of the client application. For instructions on using CM FTP, refer to the section CM FTP server.

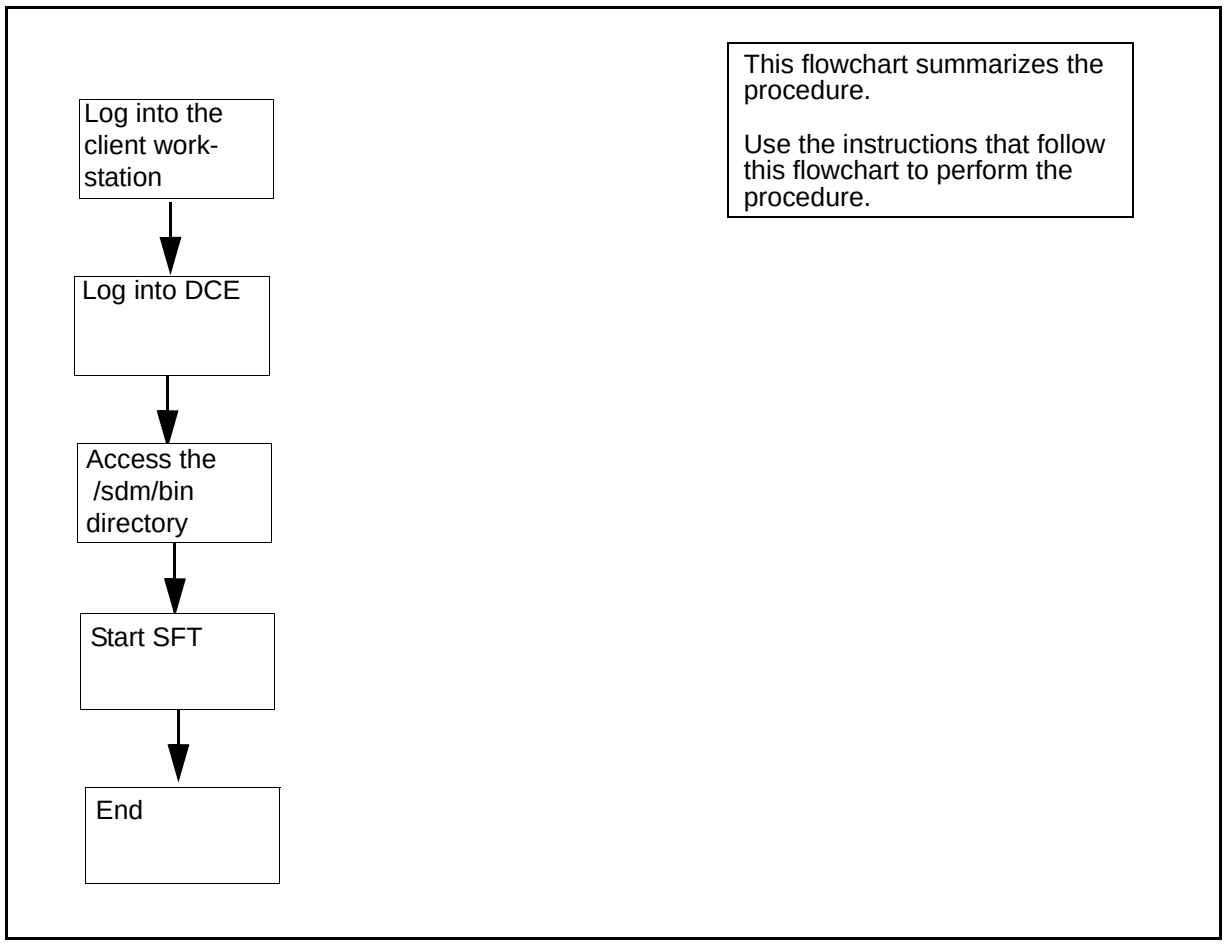
Starting an SFT session

The following procedure describes how to start an SFT session in secure access. It also describes how to enable the SFT client to access either the CS 2000 Core Manager, or the computing module (CM) for the purpose of doing file transfers. You must have a DCE account, and password to use SFT. If you do not have a DCE account, your DCE administrator can create one for you.

Note 1: If you are using anonymous or normal FTP access, refer to the procedure, Starting an FTP client in the Security and Administration section.

Note 2: Ensure you have correctly defined the DCE principal names.

Summary of starting an SFT session



Starting an SFT session

At the client workstation:

1 Log into the SFT client workstation.

2 Log into DCE by typing

`> dce_login`

and pressing the Enter key.

Response:

```
Enter Principal Name:
```

3 Type your DCE user ID, and press the Enter key.

Response:

```
Enter Password:
```

4 Type your DCE password, and press the Enter key.

5 Change to the bin directory by typing

`> cd /sdm/bin`

and pressing the Enter key.

6 Use the following table to determine your next step.

If you	Do
know the value for the CM CLLI	step 7
do not know the value for the CM CLLI	step 8

7 Proceed as follows:

a Start the SFT application by typing

`> ./sft <clli>`

and pressing the Enter key.

where

clli
is the CM CLLI, for example FCC11

Example response

```
220 FCC11 SFTPD Server (Version 9.0.21.0 Jan
27 1998) ready.
```

b Go to step 9.

8 Proceed as follows:

a List the CM CLLIs for all CS 2000 Core Manager nodes in the same DCE cell as your SFT client workstation by typing

```
> ./sft clist
```

and pressing the Enter key.

Example response

```
FCC11 ottwaonye6a
```

b Start the SFT application by typing

```
sft> open <clli>
```

and pressing the Enter key.

where

clli
is the CM CLLI, for example FCC11

Example response

```
220 FCC11 SFTPD Server (Version 9.0.21.0 Jan
27 1998) ready.
```

9 Perform substep a or b according to whether you want to transfer files to or from the CM, or to or from the CS 2000 Core Manager.

a Transfer files to or from the CM by typing

```
sft> site cm
```

and pressing the Enter key.

b Transfer files to or from the CS 2000 Core Manager by typing

```
sft> site sdm
```

and pressing the Enter key.

Note: You can repeat these substeps as required. You can toggle between the CM and CS 2000 Core Manager at any time.

10 You have completed this procedure.

Transferring and retrieving files using SFT

The following sections describe the procedures to transfer and retrieve files using SFT:

- Transferring a file to a CS 2000 Core Manager directory
- Retrieving a file from a CS 2000 Core Manager directory
- Transferring a CM file to a CS 2000 volume
- Retrieving a CM file from a CS 2000 volume
- Retrieving an active DIRP file
- Discontinuing a file transfer

The following procedures are referenced in this procedure. Ensure you have access to these procedures if required.

- Starting an SFT session in the Security and Administration section.
- Starting an FTP client in the Security and Administration section.

Transferring a file to a CS 2000 Core Manager directory

Use this procedure to transfer a file from the client workstation to a CS 2000 Core Manager directory. The file can be in either binary or ascii format. You must know the format of the file to complete this procedure.

To transfer a file from the client workstation to a CS 2000 Core Manager directory, the system looks at the file extension and sets the correct transfer type. The system knows the following file extensions:

- .patch
- .xref
- .bin(n)

  where

  n
  is the logical record length to transfer a file to the Communication Server 2000 for a binary file type.
- .txt(n)

  where

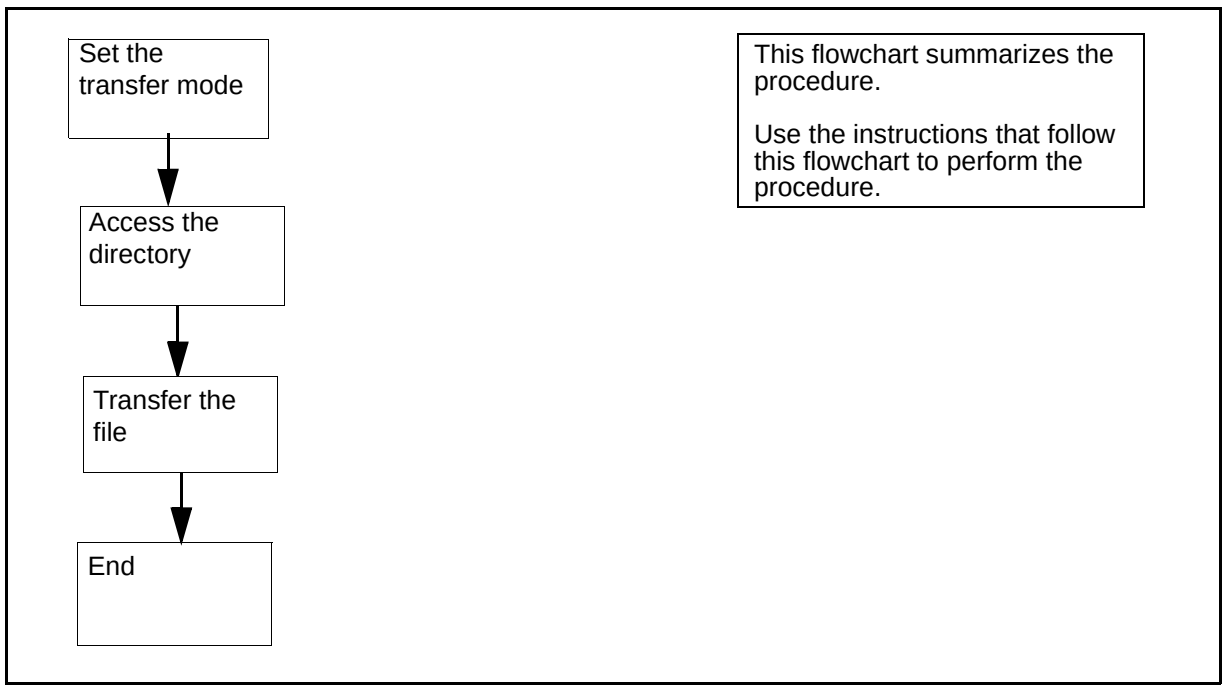
  n
  is the logical record length to transfer a file to the Communication Server 2000 for an ASCII file type.

Note: If you are transferring files to or from the Communication Server 2000, the system knows the same file extensions as above and sets the correct logical record length. If the system does not know the transfer type, the transfer type is not changed and remains as the last specified transfer type. In this instance, the warning message Unrecognized File Type. Using Current Transfer Type. is displayed as the first sentence of the response.

This procedure assumes you have already started an SFT session in DCE mode including a “site sdm” command. If you have not done so, refer to procedures Starting an SFT session or Starting an FTP client in the Security and Administration section. This procedure also assumes that you have set your current local working directory to be the directory containing the file.

To complete the procedure for transferring and retrieving files using SFT, perform the procedure that follows the flowchart.

Summary of transferring a file to a CS 2000 Core Manager directory



Transferring a file to a CS 2000 Core Manager directory

At the SFT prompt:

1 Set the transfer mode by typing

`sft> <transfer_mode>`

and pressing the Enter key.

where

transfer_mode
is either binary or ascii.

2 Access the CS 2000 Core Manager directory by typing

`sft> cd <directory_name>`

and pressing the Enter key.

where

directory_name
is the name of the CS 2000 Core Manager directory.

3 Transfer the file to the CS 2000 Core Manager directory by typing

`sft> put <file_name>`

and pressing the Enter key.

where

file_name
is the name of the file.

4 You have completed this procedure.

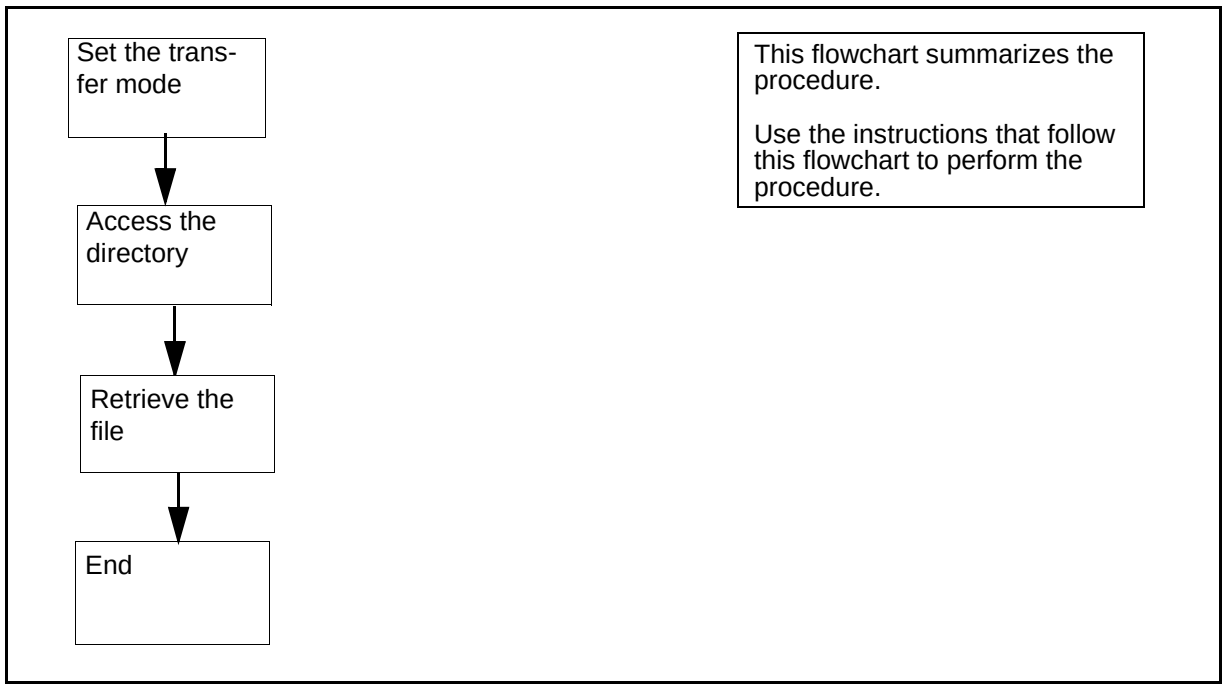
Retrieving a file from a CS 2000 Core Manager directory

Use this procedure to retrieve a file from a CS 2000 Core Manager directory to the client workstation. The file can be in either binary or ASCII format. You must know the format of the file to complete this procedure.

This procedure assumes you have already started an SFT session in DCE mode, including a site cm command. If you have not done so, refer to the procedures, Starting an SFT session, or Starting an FTP client in the Security and Administration section. This procedure also assumes that you have set your current local working directory to be the directory that is to receive the file.

To complete the procedure for retrieving a file from the CS 2000 Core Manager directory, perform the step-action procedure that follows the flowchart.

Summary of retrieving a file from a CS 2000 Core Manager directory



Retrieving a file from a CS 2000 Core Manager directory

At an SFT prompt:

1 Set the transfer mode by typing

`sft> <transfer_mode>`

and pressing the Enter key.

where

transfer_mode
is either binary or ascii.

2 Access the CS 2000 Core Manager directory by typing

`sft> cd <directory_name>`

and pressing the Enter key.

where:

directory_name
is the name of the CS 2000 Core Manager directory.

3 Retrieve the file from the CS 2000 Core Manager directory by typing

`sft> get <file_name>`

and pressing the Enter key.

where:

file_name
is the name of the file.

4 You have completed this procedure.

Transferring a CM file to a CS 2000 volume

Use this procedure to transfer a CM file from the client workstation to a volume group on the Communication Server 2000. The file can be in either binary or ascii format. You must know the format of the file to complete this procedure.

This procedure assumes you have already started an SFT session in DCE mode, including a site cm command. If you have not done so, refer to the procedures Starting an SFT session or Starting an FTP client. This procedure also assumes that you have set your current local working directory to be the directory that is to receive the file.

Record lengths and formats for CM files

To transfer a CM file to a CS 2000 volume, you must know the record length of the file. Use this information in the CM File Formats table below.

The following table provides a sample of formats for selected CM files for reference purposes. It is not a complete list. Formats can vary.

CM File Formats (Sheet 1 of 2)

File	Fixed or variable length record	Transfer mode	Record length
Image files	Fixed	binary	1020
Patches	Fixed	binary	128
SMDR	Fixed	binary	2048
EDRAM	Fixed	binary	44
SOC	Variable	ASCII	

CM File Formats (Sheet 2 of 2)

File	Fixed or variable length record	Transfer mode	Record length
Translations	Variable	ASCII	

Record lengths and formats for peripheral module (PM) files

You must know the record length of the file to transfer a PM file to a CS 2000 volume.

You can determine the record length for a peripheral module (PM) file by its file extension.

The following example shows a typical LCM file format.

LCM file: lcm ##**aa.**bin **nn**

where

is the XPM stream number of the load

aa is the version of the load

nn is the file extension number

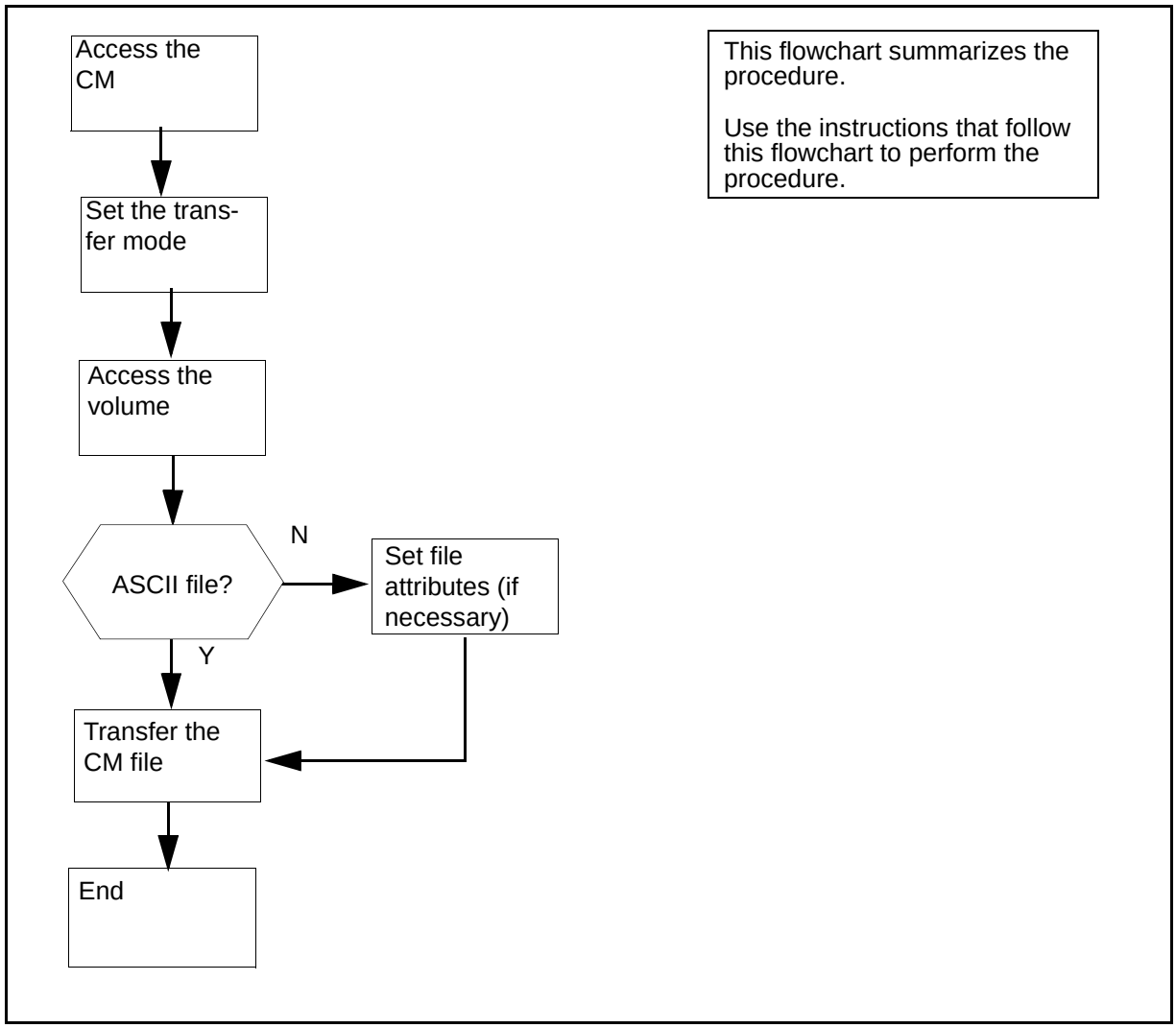
The following table describes some typical PM file extensions.

PM file extensions

File extension	Type of image	Fixed- or variable-length record	Transfer mode	Record length
.bin1024	non-system	fixed-length	binary	1024
.txt55	non-system	variable-length	ASCII	55
.bin1020	system	fixed-length	bnary	1020

To complete the procedure for transferring a CM file to a DMS volume, perform the procedure that follows the flowchart.

Summary of transferring a CM file to a CS 2000 volume



Transferring a CM file to a CS 2000 volume

At an SFT prompt:

1 Go to the CS 2000 volume by typing

`sft> cd /<volume_name>`

and pressing the Enter key.

where

volume_name
is the name of the CS 2000 volume.

Note: Specify CS 2000 volume names in uppercase characters.

2 Set the transfer mode by typing

`sft> <transfer_mode>`

and pressing the Enter key.

where

transfer_mode
is either binary or ascii.

3 Use the following table to determine your next step.

If you want to transfer	Do
an ascii file	step 5
a binary file	step 4

4 Enter the file characteristics or attributes, if necessary.

You must enter the file characteristics if the suffix of the file you need to transfer does not match the pattern ".bin###" (where ### indicates the record length a value between 1 and 32767) or if the file is a patch file. If you do not need to enter the file characteristics or attributes, proceed to step 4.

Otherwise, set the record length of the file by typing

`sft> site lrecl <Record_length>`

and press the Enter key.

where

Record_length
is the record length of the file.

Note: See table CM File Formats for a format list of various CM file types.

5 Transfer the CM to the CS 2000 volume by typing

`sft> put <file_name>`

and pressing the Enter key.

where

file_name
is the name of the CM file.

6 You have completed this procedure.

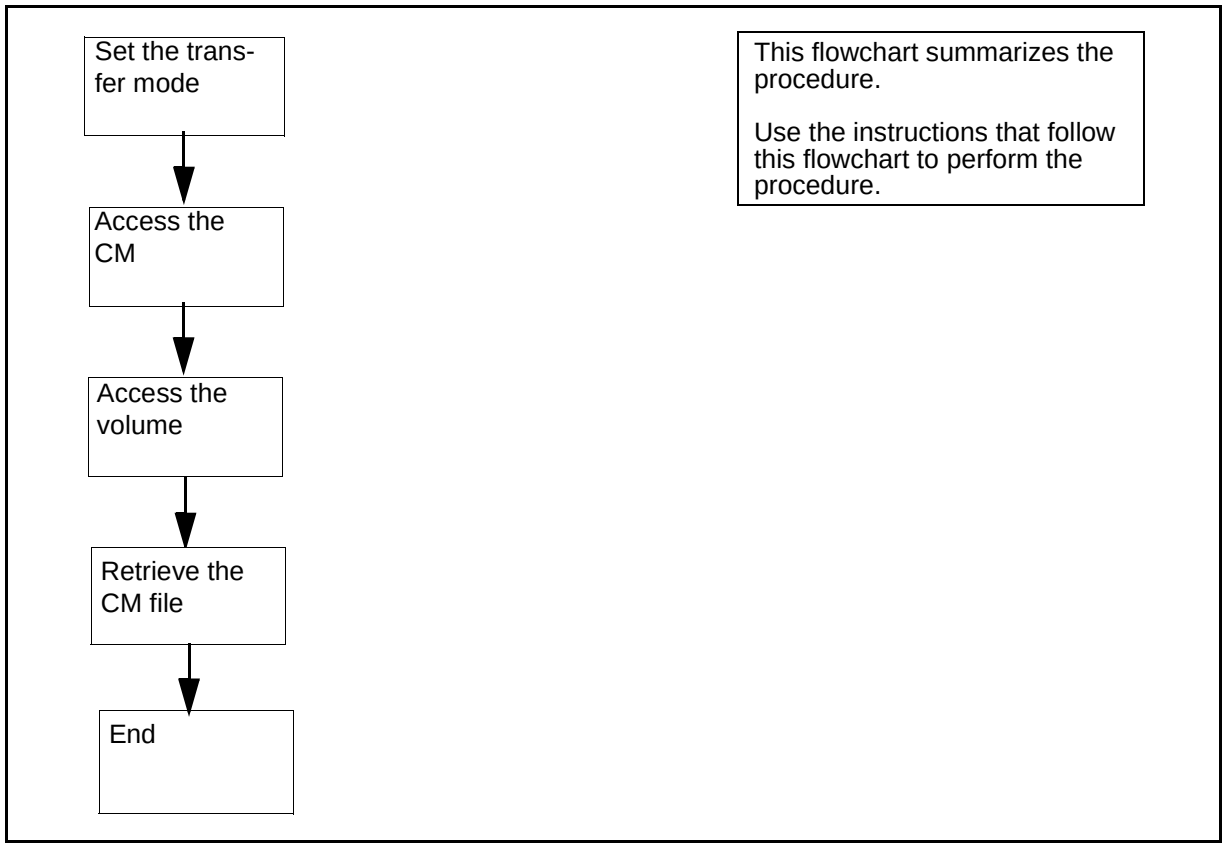
Retrieving a CM file from a CS 2000 volume

Use this procedure to retrieve a CM file from a CS 2000 volume to the client workstation. The file can be in either binary or ASCII format. You must know the format of the file to complete this procedure.

This procedure assumes you have already started an SFT session in DCE mode, including a site cm command. If you have not done so, refer to the procedures, Starting an SFT session or Starting an FTP client. This procedure also assumes that you have set your current local working directory to be the directory that is to receive the file.

To complete the procedure for retrieving a CM file from a CS 2000 volume, perform the procedure that follows the flowchart.

Summary of retrieving a CM file from a CS 2000 volume



Retrieving a CM file from a CS 2000 volume

At an SFT prompt:

1 Set the transfer mode by typing

`sft> <transfer_mode>`

and pressing the Enter key.

where

transfer_mode
is either binary or ascii.

2 Go to the CS 2000 volume by typing

`sft> cd /<volume_name>`

and pressing the Enter key.

where

volume_name
is the name of the CS 2000 volume.

Note: Specify CS 2000 volume names in uppercase characters.

3 Retrieve the CM file from the CS 2000 volume by typing

`sft> get <file_name>`

and pressing the Enter key.

where

file_name
is the name of the CM file.

4 You have completed this procedure.

Retrieving an active DIRP file

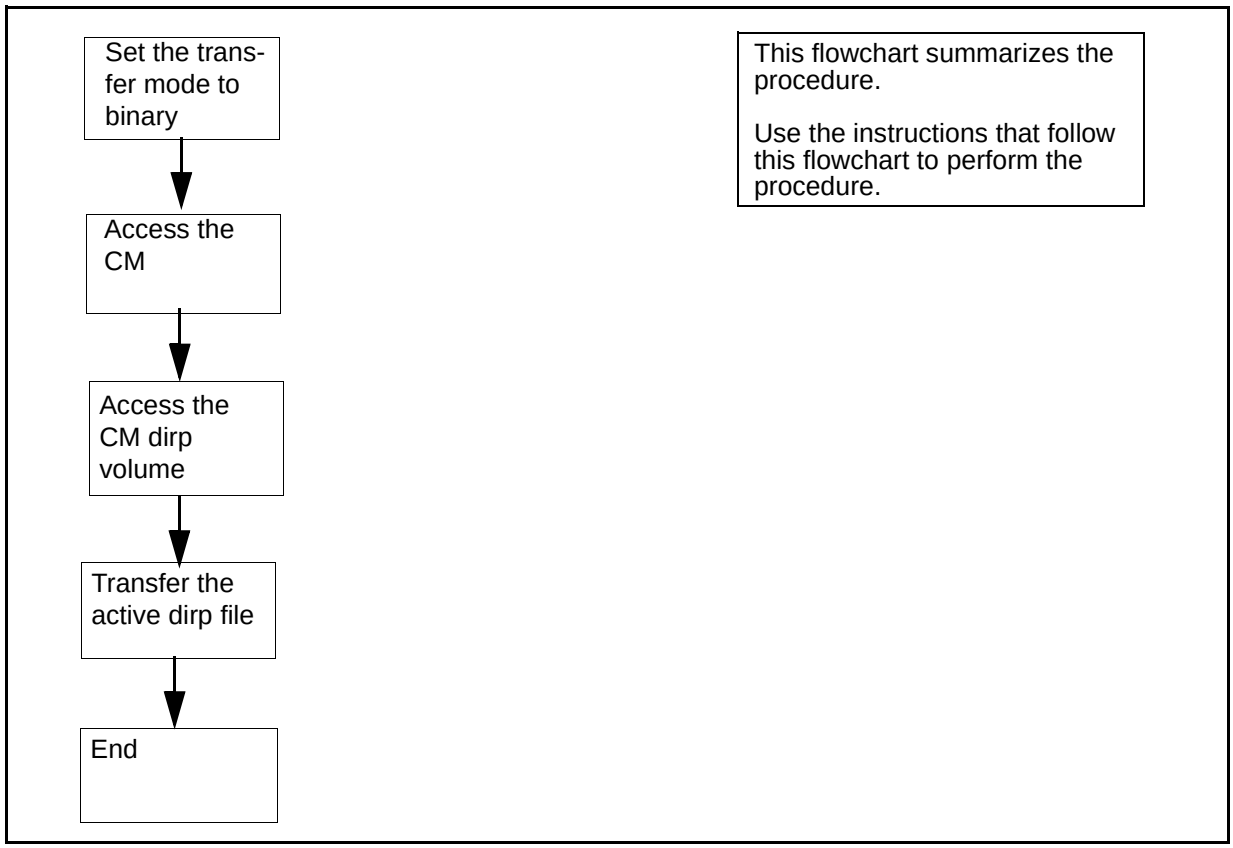
The Device Independent Recording Package (DIRP) is CM software that automatically directs data from the various administrative and maintenance facilities on the Communication Server 2000 to the appropriate recording devices.

Use the following procedure to retrieve an active DIRP file.

This procedure assumes you have already started an SFT session in DCE mode, including a site cm command. If you have not done so, refer to the procedures, Starting an SFT session or Starting an FTP client. This procedure also assumes that you have set your current local working directory to be the directory that is to receive the file.

To complete the procedure for retrieving an active DIRP file, perform the procedure that follows the flowchart.

Summary of retrieving an active DIRP file



Retrieving an active DIRP file

At an SFT prompt

1 Set the transfer mode to binary by typing

```
sft> binary
```

and pressing the Enter key.

2 Access the CM by typing

```
sft> site cm
```

and pressing the Enter key.

3 Set the file characteristics for a DIRP file by typing

sft> site getdirp <*dirp_subsystem_number*>

and pressing the Enter key.

where

dirp_subsystem_number
is the DIRP subsystem number.

Note: For automatic message accounting (AMA), the DIRP subsystem number is 0.

4 Go to the CS 2000 volume group by typing

sft> cd /<*dirp_volume*>

and pressing the Enter key.

where

dirp_volume
is the name of the DIRP volume.

Note: Specify CS 2000 volume names in uppercase characters.

5 Retrieve the DIRP file by typing

sft> get <*active_dirp_file_name*>

and pressing the Enter key.

where

active_dirp_file_name
is the name of the active DIRP file.

6 You have completed this procedure.

Discontinuing a file transfer

Discontinue file transfers by entering the interrupt key sequence (<CTRL> C). Set the interrupt key sequence by using the stty command. When you enter the interrupt key sequence, SFT terminates and closes any open sessions.

Changing the system time zone and daylight savings time parameters

Use this procedure to change the time zone and daylight savings time parameters on the CS 2000 Core Manager.

It is recommended that you perform this procedure at the same time you are performing an upgrade while the CS 2000 Core Manager is already either in split mode or out of service (non-split mode). If you choose to do so, follow the steps under Changing the system time zone and daylight savings time parameters in this procedure.

If you decide to perform this procedure independently of an upgrade, it is recommended that you use the split-mode process as opposed to the non-split mode process, which would take the CS 2000 Core Manager out of service for approximately 20 min.

- To use the split mode process, first follow the steps under Splitting the system and then follow the steps under Changing the system time zone and daylight savings time parameters in this procedure.
- To use the non-split mode process, first follow the steps under Busying the CS 2000 Core Manager and then follow the steps under Changing the system time zone and daylight savings time parameters in this procedure.

Splitting the system

At the VT100 console connected to SP0

1 Log on to the CS 2000 Core Manager as the root user

2 Access the split-mode screen by typing

```
# sdmmtc split
```

and pressing the **Enter** key.

3 Begin the split-mode process by typing

```
> start
```

and pressing the **Enter** key.

4 When prompted, confirm that you want to perform an upgrade by typing

```
> y
```

and pressing the **Enter** key.

The system performs some checks.

5 Use the following table to determine your next step.

If the system	Do
detects errors	go to the appropriate procedure to correct the errors, and perform this procedure again
does not detect errors	step 6

6 When prompted, select the first option on the list, Software upgrade, by typing

```
> 1
```

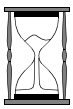
and pressing the Enter key.

7 When prompted, confirm that you want to proceed by typing

```
> y
```

and pressing the **Enter** key.

8 Wait until the system split is 100% complete (minimum of 20 minutes), as indicated by the following message on the SP0 console, before you proceed.



20 min.+

```
Split: [100%] Completed
Configure: [User] Waiting for user input
```

Note: You will not have a connection available to the inactive console until the system is 100% split. Once the system is 100% split, each VT100 console display reports in the upper-right corner which domain it is connected to. For example, SP0 will report `Active Domain 0`.

At the VT100 console SP1 (inactive)

9 Wait until the FX-Bug prompt appears on the SP1 (inactive) console before you proceed to the next step.

10 At the FX-Bug prompt, manually reboot domain 1 by typing

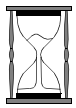
```
FX-Bug> pboot 6 0
```

and pressing the **Enter** key.

11 Log into the inactive side (SP1) of the CS 2000 Core Manager as the root user.

The system automatically displays the split-mode screen.

12



7 min.

CAUTION
Possible loss of service
If the CS 2000 Core Manager begins the system stabilization process, do not attempt to perform any activities on the system until stabilization is complete.

Wait until system stabilization is complete (approximately 7 minutes) before proceeding to the next step.

Note: When the stabilization process begins, the system displays a time estimate for its completion.

13 Proceed to Changing the system time zone and daylight savings time parameters in this procedure.

Busying the CS 2000 Core Manager

At the MAP display

1 Access the SDM level of the MAP display by typing

```
> mapci;mtc;appl;sdm
```

and pressing the **Enter** key.

2 Check that the CS 2000 Core Manager is in a fault-free state. If the CS 2000 Core Manager is not in a fault-free state, correct all faults and alarms before continuing this procedure. Refer to the Fault Management section for alarm-clearing procedures. If you have alarms or faults that you cannot clear, stop and contact your next level of support.

3 Busy the CS 2000 Core Manager by typing

```
> bsy
```

and pressing the **Enter** key.

4 Confirm the busy request by typing

```
> y
```

and pressing the **Enter** key.

5 Proceed to Changing the system time zone and daylight savings time parameters in this procedure.

Changing the system time zone and daylight savings time parameters

At the local VT100 console

1 Log in as root user.

2 Enter the Time Zone level by typing

`# sdmmtc tz`

and pressing the Enter key.

Example response:

```
  SDM     CON    512    NET    APPL    SYS     HW    CLLI: SNM0
  ManB     .     . .     .     ManB     .      .     Host: wcary2p3
                 . .                                      Fault Tolerant

TimeZone
 0  Quit
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17 Help
 18 Refresh

Time Zone: Eastern U.S.; Colombia
   EST5EDT (CUT -5)
   Daylight Start: M4.1.0/02:00:00 (Standard)
   End: M10.5.0/02:00:00
   Thu Sep 5, 2002 18:51

  root
 Time 18:51  >
```

3 Change the time zone by typing

`> c`

and pressing the Enter key.

Example response:

```
Time Zone: Daylight Savings?
Does this time zone go on Daylight Savings Time?
Please confirm (“YES”, “Y”, “NO”, or “N”):
```

4 Refer to the following table to determine your next step.

If the time zone	Do
goes into Daylight Savings Time	type **y**, and press the Enter key.
does not go into Daylight Savings Time	type **n**, and press the Enter key.

Example response: Screen 1

```
  SDM      CON    512     NET    APPL    SYS      HW    CLLI: SNM0
  ManB      .     . .      .     ManB     .       .     Host: wcary2p3
                  . .                                       Fault Tolerant

TimeZone
 0  Quit
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17 Help
 18 Refresh

Time Zone: Closest Match
Choose the Time Zone which is the closest match to yours:

1. Bering Straits              (BST11BDT)          (CUT -11)
2. Hawaii;Aleutian Islands     (HST10HDT)          (CUT -10)
3. Alaska                      (AST9ADT)           (CUT -9)
4. Pacific U.S.;Yukon          (PST8PDT)           (CUT -8)
5. Mountain U.S.               (MST7MDT)           (CUT -7)
6. Central U.S.;Honduras       (CST6CDT)           (CUT -6)
7. Eastern U.S.;Colombia       (EST5EDT)           (CUT -5)
8. Central Brazil              (AST4ADT)           (CUT -4)
9. Greenland;East Brazil       (GRNLNDST3GRNLNDDT) (CUT -3)
10 Falkland Islands            (FALKST2FALKDT)     (CUT -2)
11.Azores;Cape Verde           (AZOREST1AZOREDT)   (CUT -1)
12 Coordinated Universal Time  (CUT0GDT)           (CUT)
13.United Kingdom              (GMT0BST)           (CUT)
14.Norway, France              (NFT-1DFT)          (CUT +1)
15.South Africa                (USAST-2USADT)      (CUT +2)
16.Finland                     (WET-2WET)          (CUT +2)
  root
 Time 18:54  >MORE...(52%)
```

5 Press the Space Bar to display the following screen:

Example response: Screen 2

```
  SDM     CON    512    NET    APPL    SYS     HW    CLLI: SNM0
  ManB     .     . .     .     ManB     .      .     Host: wcary2p3
                 . .                                     Fault Tolerant

TimeZone
 0  Quit
 2                 17. Turkey                    (MEST-3MEDT)       (CUT +3)
 3                 18. Saudi Arabia              (SAUST-3SAUDT)     (CUT +3)
 4                 19. Gorki;Central Asia;Oman   (WST-4WDT)         (CUT +4)
 5                 20. Pakistan                  (PAKST-5PAKDT)     (CUT +5)
 6                 21. Tashkent;Central Asia     (TASHST-6TASHDT)   (CUT +6)
 7                 22. Thailand                  (THAIST-7THAIDT)   (CUT +7)
 8                 23. People's Republic of China (BEIST-8BEIDT)    (CUT +8)
 9                 24. Taiwan                    (TAIST-8TAIDT)     (CUT +8)
 10                25. Western Australia         (WAUST-8WAUDT)     (CUT +8)
 11                26  Japan                     (JST-9JSTDT)       (CUT +9)
 12                27. Korea                     (KORST-9KORDT)     (CUT +9)
 13                28  Eastern Australia         (EET-10EEDT)       (CUT +10)
 14                29. Solomon Islands           (MET-11METDT)      (CUT +11)
 15                30. New Zealand               (NZST-12NZDT)      (CUT +12)
 16
 17 Help           Enter a number from 1 to 30 to choose the time zone that
 18 Refresh        most closely matches yours. You will have the opportunity
                   to customize the time zone if necessary: [7]
  root
 Time 18:54  >
```

6 Select a time zone by typing

> <n>

and pressing the Enter key.

where:
<n> is the number of the time zone closest to the one in which you are geographically located.

Example:

The closest time zone to Newfoundland is the one for Greenland; East Brazil, or number 9 in the list of time zones. Therefore, to select the time zone for Newfoundland, type

> 9

and press the Enter key.

Example response:

```
Time Zone: Edit this zone?
Selected Zone: Greenland;East Brazil
     GRNLNDST3GRNLNDDT (CUT -3)
     Daylight Start: M4.1.0/02:00:00 (Standard)
     End: M10.5.0/02:00:00
     Thu Sep 5, 2002 18:57


The above shows the values for the time zone that you
have selected. Proceed to set the time zone using the
current values, or edit them and make changes.

Proceed with these values?
Enter Y to confirm, N to reject, or E to edit:

>
```

7 When prompted, confirm, reject, or edit the values.

If you entered	Do
y to confirm the values	you have completed this procedure
n to reject the values	return to step 3
e to edit the values	step 7

8 The system displays the current value of the time zone description, and prompts you enter another value.

Example response:

```
Time Zone: Description
Selected Zone: Greenland;East Brazil
     GRNLNDST3GRNLNDDT (CUT -3)
     Daylight Start: M4.1.0/02:00:00 (Standard)
     End: M10.5.0/02:00:00
     Thu Sep 5, 2002 19:01

The time zone description should include a few words
such as the name of your city which describes the area
where the time zone is in use.

Enter the description: [Greenland;East Brazil]
>
```

9 Enter the new description for your time zone.

Example:

To enter the value for Newfoundland, you would type

> Newfoundland

and press the Enter key.

Example response:

```
Time Zone: Acronym
Selected Zone: Newfoundland
     GRNLNDST3GRNLNDDT (CUT -3)
     Daylight Start: M4.1.0/02:00:00 (Standard)
     End: M10.5.0/02:00:00
     Thu Sep 5, 2002 19:15

Enter the acronym associated with this time zone. For
example, the time zone acronym for New York is EST,
which is short for Eastern Standard time

Enter the acronym: [GRNLNDST]
>
```

10 Enter an acronym for your time zone.

Example:

To enter an acronym for Newfoundland Standard Time, you would type

> NST

and press the Enter key.

Example response:

```
Time Zone: Offset from CUT
Selected Zone: Newfoundland
     NST3GRNLNDDT (CUT -3)
     Daylight Start: M4.1.0/02:00:00 (Standard)
     End: M10.5.0/02:00:00
     Thu Sep 5, 2002 19:19


The offset from CUT (Coordinated Universal Time) is
the number of hours BEFORE CUT for this time zone. For
example, EST in North America is 5 hours before CUT,
while NFT for France and Norway is -1 hours before
CUT. Specify the time in the form HH[:MM[:SS]] where
HH ranges from -12 to 11. Minutes and seconds are
optional.

Enter the offset from CUT: [3]
>
```

11 Enter the time zone offset from CUT (Coordinated Universal Time).

Example:

To set the time zone offset from CUT for Newfoundland, you would type

> 3:30

and press the Enter key.

Use the following table to determine your next step.

If the time zone	Do
goes into Daylight Savings Time (you entered **y** in step 4)	step 11
does not go into Daylight Savings Time (you entered **n** in step 4)	step 18

12 The system displays the following response.

Example response:

```
Time Zone: Daylight Savings Acronym
Selected Zone: Newfoundland
     NST3:30GRNLNDDT2 (CUT -3:30)
     Daylight Start: M4.1.0/02:00:00 (Standard)
     End: M10.5.0/02:00:00
     Thu Sep 5, 2002 19:21


The daylight savings time acronym is the name
associated with daylight savings for this time zone.
For example, for EST (Eastern Standard Time), the
associated daylight savings acronym is EDT (Eastern
Daylight Time).

Enter the daylight savings acronym: [GRNLNDDT]
>
```

13 Enter the daylight savings acronym for the time zone.

Example:

To set the daylight savings acronym for Newfoundland Daylight Time, you would type

> NDT

and press the Enter key.

Example response:

```
Time Zone: Daylight Savings offset from CUT
Selected Zone: Newfoundland
     NST3:30NDT2 (CUT -3:30)
     Daylight Start: M4.1.0/02:00:00 (Standard)
     End: M10.5.0/02:00:00
     Thu Sep 5, 2002 19:24


The daylight savings offset from CUT (Coordinated
Universal Time) is the number of hours BEFORE CUT for
daylight savings in this time zone. For example, EDT
in North America is 4 hours before CUT, while DFT for
France and Norway is -2 hours before CUT. The daylight
savings offset is normally 1 hour less that (ahead of)
the standard offset. Specify the time in the form
HH[:MM[:SS]] where HH ranges from -12 to 11. Minutes
and seconds are optional.

Enter the daylight savings offset from CUT: [2]
>
```

14 Enter the daylight savings offset from CUT for the time zone.

Example:

To set the daylight savings offset from CUT for Newfoundland, you would type

> 2:30

and press the Enter key.

Example response:

```
Time Zone: Daylight Savings Start Day
Selected Zone: Newfoundland
     NST3:30NDT2 (CUT -3:30)
     Daylight Start: M4.1.0/02:00:00 (Standard)
     End: M10.5.0/02:00:00
     Thu Sep 5, 2002 19:27


The daylight savings start day indicates the day of the
year when daylight savings takes effect. The day can
be specified one of two forms: M<month>.<week>.<day>
or J<julianday> where:
  <month> is the month, a number from 1 to 12
  <week> is the week during that month, an number from
         1 to 5,
  <day> is the day of that week, a number from 0 to 6,
         0 indicating Sunday,
  <julianday> is the day of the year, a number from
         1 to 365, leap days are not counted.

Enter the daylight savings start day: [M4.1.0]
>
```

15 Enter the starting day for daylight savings for your time zone.

Example:

Newfoundland changes on the first Sunday of April, which is the current value in the example. To accept a current value, press the Enter key.

Example response:

```
Time Zone: Daylight Savings Start Time
Selected Zone: Newfoundland
     NST3:30NDT2 (CUT -3:30)
     Daylight Start: M4.1.0/02:00:00 (Standard)
     End: M10.5.0/02:00:00
     Thu Sep 5, 2002 19:30

The daylight savings start time indicates the time on
the daylight saving start day when daylight savings
takes effect. The time is specified in the format
HH[:MM[:SS]] where HH ranges from 00 to 23. Minutes
and seconds are optional.

Enter the daylight savings start time: [02:00:00]
>
```

16 Enter the daylight savings start time for your time zone.

Example:

Newfoundland changes as 02:00:00, which is the value already specified in the example. To accept the current value, press the Enter key.

Example response:

```
Time Zone: Daylight Savings End Day
Selected Zone: Newfoundland
     NST3:30NDT2 (CUT -3:30)
     Daylight Start: M4.1.0/02:00:00 (Standard)
     End: M10.5.0/02:00:00
     Thu Sep 5, 2002 19:33


The daylight savings end day indicates the day of the
year when daylight savings ends. The day can be
specified in one of two forms:
 M<month>.<week>.<day> or J<julianday> where:
  <month> is the month, a number from 1 to 12,
  <week> is the week during that month, a number
         from 1 to 5
  <day> is the day of that week, a number
         from 0 to 6, 0 indicating Sunday
  <julianday> is the day of the year, a number
         from 1 to 365, leap days are not counted.


Enter the daylight savings end day: [M10.5.0]
>
```

17 Enter the daylight savings end day for your time zone.

Example:

Newfoundland changes on the last Sunday in October, which is the current value in the example. To accept the current value, press the Enter key.

Example response:

```
Time Zone: Daylight Savings End Time
Selected Zone: Newfoundland
     NST3:30NDT2 (CUT -3:30)
     Daylight Start: M4.1.0/02:00:00 (Standard)
     End: M10.5.0/02:00:00
     Thu Sep 5, 2002 19:36

The daylight savings end time indicates the time on
the daylight saving end when daylight savings ends.
The time is specified in the format HH:[MM[:SS]]
where HH ranges from 00 to 23. Minutes and seconds
are optional.

Enter the daylight savings end time: [02:00:00]
>
```

18 Enter the daylight savings end time for your time zone.

Example:

Newfoundland changes at 02:00:00, which is the default in the example. To accept the current value, press the Enter key.

Example response:

```
Time Zone: Edit this zone?
Selected Zone: Newfoundland
     NST3:30NDT2 (CUT -3:30)
     Daylight Start: M4.1.0/02:00:00 (Standard)
     End: M10.5.0/02:00:00
     Thu Sep 5, 2002 19:39

The above shows the values for the time zone that you
have selected. Proceed to set the time zone using the
current values, or edit them and make changes.

Proceed with these values?
Enter Y to confirm, N to reject, or E to edit:
>
```

If you want to	Do
confirm the values	enter **y**, and go to step 18
reject the values	enter **n**, and go to step 3
edit the values	enter **e**, and return to step 7

19 The system displays the values for both the current and the commissioned time zones. and a prompt for a system reboot.

Example response:

```
Current Zone: Eastern U.S.: Colombia
     EST5EDT (CUT -5)
     Daylight Start: M4.1.0/02:00:00 (Standard)
              End: M10.5.0/02:00:00
     Thu Sep 5, 2002 19:42

Commissioned Zone: Newfoundland
     NSTE:30NDT (CUT -3:30)
     Daylight Start: M4.1.0/02:00:00 (Standard)
              End:   M10.5.0/02:00:00
     Thu Sep 5, 2002 19:42

Time Zone: Reboot Required
The commissioned time zone will not take effect until
after the system has been rebooted.

Reboot the system now?
Please confirm: ("YES", "Y", "NO", or "N")

>
```

If you want to	Do
reboot now	type y, and press the Enter key
reboot later	type **n**, and press the Enter key

20 You have completed this procedure.