

Configuration management

Purpose

This document provides the Configuration Management strategy and procedures for the CICM 7.0 release. It is one of a set of seven documents in the CICM customer documentation suite, which includes:

- *NN10044-111 CICM Basics*
- *NN10240-511 CICM Configuration Management*
- *NN10252-611 CICM Security and Administration*
- *NN10248-711 CICM Performance Management*
- *NN10233-911 CICM Fault Management*
- *NN10244-811 CICM Accounting*
- *NN10230-461 CICM Upgrades*

Configuration management strategy

The CICM is initially configured during initial installation by Nortel Networks system installers.

After initial system configuration, configuration may be changed or additional configuration completed by the Service Provider. The Configuration Wizard of the Element Manager Web pages are used for this configuration.

For the CICM 7.0 release, the Configuration Wizard is not required. All configuration is performed directly on the CICM using the preboot tool. Therefore, Configuration Wizard procedures are omitted from this document. The other configuration procedures (those not performed on the configuration wizard) are applicable and therefore are included.

The Element Manager Web pages that are used to configure the CICM and its clients, but that do not use the Configuration Wizard are the following:

- profiles
 - audio
 - enterprise
 - language
 - network
 - user
 - feature
 - security
- users
- client terminals
- Simple Network Management Protocol (SNMP)

Configuration data

Configuration data, such as IP addresses and the maximum number of concurrent sessions, resides within the Windows NT system registry. The operating company may use standard Windows NT backup tools to ensure that critical configuration data is archived externally to the CICM.

Previously backed up configuration data may be restored to the Windows NT registry in the event of data loss or data corruption. Service may then be resumed on a replacement or repaired system with minimal loss of service.

Element Managers can be configured to back up the configuration data of all CICMs on a periodic basis (e.g. every night at a specified time).

Tools and utilities

SERVORD

Provision CICM client lines

The procedure used to provision a CICM client on the CS2000 is similar to the method used to provision a line on other lines gateways. This procedure to provision CICM client lines is provided below.

Procedure 1 Provision CICM client lines

On a PC connected to the CICM Administration LAN

- 1 Connect to the CS2000 Management Server for the selected CS2000.
- 2 Ensure that the GWC is provisioned to support Large Lines Gateways.

Profile _____

Current: LARGE_LINEINTL Change...

Capability	Capacity	Units
Large Gateways	27	gateways
Lines	6400	ports

- 3 Select **Associate Media Gateway** to associate a CICM gateway with the selected GWC.

Response: The Associate Media Gateway dialog window opens.

Associate Media Gateway [X]

Gateway name: rochan-2.nortel.net

Gateway IP address: 47.165.178.165

Gateway controller name: GWC-10

Gateway profile name: CICM

Gateway site name: LG

Signal Protocol

Protocol type: MEGACO (4)

Protocol port: 2944

Protocol version: 1.0

Selected Profile Contents

Reserved terminations: 1024

GWC profile number: 57

Service type: LINE

Category: 1

OK Cancel

- 4 Datafill the Associate Media Gateway window, then press **OK**.
Response: The registration of the CICM gateway against the GWC is displayed.

Name	IP Address	Profile	Max T...	Res...	Protocol	Pr...	Prot...	PEP Ser...	NAT Na...	Node N...	N...
cxip120a.nortel.net	47.165.76.120	CXIPCM	1000	1000	megaco	1.0	2944	NOT_SET	NOT_SET	LG 00 4	30
rochan-2.nortel.net	47.30.178.165	CXIPCM	1024	1024	megaco	1.0	2944	NOT_SET	NOT_SET	LG 00 6	43
test.nortel.net	0.0.0.1	CXIPCM	1000	1000	megaco	1.0	2944	NOT_SET	NOT_SET	LG 00 5	41

- 5 Create the logical group in table LGRPINV on the CS2000.
Response:

```
TABLE: LGRPINV
>lis all
TOP
GRPNO SRVRNAME GRPTYPE LGRPOPTS
-----
LG 00 0 GWC 6 C $
LG 00 1 GWC 13 C $
LG 00 2 GWC 14 C $
LG 00 3 GWC 15 C $
LG 00 4 GWC 9 C $
LG 00 5 GWC 9 C $
LG 00 6 GWC 9 C $ ← RESULTING ENTRY
BOTTOM
```

- 6 Log into OSSGATE and issue the **NEW** command to create new lines.
Example input:

```
NEW $ 8124012 M5216 ETB3PRIVGRPA 0 0 208 1 Y rochan-2.nortel.net tp/0002 $
DN LCC CICM Gateway Endpoints
```

Response on the CS2000 Management Server:

Name	Gateway	Node Number	Terminal Number
tp/0001	rochan-2.nortel.net	43	1
tp/0002	rochan-2.nortel.net	43	2

Response on the CS2000 (the QLEN command):

```
>qlen 8124012
-----
LEN:      LG      00 6 00 01
TYPE: SINGLE PARTY LINE
SNPA: 208
DIRECTORY NUMBER:      8124012
LINE CLASS CODE: M5216 SET
CUSTGRP:  ETB3PRIVGRPA  SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE: GWLEBS      GND: N  PADGRP: PKNIL  BNV: NL MNO: Y
PM NODE NUMBER :      43
PM TERMINAL NUMBER :  2
OPTIONS:
  NONE
      KEY      DN
      ---      --
      1      DN      2088124012

      KEY      FEATURE
      ---      -----
      NONE
```

GWLEBS is the International Line Cardcode for pPhone/EBS sets. In North American markets this value will be RDTEBS

7 This procedure is complete.

Configuration management procedures

This section provides the configuration procedures undertaken from the Element Manager Web pages.

Note: For all procedures provided in this document, it is required to use administrator userids and passwords to login to the Element Manager.

Configuration

The CICM is configured during initial installation by Nortel Networks system installers. After installation, the Service Provider must configure user terminals and profiles using the Element Manager Web pages.

Configuration wizard

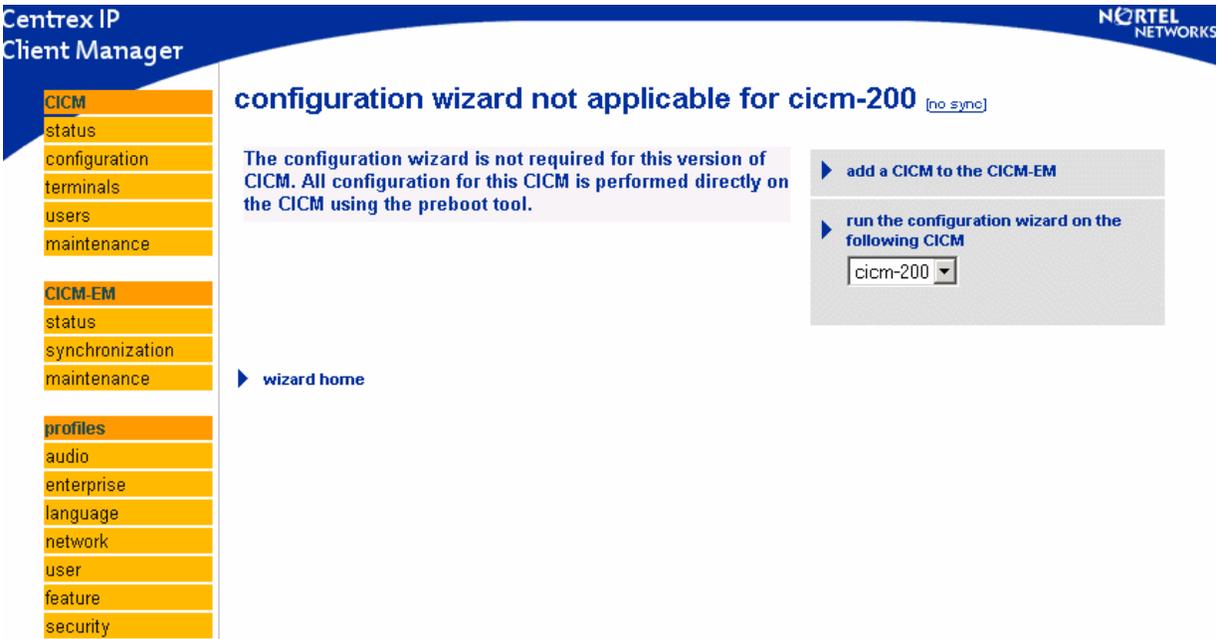
The Configuration Wizard is accessed by selecting the **configuration** option in the main menu, as illustrated below.

Figure 1 Configuration wizard home page



In CICC SN07, the configuration wizard is not applicable. Selecting **run the configuration wizard on the following CICC** results in the following Web page:

Figure 2 Configuration wizard not applicable



Create and configure users

Use these procedures to create and configure users through the **Users** section of the **Element Manager** Web pages. The list of users on a CICC may also be viewed and administered from these Web pages.

Create users

Users must be created before being configured. Users may be created and configured individually or in a batch. Use the *Create Users* procedure or the *Batch Create Users* procedure below to create users, then proceed to the *Configure Users* procedure.

Procedure 2 Create users

At the CICM Home page

- 1 Select **users** from the **CICM** section of the left menu.

*Response: The **User Home Page** opens.*

The screenshot shows the 'user home page' interface. On the left is a navigation menu with categories: CICM (status, configuration, terminals, users, maintenance), CICM-EM (status, synchronization, maintenance), profiles (audio, enterprise, language, network, user, feature, security), and diagnostics. The main content area is titled 'user home page [no_sync]' and contains instructions: 'Users are associated with CICMs. Select a user and CICM as appropriate then click on the option required.' and 'If you select a CICM to browse users with, you will be further asked for a VLCM or VMG and a drawer or range before being able to browse the list of users.' On the right, there are several action buttons: 'browse users' (with a CICM dropdown set to 'cicm-200'), 'view user's configuration', 'edit user's configuration', 'delete user' (with a User text input and a CICM dropdown set to 'cicm-200'), 'manually create multiple users', 'list the active users', 'edit the configuration of a range of users', 'automatically create a range of users', 'audit users' (with a CICM dropdown set to 'cicm-200'), and 'user backup' (with a CICM dropdown set to 'cicm-200'). The bottom left corner of the page displays 'CICM-EM 7.0'.

At the User Home Page

- 2 Select the CICM applicable from the drop-down menu under the **audit users** option on the right menu.

Note: This method of selecting the CICM applies to both manually and automatically created users.

- 3 Click on the **manually create multiple users** menu option on the right menu.

Note: Use this to manually create one or multiple users.

*Response: The **create users on <cicm_name>** page opens.*

The screenshot shows the 'create user(s) on cicm-200' page in the Centrex IP Client Manager. The left sidebar contains a navigation menu with the following items: CICM, status, configuration, terminals, users, maintenance, CICM-EM, status, synchronization, profiles, audio, and enterprise. The main content area features a table with four columns: 'User name', 'VMG', 'Line number', and 'User profile'. Each column has a corresponding input field or dropdown menu. To the right of the table is a 'create users' button.

- 4 For each user to create, fill in the **user name**, then select by the drop-down menus the **VMG/VLCM**, **line number**, and **user profile** to apply.

Note: For definitions of fields, click on the ? icon.

- 5 After completing the field datafill, click on the **create users** menu option on the right.

Response: The status page displays the results of the action.

- 6 This procedure is complete.

Procedure 3 Batch create users

ATTENTION

The **Batch create users** Web page has powerful functionality. Consider carefully the impact of your choices.

The batch method of creating users allows you to create up to 1023 users per drawer. You may create the usernames or have usernames automatically generated.

At the User Home Page of the element manager Web pages

- 1 Select the CICM applicable from the drop-down menu under the **audit users** option on the right menu.
- 2 Click on the **automatically create a range of users** option on the right menu.

*Response: The **batch create users on <cicm_name>** page opens.*

The screenshot shows the Centrex IP Client Manager interface. The left sidebar contains a navigation menu with categories: CICM (status, configuration, terminals, users, maintenance), CICM-EM (status, synchronization, maintenance), profiles (audio, enterprise, language), and user home. The main content area is titled 'batch create users on cicm-200' with a '(no_sync)' link. A red warning message states: 'Warning. This page has very powerful functionality, please consider all input fields carefully.' Below the warning is a 'Create users' form with a help icon. The form fields are: 'Number of users to create' (text input with '1'), 'Starting Line' (dropdown with '1'), 'VMG' (dropdown with 'vmg0'), 'Profile' (dropdown), and 'Starting username' (text input). A 'start operation' button is located to the right of the form. At the bottom of the form area, there are navigation links: 'user home' and 'users on cicm-200'.

- 3 Enter information into each field on the **batch create users on <cicm_name>** page.

Note: Click on the ? icon for definitions of each field.

- **Number of users to create.** Enter up to 639 users for a TDM CICM or up to 1023 users for an H.248 CICM.
- **Starting line** is DMS/CS2K provisioning information. After each user is created, the line will be incremented by one.

When it reaches the end of the drawer, it will snap onto the next one and start from line 0 (TDM only).

- **VMG** is the VMG/VLCM that all the users will be created on.
- **Profile** is the user profile that all created users will be associated with.
- **Starting username** is the username the first created user will have. Each subsequently created username will increment the username by one. The username must be numeric, from 4 to 15 characters long.

Note: Leading zeros are recognized.

- 4 After completing field datafill, click on the **start operation** menu option.

Response: A status page opens and then confirms completion.

- 5 This procedure is complete.

Configure or re-configure users

Use the following *Configure or re-configure users* procedure to configure new users and to change the current configuration of users. Use the *Batch Change Configuration of Users* procedure below to change configuration of a batch of users.

Procedure 4 Configure or re-configure users

At the User Home Page of the element manager Web pages

- 1 Select the CICM applicable from the drop-down menu below the **browse users** option in the right menu.

*Response: The **User Home Page** updates for the selected CICM, and displays **VMG** and user **Range** selections.*

- 2 Click on the **browse users** text.
*Response: the **Users on cicm <name> (range <#> on vmg <name>)** page opens.*

Line No	User	User Profile	Operation ?	Line No	User	User Profile	Operation ?
				0032	7220032	cicmDefault	delete
				0033	7220033	cicmDefault	delete
0001	7220001	cicmDefault	delete	0034	7220034	cicmDefault	delete
0002	7220002	cicmDefault	delete	0035	7220035	cicmDefault	delete
0003	7220003	cicmDefault	delete				

- 3 To configure or edit a user configuration, click on the user name to configure.
***Note:** Users must be created before being configured. See the *Create Users* or *Batch Create Users* procedure above.*
*Response: The **edit user <name> on <cicm_name>** page opens.*

Netrix IP
Management

CICM-EM 7.0

edit user 7244001 on cicm-200 [no_sync]

User statistics	
User name	7244001
Total Call Count	7
Login Status	Idle
Master Terminal	none
Slave Terminal	none
Auto Login Terminals	none
Total Login Failures	0
Login Count	1
Login Failure Count	0
Login Time	2004/11/09 14:42

User settings	
Password	<input type="password" value="XXXXXXXX"/>
Profile	<input type="text" value=""/>

CS2k Provisioning Information	
VMG	<input type="text" value="vmg0"/>
Line Number	<input type="text" value="1"/>

Audio profiles for recent terminals	
31-38-00-0A-E4-06-99-99 (I2004)	

- save changes
- force user logout
- user overrides
- reset user counters
- delete user
- back to user pages for cicm-200

- 4 On the **edit user <name> on <cicm_name>** page, configure the user settings, CS2K provisioning, and Audio Profiles as required.

Note 1: Click on the ? icon for definitions of each field.

Note 2: There is not a fixed link between a username and its CS2K provisioning. It must be entered manually on this Web page.

Note 3: Users may be changed between lines and VMGs/VLCMs

- 5 After completing the user configuration, click on the **save changes** menu option.

Response: An update screen displays the result of the action.

- 6 This procedure is complete.

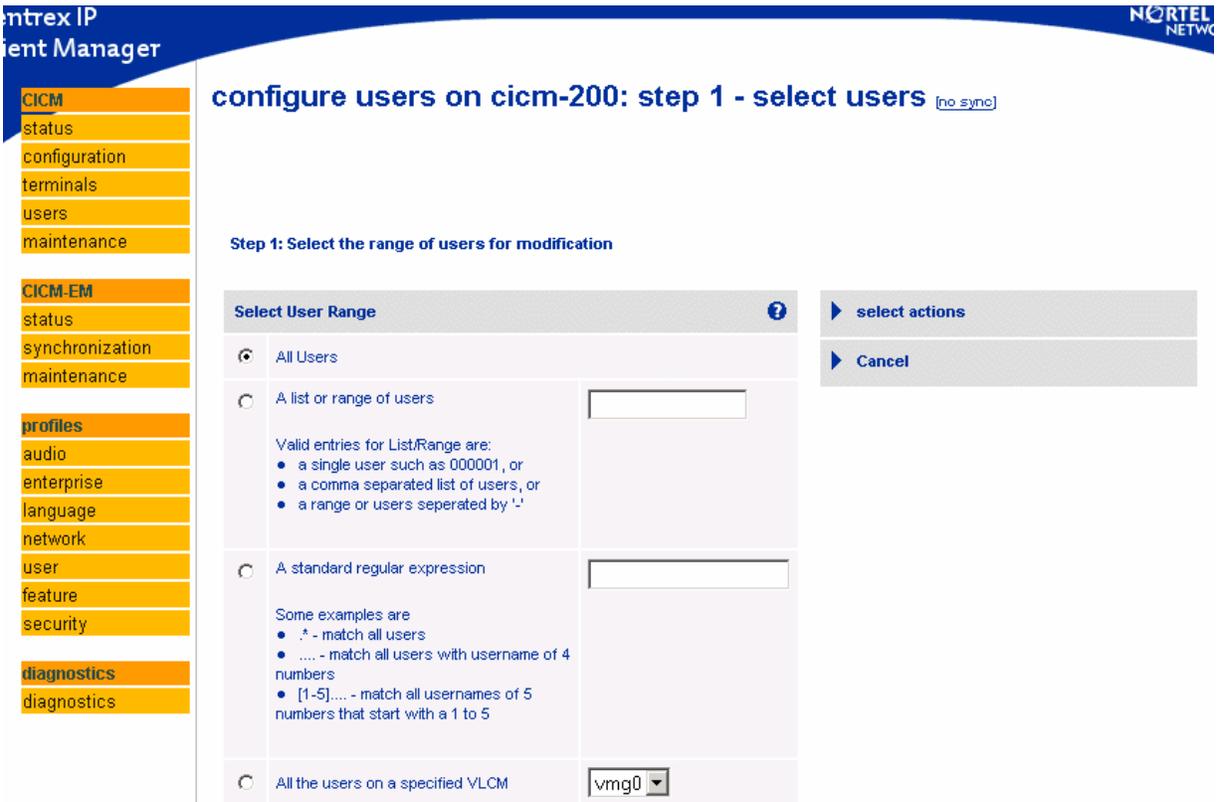
Procedure 5 Batch change configuration of users

ATTENTION
 The **Batch change configuration** Web page has powerful functionality. Consider carefully the impact of your choices.

At the User home page of the element manager Web pages

- 1 Select the CICM applicable from the drop-down under the **audit users** option on the right menu, then click on the **edit the configuration of a range of users** text.

*Response: The **configure users on <cicm_name>: step 1 - select users** page opens.*



- 2 Select the range of users to change configuration on:
 - All users
 - A range of users

- Users defined by a standard regular expression
- All the users on a VMG/VLCM (specified by the drop-down menu)

Note: Click on the ? icon for field definitions

Then click on the **select actions** options on the right menu.

Response: The **configure users on <cicm_name>: step 2 - select operations** page opens.

configure users on cicm-200: step 2 - select operations [\[no sync\]](#)

Step 1: Select the range of users for modification - Completed!

Selected User Range ⓘ

all

review actions

back to select users

Step 2: Select the operations you want to perform from the list below

Delete Users

This will delete all selected users

Modify user properties

Password Reset ⓘ

Should user passwords be reset

Choose what method should be used to assign new passwords

Specify a password to use (leave blank if 'random' password assignment method has been chosen). Note, only numeric passwords of at least four characters are valid.

Specify how many digits random passwords should be (select 'Not Specified' if 'random' password assignment method has not been chosen)

- 3 Select the operations to perform:
 - Select **delete users** to delete all selected users, OR
 - Select **modify user properties**, then specify how to modify user properties.
 - password reset
 - counters reset
 - passwords view
 - user profile set/select

Then click on the **review actions** text on the right menu.

*Response: The **configure users on <cicm_name>: step 3 - review actions** page opens. (An example follows)*

The screenshot shows the 'Centrex IP Client Manager' interface. On the left is a navigation menu with categories: CICM (status, configuration, terminals, users, maintenance), CICM-EM (status, synchronization), and profiles. The main content area is titled 'configure users on cxip120: step 3 - review actions'. A red warning message states: 'Warning. This page has very powerful functionality, please check all input fields carefully.' Below this, a blue status bar reads 'Step 1: Select the range of users for modification - Completed!'. A form field labeled 'Selected User Range' contains the text 'all' and has an information icon. To the right of the form are two buttons: 'start operation' and 'back to select operations'.

- 4 After verifying the actions to perform:
 - To proceed, select **start operation** from the right menu.
 - To modify configuration or cancel the operation, select **back to select operations** from the right menu.

*Response: If **start operation** was selected, the operation will commence and a verification page will display. If **back to select operations** was selected, the step 2 page will display again.*

- 5 This procedure is complete.

View users list and user configuration

Use this procedures to view the list of users on a CICM. Use the Procedure *View user configuration*, to view the configuration for a user on a CICM.

Procedure 6 View users list

At the element manager home page

- 1 Select **users** from the left navigation bar.

*Response: The **user home page** opens.*

- 2 Select the CICM applicable from the drop-down menu under the **browse users** option on the right menu, then click on the **browse users** text.

*Response: The **users on CICM <cicm_name> (range <#-#> on vmg <name>)** page opens with the list of current users on the CICM.*

The screenshot shows the Nortel Element Manager interface. On the left is a navigation menu with categories like CICM, CICM-EM, profiles, and user. The main content area is titled 'users on cicm cicm-200 (range 0-63 on vmg 'vmg0')'. It contains a table of users and a right-hand menu.

Line No	User	User Profile	Operation	Line No	User	User Profile	Operation
				0032	7220032	cicmDefault	delete
0001	7220001	cicmDefault	delete	0033	7220033	cicmDefault	delete
0002	7220002	cicmDefault	delete	0034	7220034	cicmDefault	delete
0003	7220003	cicmDefault	delete	0035	7220035	cicmDefault	delete
0004	7220004	cicmDefault	delete	0036	7220036	cicmDefault	delete
0005	7220005	cicmDefault	delete	0037	7220037	cicmDefault	delete
0006	7220006	cicmDefault	delete	0038	7220038	cicmDefault	delete
0007	7220007	cicmDefault	delete	0039	7220039	cicmDefault	delete
0008	7220008	cicmDefault	delete	0040	7220040	cicmDefault	delete
0009	7220009	cicmDefault	delete	0041	7220041	cicmDefault	delete

On the right, the 'browse users on' menu is expanded, showing dropdowns for CICM (cicm-200), VMG (vmg0), and Range (0-63). Below it are options for 'view user's configuration', 'edit user's configuration', and 'delete user'.

- 3 To view the user list for a different CICM, a different VMG/VLCM, or a different range, select from the drop-down menus on the **browse users on** menu option on the right.

*Response: The **users on CICM <cicm_name> (range <#-#> on vmg <name>)** page updates to display the selection.*

- 4 To view a list of active users with node and line number information, click on the **list the active users** option on the right menu.

*Response: the **active users on <cicm_name>** page opens.*

Centrex IP Client Manager

active users on cicm-002

User	Node	Line
7230500	47.135.44.149	500
7230501	47.135.44.149	501
7230502	47.135.44.149	502
7231009	47.135.44.149	1009

back to user pages for cicm-002

5 This procedure is complete.

Procedure 7 View user configuration

At the users home page of the element manager Web pages

- 1 Select the CICM applicable from the drop-down menu under the **browse users** option on the right menu, then click on the **browse users** text.

*Response: The VMG and Range fields are displayed under the **browse users** option.*

Centrex IP Client Manager

user home page [no_sync]

Users are associated with CICMs. Select a user and CICM as appropriate then click on the option required.

If you select a CICM to browse users with, you will be further asked for a VLCM or VMG and a drawer or range before being able to browse the list of users.

browse users

CICM

VMG

Range

- 2 Click again on the **browse users** option on the right menu.

*Response: The **users on CICM <cicm_name> (range <#-#> on vmg <vmg_name>)** page opens.*

Context IP Management Manager

users on cicm cicm-002 (range 0-63 on vmg 'vmg0') [no_sync]

Line No	User	User Profile	Operation ?	Line No	User	User Profile	Operation ?
				0032	7230032	cicmDefault	delete
0001	7230001	cicmDefault	delete	0033	7230033	cicmDefault	delete
0002	7230002	cicmDefault	delete	0034	7230034	cicmDefault	delete
0003	7230003	cicmDefault	delete	0035	7230035	cicmDefault	delete
0004	7230004	cicmDefault	delete	0036	7230036	cicmDefault	delete
0005	7230005	cicmDefault	delete	0037	7230037	cicmDefault	delete
0006	7230006	cicmDefault	delete	0038	7230038	cicmDefault	delete
0007	7230007	cicmDefault	delete	0039	7230039	cicmDefault	delete
0008	7230008	cicmDefault	delete	0040	7230040	cicmDefault	delete
0009	7230009	cicmDefault	delete	0041	7230041	cicmDefault	delete

► **browse users on**

CICM

VMG

Range

► **view user's configuration**

► **edit user's configuration**

► **delete user**

User

- 3 To view a user configuration, click on the username on the list, or Enter a user name under the **delete user** option on the right menu, then click on the **view user's configuration** text.

*Response: The **view user <username> on <cicm_name>** page opens.*

***Note:** Changes cannot be made from this **view user <name> on <cicm_name>** page.*

entrex IP
Client Manager

CICM
status
configuration
terminals
users
maintenance

CICM-EM
status
synchronization
maintenance

profiles
audio
enterprise
language
network
user
feature
security

diagnostics
diagnostics

CICM-EM 7.0

edit user 7244003 on cicm-200 [no_sync]

User statistics	
User name	7244003
Total Call Count	6
Login Status	Idle
Master Terminal	none
Slave Terminal	none
Auto Login Terminals	none
Total Login Failures	0
Login Count	0
Login Failure Count	0
Login Time	None

User settings	
Password	<input type="password" value="*****"/>
Profile	<input type="text" value=""/>

CS2k Provisioning Information	
VMG	<input type="text" value="vmg0"/>
Line Number	<input type="text" value="3"/>

Audio profiles for recent terminals

▶ save changes
▶ force user logout
▶ user overrides
▶ reset user counters
▶ delete user
▶ back to user pages for cicm-200

- 4 To configure or edit user configuration, refer to the *Configure users* procedure above.
- 5 This procedure is complete.

Delete a user

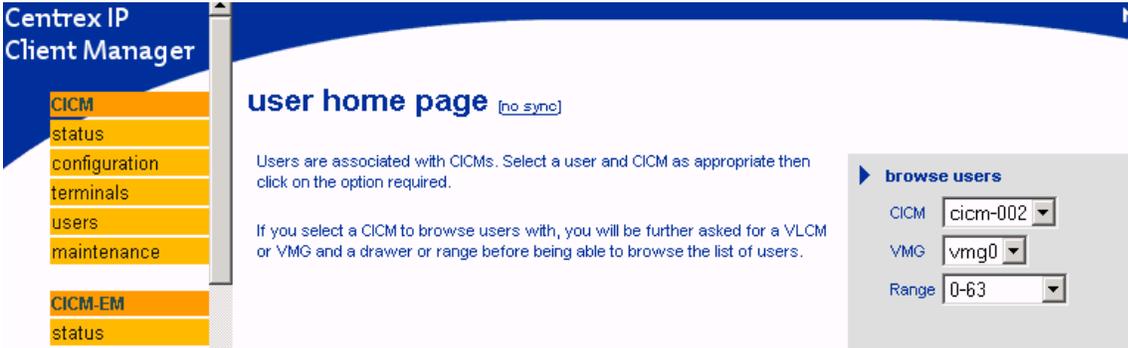
Use this procedure to delete a user from a CICM.

Procedure 8 Delete a user

At the user home page of the element manager Web pages

- 1 Select the CICM applicable from the drop-down menu under the **browse users** option on the right menu, then click on the **browse users** text.

*Response: The VMG and Range fields are displayed under the **browse users** option.*



2 Click again on the **browse users on** text.

*Response: The **users on CICM <cicm_name> (range <number> on vmg <name>)** page opens.*



3 In the **Operation** column, click on **delete** for the user(s) you want to delete.

Response: A status page displays the results of the action.

4 This procedure is complete.

Force user logout

Use this procedure to force a user logout.

Procedure 9 Force user logout

At the users home page of the element manager Web pages

- 1 Select the CICM applicable from the drop-down menu in the **browse users on** option, then click on the **browse users on** text two times.

*Response: The **users on CICM <name> (range <number> on vmg <name>)** page opens.*

- 2 Enter a user name under the **delete users** option on the right menu, then click on the **edit a user's configuration** text.

*Response: The **edit user <name> on <cicm_name>** page opens.*

entrex IP
Client Manager

edit user 7230001 on cicm-002 [no sync]

User statistics	
User name	7230001
Total Call Count	0
Login Status	Idle
Master Terminal	none
Slave Terminal	none
Auto Login Terminals	none
Total Login Failures	0

- ▶ save changes
- ▶ force user logout
- ▶ user overrides
- ▶ reset user counters
- ▶ delete user
- ▶ back to user pages for cicm-002

- 3 Click on the **force user logout** option on the right menu.
Response: A status message appears with the result of the force logout action.

- 4 This procedure is complete.

Reset user counters

Use this procedure to reset user counters. This will reset to zero the following counters:

- Total login failures
- Login count
- Login failure count
- Total call count

Procedure 10 Reset user counters

At the user home page of the element manager Web pages

- 1 Select the CICM from the drop-down menu in the **browse users on** box, then click on the **browse users on** text two times.

*Response: The **users on CICM <cicm_name> (range <number> on vmg <name>)** page opens.*

- 2 Click on the user name to reset counters for.

*The **edit user <username> on <cicm_name>** page opens.*

The screenshot displays the 'edit user 7230001 on cicm-002' page in the Centrex IP Client Manager. The left sidebar shows a navigation menu with categories: CICM (status, configuration, terminals, users, maintenance), CICM-EM (status, synchronization), profiles (audio, enterprise), and other options. The main content area features a 'User statistics' table for user 7230001, with fields: User name (7230001), Total Call Count (0), Login Status (Idle), Master Terminal (none), Slave Terminal (none), Auto Login Terminals (none), and Total Login Failures (0). To the right of the table is a vertical menu with buttons: save changes, force user logout, user overrides, reset user counters, delete user, and back to user pages for cicm-002.

- 3 Click on the **reset user counters** option on the right menu.

Response: A status page displays the results of the reset command.

- 4 This procedure is complete.

Create and configure profiles

The Element Manager Web pages are used to configure the CICMs by creating, modifying, and applying profiles. This allows configuration of many CICMs at one time. The profiles are maintained on the CICM Element Manager. This section contains the procedures for configuring profiles.

There are seven types of profiles:

- **Audio Profiles**
- **Enterprise Profiles**
- **Language Profiles**

- **Network Profiles**
- **User Profiles**
- **Feature Profiles**
- **Security Profiles**

Audio Profiles

An Audio Profile specifies audio parameters for making or receiving a call. Audio Profiles simplify the way in which users control the audio parameters that are used when making a call. The parameters which can be configured include voice coding type, voice activity detection and the voice packet size. These parameters are configured according to the specific network conditions that exist between the customer site and the CICM. Having several profiles available to users means that they can select the most appropriate profile for each call.

Implementing the parameters in the Audio Profile can range from applying a specific codec to changing QoS marking in the headers of the IP packets, which in turn will affect how other devices in the network treat those packets.

Examples of audio parameters are:

- Which codec the client terminal should apply to an outgoing media stream
- Voice Activity Detection (VAD) capability with G.729A and G.723.1
- Packet size (i.e. the number of voice frames per packet)
- Quality of Service (QoS) parameters to be applied to the IP packets originating from that terminal or destined for that terminal
- Jitter buffer setting on the terminal

The CICM administrator can adjust the parameters in an audio profile to compensate for different types of conditions in the network. For example, a telecommuter's IP voice packets may encounter one set of network conditions when a call is placed from the home, and a different set of conditions when a call is placed from the office. In this case the telecommuter would need two different audio profiles, one for each terminal.

The CICM administrator controls the Audio Profiles and determines which ones will be available for end users to select for their terminals. When a user logs in to a CICM through a specific terminal, the CICM updates the items on the Audio Profile selection menu and applies the Audio Profile to that specific terminal.

When an end user or the CICM administrator selects an Audio Profile for a terminal, the following occurs:

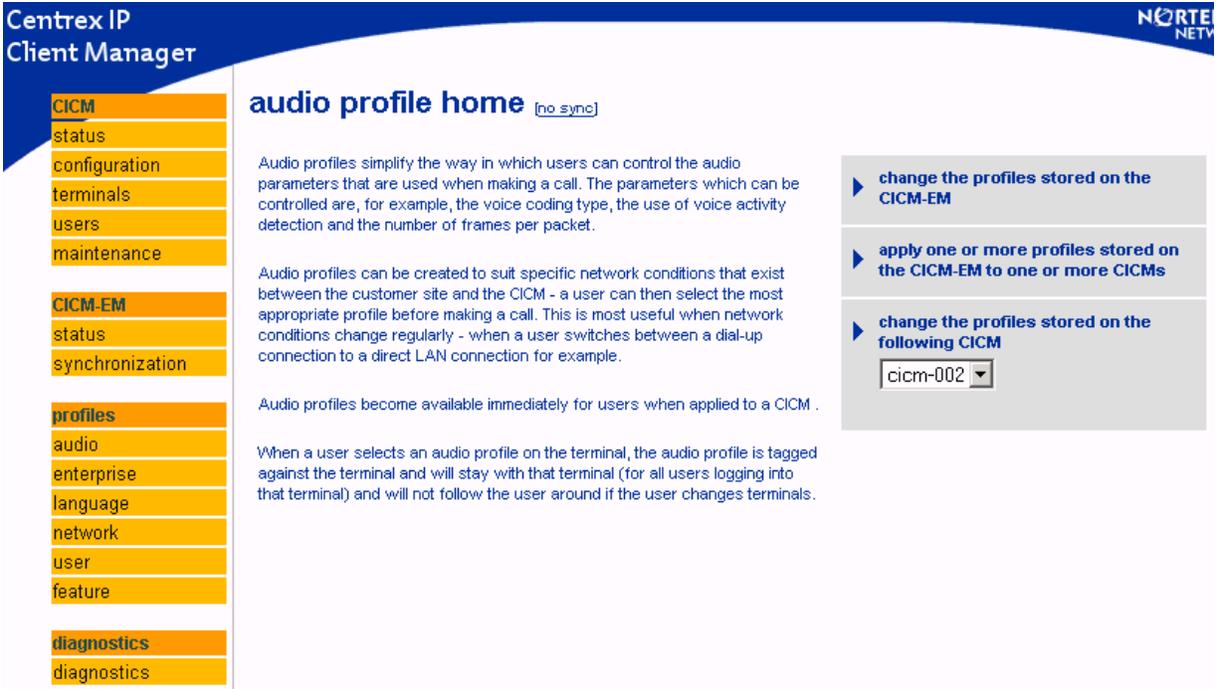
- The terminal implements the parameters for all outgoing voice traffic
- The CICM implements the parameters for all voice traffic destined for that terminal.

Audio profiles may be created, changed or deleted. Audio Profile changes take effect on the next call. They may be applied to a CICM or to a user.

Procedure 11 Create an Audio Profile on an EM

At the Element Manager home page

- 1 Select **audio** from the **profiles** section of the left menu bar.
Response: The audio profile home screen opens.



- 2 To create a new Audio Profile, click on the **change the profiles stored in the CICM-EM** option on the right menu.

Response: The audio profiles modification screen opens.

The screenshot shows the 'Nortel IP Element Manager' interface. On the left is a navigation menu with categories: CICM (status, configuration, terminals, users, maintenance), CICM-EM (status, synchronization), profiles (audio, enterprise), and a 'profiles' section. The main content area is titled 'audio profiles modification (cicm-em)'. It features two tables and a right-hand menu. The first table has columns: Audio Profile (TDM), Default Codec, Ethernet QoS, Type of Service, Jitter Buffer, and Delete. The second table has columns: Audio Profile (Succession), Primary Codec, Secondary Codec, Ethernet QoS, Type of Service, and Delete. The right-hand menu contains three options: 'add new profile of the following type' with a dropdown set to 'TDM', 'apply one or more profiles stored on the CICM-EM to one or more CICMs', and 'change the profiles stored on the following CICM' with a dropdown set to 'cicm-002'.

- 3 Choose Succession from the drop-down menu under the **add new profile of the following type** option on the right menu.
*Response: The **audio profile creation** page opens.*

Centrex IP Client Manager

audio profile creation (cicm-em) (no_sync)

Audio Profiles ⓘ

Audio profile name

Voice Codec ⓘ

Codec Type (Primary)
 G.729a
 G.711 (Auto)
 G711 Mu-Law
 G711 A-Law

Codec Type (Secondary)
 G.729a
 G.711 (Auto)
 G711 Mu-Law
 G711 A-Law
 None

RFC 2833 Tones

Configure VAD for G.729

Primary Packet Size

Secondary Packet Size

Ethernet Quality Of Service ⓘ

User Priority

IP Quality Of Service ⓘ

▶ create profile

▶ return to audio profile modification

- 4 Type the new profile name in the **Audio Profile Name** field, then create the profile by datafilling each of the fields.

Note: Click on the ? icon in each field for detailed descriptions and decision criteria.
- 5 After the fields are datafilled, click on the **create profile** option on the right menu.

*Response: The **profile creation results** window displays the profile creation status and confirms completion.*

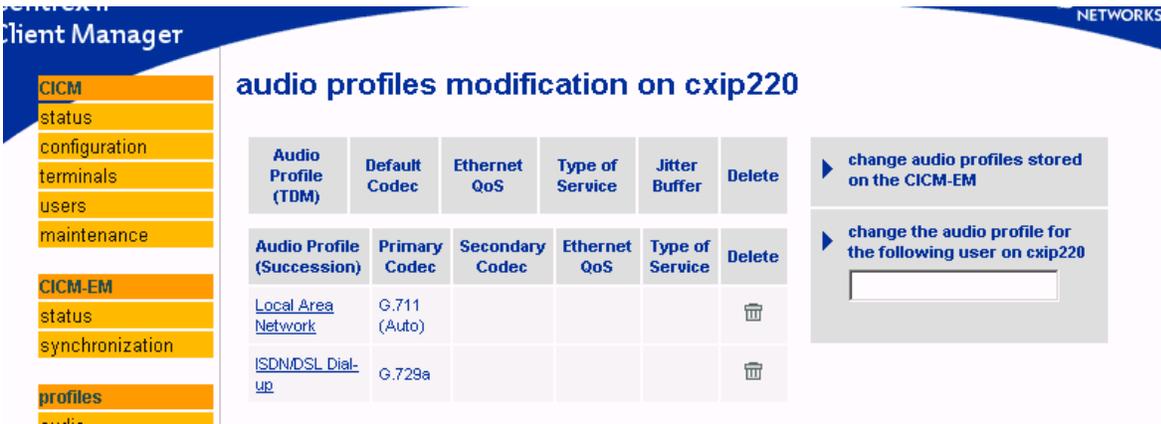
Note: The profile created is stored on the Element Manager. To be activated, they must be applied to the CICMs by the *Apply an audio profile to a CICM* procedure below.
- 6 This procedure is complete.

Procedure 12 Change an Audio Profile on an EM

At the Audio Profile home page of the Element Manager Web pages

- 1 Select the CICM from the drop-down menu under the **change the profiles stored on the CICM-EM** text on the right, then click on the **change the profiles stored on the CICM-EM** option.

Response: The audio profiles modification on <cicm_name> page is displayed.



- 2 Click on the audio profile to change.
Response: The audio profile <profile_name> (<cicm_name>) page opens.

The screenshot shows the 'Centrex IP Client Manager' interface. On the left is a navigation menu with categories: CICM (status, configuration, terminals, users, maintenance), CICM-EM (status, synchronization), profiles (audio, enterprise, language, network, user, feature), and diagnostics. The main content area is titled 'audio profile 'enterprise' (cicm-002) [no_sync]'. It contains several configuration sections:

- Audio Profiles:** Audio profile name: enterprise
- Voice Codec:**
 - Codec Type (Primary): G.729a, G.711 (Auto), G711 Mu-Law, G711 A-Law
 - Codec Type (Secondary): G.729a, G.711 (Auto), G711 Mu-Law, G711 A-Law, None
- RFC 2833 Tones: On
- Configure VAD for G.729: Not Applied
- Primary Packet Size: 10ms
- Secondary Packet Size: 20ms
- Ethernet Quality Of Service:** User Priority: Not Applied
- IP Quality Of Service:** Configure Type of Service: Not Applied

On the right side, there are two buttons: 'save your changes to this profile' and 'return to audio profile modification'.

- 3 Edit the audio profile by modifying the fields.
Note: Click on the ? icon in each field for detailed descriptions and decision criteria.
- 4 Click on the **save your changes to this profile** option on the right menu to save the edited profile to the Element Manager.
*Response: The **profile save results** screen displays the results of the action.*
- 5 This procedure is complete.

Procedure 13 Apply an Audio Profile to a CICM

At the Element Manager home page

- 1 Select **audio** from the **profiles** menu on the left.
*Response: The **audio profile home page** is displayed.*
- 2 Click on the **apply one or more profiles stored on the CICM-EM to one or more CICMs** option on the right menu.
*The **apply audio profile page** displays.*

- 3 In the **Range of Profiles** box, click a radio button to:
 - apply only the selected audio profiles, or
 - apply all existing audio profiles
- 4 In the **Profile Selection** box, choose the profiles to apply by clicking. Use **Shift+Click** to add a range, or **Control+Click** to add a nonconsecutive selection.
- 5 In the **Range of CICMs** box, click a radio button to:
 - apply the profiles only to the selected CICM(s), or
 - apply the profiles to all CICMs.

- 6 In the **CICM Selection** box, choose the CICMs to apply the profiles to by clicking. Use **Shift+Click** to add a range, or **Control+Click** to add a selection.
- 7 Click on the **apply profile(s)** option on the right menu.
Response: A status page displays the results of the action and confirms completion.
- 8 This procedure is complete.

Procedure 14 Delete an Audio Profile from a CICM

From the audio profile home page of the Element Manager Web pages

- 1 Choose the CICM from the drop-down menu on the **change the profiles stored on the following CICM** menu option on the right, then click on the **change the profiles stored on the following CICM** text.
*Response: The **audio profiles modification on <cicm_name>** page displays the list of audio profiles stored on the CICM.*

The screenshot shows the Centrex IP Client Manager interface. The left navigation menu includes options like CICM, status, configuration, terminals, users, maintenance, CICM-EM, status, synchronization, and profiles. The main content area is titled 'audio profiles modification (cicm-002) [no_sync]'. It features a table with columns: Audio Profile (TDM), Default Codec, Ethernet QoS, Type of Service, Jitter Buffer, and Delete. Below this is another table with columns: Audio Profile (Succession), Primary Codec, Secondary Codec, Ethernet QoS, Type of Service, and Delete. The second table lists two profiles: 'enterprise' with Primary Codec G.711 (Auto) and Secondary Codec G.729a, and 'ISDN/DSL Dial-up' with Primary Codec G.729a. A button on the right says 'change audio profiles stored on the CICM-EM'.

- 2 Click on the delete (trash can) icon for the audio profile to delete.
Response: A status page opens to confirm the deletion.
- 3 This procedure is complete.

Procedure 15 Apply an Audio Profile to a user

At the User Home Page of the Element Manager home pages

- 1 Select the CICM that the user is on from the drop-down menu on the **browse users on** menu option, then click on the **browse users** text.

*Response: The **browse users** section expands to display the VMG and user ranges.*

- 2 Select user range applicable from the drop-down menu on the **browse users** menu option, then click on the **browse users** text again.

Note: For CICM 7.0, there is only one VMG per CICM, so no VMG selection is necessary.

*Response: The **users on CICM <name> (range <#-#> on vmg <name>)** page opens and displays a list of users*

The screenshot shows the 'users on cicm cicm-002 (range 0-63 on vmg 'vmg0')' page. The main content area contains a table with columns for Line No, User, User Profile, and Operation. The table lists 22 users, each with a unique ID and a 'delete' link. The right-hand sidebar contains several options: 'browse users on' (with dropdowns for CICM: cicm-002, VMG: vmg0, and Range: 0-63), 'view user's configuration', 'edit user's configuration', 'delete user' (with a text input field for the user name), 'manually create multiple users', and 'list the active users'.

Line No	User	User Profile	Operation	Line No	User	User Profile	Operation
				0032	7230032	cicmDefault	delete
0001	7230001	cicmDefault	delete	0033	7230033	cicmDefault	delete
0002	7230002	cicmDefault	delete	0034	7230034	cicmDefault	delete
0003	7230003	cicmDefault	delete	0035	7230035	cicmDefault	delete
0004	7230004	cicmDefault	delete	0036	7230036	cicmDefault	delete
0005	7230005	cicmDefault	delete	0037	7230037	cicmDefault	delete
0006	7230006	cicmDefault	delete	0038	7230038	cicmDefault	delete
0007	7230007	cicmDefault	delete	0039	7230039	cicmDefault	delete
0008	7230008	cicmDefault	delete	0040	7230040	cicmDefault	delete
0009	7230009	cicmDefault	delete	0041	7230041	cicmDefault	delete
0010	7230010	cicmDefault	delete	0042	7230042	cicmDefault	delete
0011	7230011	cicmDefault	delete	0043	7230043	cicmDefault	delete

- 3 Click on the user name to apply an Audio Profile to.

*Response: The **edit user <name> on <cicm_name>** page opens.*

Centrex IP
Client Manager

edit user 000005 on cxip180

User statistics

User name	000005
Total Call Count	3
Login Status	Active (CXIP180B)
Master Terminal	31-38-00-60-38-DD-48-56
Slave Terminal	none
Sticky Login Terminals	none
Total Login Failures	0
Login Count	2
Login Failure Count	0
Login Time	2004/01/23 22:59

User settings

Password	<input type="text" value="1234"/>
Profile	<input type="text" value=""/>

CS2k Provisioning Information

VMG	<input type="text" value="CXIP180"/>
Line Number	<input type="text" value="5"/>

Audio profiles for recent terminals

31-38-00-60-38-DD-48-56 (master,i2002)	
31-38-00-60-38-76-06-95 (i2004)	

Actions:

- save changes
- force user logout
- user overrides
- reset user counters
- delete user
- back to user pages for cxip180

- 4 In the **Audio profiles for recent terminals** section at the bottom, click on the user terminal to apply the Audio Profile to.
- Response: The terminal <name> on <cicm_name> page opens.*

Centrex IP
Client Manager

terminal 31-38-00-60-38-dd-48-56 on cxip180

Terminal values

Terminal Type	i2002
Connect Count	2
Firmware Level	1.57
Hardware Release Level	0
Pec	NT2K00GI
Display Contrast	
Time Last Connected	2004/01/23 22:59
Last Reset Reason Code	Reset by user key sequence or by gateway (5)
Sticky Login User	none

Terminal defaults

Audio Profile	Local Area Network
Language	English (US)

save

Navigation Menu:

- CICM
 - status
 - configuration
 - terminals
 - users
 - maintenance
- CICM-EM
 - status
 - synchronization
- profiles
 - audio
 - enterprise
 - language
 - network
 - user
 - feature
- diagnostics
 - diagnostics

- In the **Audio Profiles** field of the **Terminal defaults** section, select the audio profile to apply from the drop-down menu, then click on the **save** option on the right menu.
- This procedure is complete.

Enterprise Profiles

Enterprise Profiles provide for groupings of Network Profiles and CICMs. The Enterprise Profile is created through the Element Manager and stored on the CICM, as is the Network Profile. An Enterprise Profile groups the Network Profile(s) of an enterprise with the CICMs that serve that enterprise.

The purpose of the Enterprise Profile is to support the Selective CICM Login feature (i.e. Hot Desking capability).

With this feature, users of an enterprise that is served by multiple CICMs will be provided with an option at the login prompt, to choose which CICM to log in to, from a list of CICMs that serve this enterprise. The user can also log into any terminal connected to the selected CICM.

A CICM may be associated with many Enterprise Profiles if these enterprises are served by this CICM. However, a Network Profile can only be associated with a single Enterprise Profile.

Upon receiving the first packet from a client, the hosting CICM checks the source IP address of the packet against the list of Network Profiles stored on the CICM. If a Network Profile contains that source IP address and the Network Profile is also associated with an Enterprise Profile, the user is then presented with a list of all the CICMs associated with that Enterprise Profile, and will be able to redirect their terminal to any of these CICMs. Thus the Enterprise profile, in conjunction with the Network Profile, enhances security.

Note: The source IP address may or may not be the client's IP address. If the client is behind an enterprise NAT, then the source IP address is the public IP address of the NAT.

The Enterprise Profile is created, edited and deleted on the Element Manager. The Enterprise Profile may be written to it's associated CICMs, but it cannot be edited on a CICM.

The complete process for creation and configuration of Enterprise Profiles is summarized as follows:

- **Create an Enterprise Profile.** See the *Create an Enterprise Profile* procedure below.
- **Associate Network Profiles to the Enterprise Profile.** See the *Associate and Apply an Enterprise Profile* procedure below.
- **Associate CICMs to the Enterprise Profile.** See the *Associate and Apply an Enterprise Profile* procedure below.
- **Apply the Enterprise Profile to the CICM.** This step downloads and saves the Enterprise Profile to the CICM. See the *Associate and Apply an Enterprise Profile* procedure below.

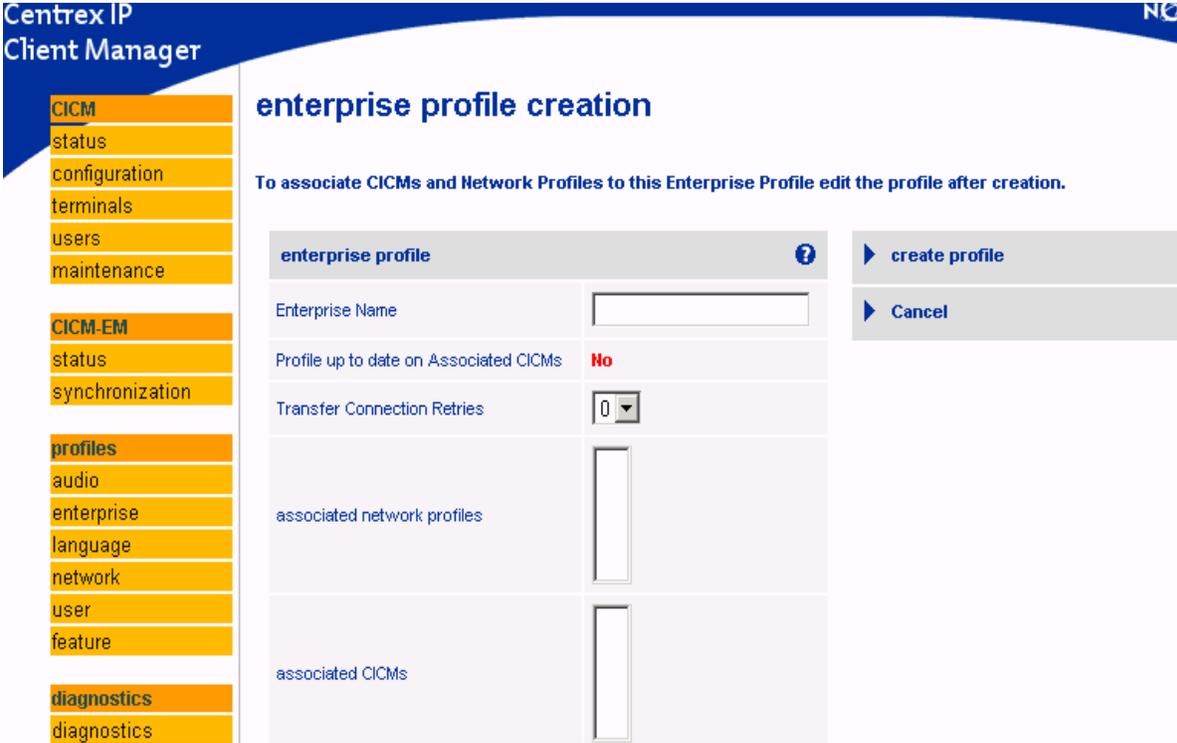
Procedure 16 Create an Enterprise Profile

At the CICM - Element Manager Home page

- 1 Select **enterprise** from the **profiles** section of the left menu.
*Response: The **enterprise profiles modification** page opens.*

The screenshot shows the Centrex IP Client Manager interface. The top header is blue with 'Centrex IP Client Manager' on the left and the Nortel logo on the right. A left sidebar contains a menu with the following items: CICM (highlighted in orange), status, configuration, terminals, users, and maintenance. The main content area is titled 'enterprise profiles modification (cicm-em) [no_sync]'. Below the title is a table with three columns: 'Name', 'Up To Date', and 'Delete'. To the right of the table is a button labeled 'add new profile' with a right-pointing arrow.

- 2 Click on the **add new profile** menu option on the right menu.
The *enterprise profile creation (cicm-em)* page opens.



- 3 Datafill the **Enterprise Name** field, then datafill all other fields (refer to Table 1 below for field descriptions), then click on the **create profile** option on the right menu.

Table 1 Enterprise Profile fields

Field	Entry	Description
Enterprise Name	User determined name no more than 20 alpha-numeric characters.	The Enterprise Name is chosen upon creation and cannot be edited thereafter.
Profile up to date on Associated CICMs	Read-only. Yes or No	Indicates whether the profile is up-to-date on all of its associated CICMs. The state changes to No when a change is made to the Enterprise Profile. The state changes to Yes when it is successfully applied to all of the CICMs in the Associated CICMs list. Refer to the <i>Apply Enterprise Profile to CICMs</i> procedure. Note: If the Enterprise Profile is not kept up-to-date on the associated CICM(s), it will automatically deactivate upon its associated CICMs, and must be re-associated.

Table 1 Enterprise Profile fields

Field	Entry	Description
Transfer Connection Retries	0 or 1 Default is 0	Recommended setting: 0 This is the number of times a terminal redirecting to another CICM will retry to connect to the target CICM. The value should be set to zero (the default) for most applications.
Associated Networks (Network Profile)	Read-only	Terminals are associated with an enterprise based on their network location. Some terminals can automatically discover their location (e.g. from a DHCP server) and provide it to the CICM. For terminals that do not or cannot report an automatically discovered network location to the CICM, a mapping, called a Network Profile, can be created to assign a network location based on the terminal's IP address. This is the list of network locations that are associated with the enterprise defined by this profile. A non-editable list of Network Profiles that are associated with this Enterprise Profile. When a CICM is disassociated from the Enterprise Profile, it will remain in this list with the postfix "disassociated" until the updated information is successfully applied to the CICMs in the list, whereupon it will be removed from the list. It will be blank for a new profile with no associations defined.
Associated CICMs	Read-only	A non-editable list of CICMs that are associated with this Enterprise Profile. It will be blank for a new profile with no associations defined.

Note: The **Associated Networks** and **Associated CICMs** fields are non-editable. The Network Profiles and CICMs are not associated on this **Enterprise Profile Creation Web** page. You must create the Enterprise Profile name first.

*Response: The **profile creation results** page opens and displays the result of the creation.*

- 4 Proceed to the following *Associate and Edit an Enterprise Profile* procedure to associate Enterprise Profiles with Network Profiles and CICMs.
- 5 This procedure is complete.

Associate and apply an Enterprise Profile

Use this procedure to associate an Enterprise Profile to Network Profiles and to CICMs, and to apply an Enterprise Profile to a CICM.

Also use this procedure to change the associations of an Enterprise Profile, and to apply the Enterprise Profile changes to a CICM.

The complete process for creation and configuration of Enterprise Profiles is summarized as follows:

- **Create an Enterprise Profile.** See the *Create an Enterprise Profile* procedure above.
- **Associate Network Profiles to the Enterprise Profile.** See the *Associate and Apply an Enterprise Profile* procedure below.
- **Associate CICMs to the Enterprise Profile.** See the *Associate and Apply an Enterprise Profile* procedure below.
- **Apply the Enterprise Profile to the CICM.** This step downloads and saves the Enterprise Profile to the CICM. See the *Associate and Apply an Enterprise Profile* procedure below.

Procedure 17 Associate and apply an Enterprise Profile

At the CICM - Element Manager home page

- 1 Select **enterprise profiles** from the left navigation bar.
*Response: The **enterprise profiles modification** page opens.*

The screenshot shows the 'entrex IP Client Manager' interface. The left navigation bar has 'enterprise profiles' selected. The main content area is titled 'enterprise profiles modification'. It contains a table with the following data:

Name	Up To Date	Delete
kullyboy	No	

There is an 'add new profile' button on the right side of the table.

- 2 Select the Enterprise Profile to associate from the list of profiles by clicking on the profile name.
*Response: The **enterprise profile edit** page opens. This page displays the Network Profiles and CICMs that are currently associated to this Enterprise Profile. The **Profile up to date on the Associated CICMs** field indicates whether or not the Enterprise Profile has been downloaded to its associated CICMs.*

enterprise profile edit

enterprise profile ⓘ

Enterprise Name: kullyboy

Profile up to date on Associated CICMs: No

Transfer Connection Retries: 0

associated network profiles: 47.0.0.0 / 255.0.0.0

associated CICMs: cxip220

- ▶ save transfer retries
- ▶ associated network profiles
- ▶ associated CICMs
- ▶ audit enterprise profile
- ▶ apply enterprise profile to all associated CICMs
- ▶ Cancel

- 3 To associate Network Profiles to the selected Enterprise Profile:
- Click on the **associated network profiles** option on the right menu.

*Response: The **network profiles associated with enterprise profile <name>** page opens and lists the current associations.*

network profiles associated with enterprise profile kullyboy

Associated Network Profiles ⓘ

address	subnet	retries	disassociate
47.0.0.0	255.0.0.0	2	<input type="checkbox"/>

- ▶ associate one or more network profiles
- ▶ disassociate selected network profiles
- ▶ Cancel

- To associate additional profiles, click on the **associate one or more network profiles** option on the right menu.

*Response: The **network profile association with enterprise profile <name>** page opens to display a list of*

Network Profiles available to associate to the selected Enterprise Profile.

The screenshot shows the 'Centrex IP Client Manager' interface. On the left is a navigation menu with options like CICM, status, configuration, terminals, users, maintenance, CICM-EM, status, and synchronization. The main area is titled 'network profile association with enterprise profile kullyboy'. It contains a table with columns for Address, Subnet, Retries, and Associate. To the right of the table are two buttons: 'associate selected network profiles' and 'Cancel'.

Address	Subnet	Retries	Associate
47.130.34.100	255.255.255.0	1	<input type="checkbox"/>
47.130.120.12	255.0.0.0	1	<input type="checkbox"/>
47.165.230.101	255.255.255.255	6	<input type="checkbox"/>
47.165.230.102	255.255.255.255	6	<input type="checkbox"/>

- c Click in the check box of the **Associate** field to select the Network Profile(s) to associate this Enterprise Profile to, then click on the **associate selected network profiles** option on the right menu.

*Response: The **associating network profile(s)** page opens to display the results of the action.*

Note: Any modified profiles must be re-applied to the CICM (Step 7 of this procedure) to be effective.

- 4 To disassociate Network Profiles to the Enterprise Profile, from the **enterprise profile edit** page:
 - a Click on the **associated Network Profiles** menu option on the right menu.

*Response: The **network profiles associated with enterprise <name>** page opens to display the Network Profiles currently associated to the Enterprise Profile.*
 - b In the **disassociate** field, select the Network Profile to be disassociated from the Enterprise Profile by clicking the check box,
 - c Then click on the **disassociate selected network profile(s)** menu option on the right menu.

*Response: The **disassociating network profile(s)** page opens to display the results of the action.*
- 5 To associate CICMs to the Enterprise Profile: from the **enterprise profile edit** page:
 - a Click the **associated CICMs** menu option on the right menu.

*Response: The **cicms associated with enterprise profile <name>** page opens to display the current CICM associations.*

- b** Click on the **associate one or more cicms** option on the right menu.

*Response: The **cicm association with enterprise profile <name>** page opens to display a list of available CICMs to associate.*

- c** Select the CICMs to associate, then click on the **associate selected CICMs** text bar on the right menu.

*Response: The **associating cicm(s)** page opens to display the results of the action.*

- 6** To disassociate CICMs to the Enterprise Profile:
from the **enterprise profile edit** page:

- a** Click the **associated CICMs** menu option on the right menu.

*Response: The **cicms associated with enterprise profile <name>** page opens to display the current CICM associations.*

- b** Select the CICMs to disassociate by clicking in the **Disassociate** field check box, then click on the **disassociate selected CICMs** menu option on the right.

*Response: The **disassociating cicms** screen opens to display the results of the action.*

7

ATTENTION

This step is required to apply all profile association/disassociation changes to the CICMs.

Upon completion of the Network Profile and CICM associations and disassociations, on the **enterprise profile edit** page, click on the **apply enterprise profile to all associated CICMs** option on the right menu bar.

*Response: The **enterprise profile application results** page opens to display the results of the action, and confirms the successful completion.*

- 8** This procedure is complete.

Procedure 18 Delete an Enterprise Profile

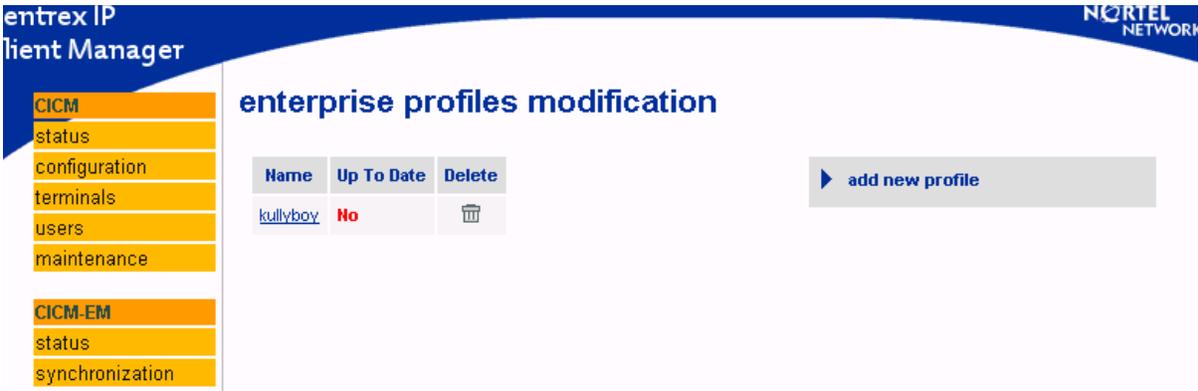
ATTENTION

All CICMs and Network Profiles must be disassociated from the Enterprise Profile before it can be deleted. Use the *Edit an Enterprise Profile* procedure above first to disassociate all CICMs and Network Profiles from the Enterprise Profile to be deleted.

At the CICM - Element Manager home page

- 1 Select **enterprise profiles** from the left navigation bar.

*Response: The **enterprise profiles modification** page opens to display the current list of Enterprise Profiles.*



- 2

ATTENTION

The state of the Enterprise Profile (indicated in the Up To Date field on the enterprise profiles modification page) must be set to Yes before the Enterprise Profile can be deleted.

Refer to Table 1 in Procedure 18 for a definition of the Profile Up To Date on Associated CICMs field. Apply the Enterprise Profiles to the associated CICMs to change this Up to Date field to Yes, then proceed to delete the Enterprise Profile.

In the **Delete** field, click on the delete (trash can) icon corresponding to the Enterprise Profile to be deleted.

Response: The results of the action is displayed, and the deletion is confirmed.

3 This procedure is complete.

Audit an Enterprise Profile

Use the following procedure to audit an Enterprise Profile on its associated Network Profiles and CICMs. The resulting audit report facilitates correct profile associations.

Procedure 19 Audit an Enterprise Profile

At the CICM - Element Manager home page

1 Select **enterprise** from the **profiles** section of the left navigation bar.

*Response: The **enterprise profiles modification** page opens to display the current list of Enterprise Profiles.*

2 Click on the Enterprise Profile to audit from the list of current profiles.

*Response: The **enterprise profile edit** page opens.*



3 Click on the **audit enterprise profile** option on the right menu.

*Response: Datafill related to the Enterprise Profile and its associated CICMs is checked, and the **Audit of Enterprise Profile < name> upon associated CICMs** report is displayed.*

- 4 This procedure is complete.

Language profiles

A Language Profile is a language file which support language selection for the Ethersets. Multiple languages are supported for the Ethersets and CICM SoftClients. A Language Profile must be applied to the specific CICM for the Ethersets to access a particular language.

Note: Although multiple languages are available on the m6350 SoftClient, the Language Profile does not apply to it. For information on language selection on the CICM SoftClient, refer to the *m6350 Centrex IP SoftClient User Guide*.

Language profiles available are English, German, Spanish, Italian and French. They are stored on the Element Manager and applied automatically to CICMs. Language profiles may be viewed from the Element Manager Web pages, but they cannot be created or changed. New languages will be added via new software releases or language patches.

Procedure 20 View Language Profiles

At the Element Manager home page

- 1 Select **language** from the **profiles** section of the left navigation bar.

*Response: The **language profile home** page opens.*

entrex IP
Management

CICM
status
configuration
terminals
users
maintenance

CICM-EM
status
synchronization

profiles
audio
enterprise
language
network

language profile home

All current language profiles (English, German, Spanish, Italian and French) are available. New languages will be added via a new software release or language patch. This is available from the next level of support.

▶ view the profiles stored on the following CICM
cxi110 ▼

- Note:** Standard language profiles of English, French, German, Italian, and Spanish are currently provided.
- 2 Select the CICM from the drop-down menu on the **view the profiles stored on the following CICM** option on the right menu, then click on the **view the profiles stored on the following CICM** text.

*Response: The **language profiles modification (cicm_name)** page opens.*

Note: This is a view-only page. Language profiles cannot be modified.

Centrex IP Client Manager

language profiles modification (cicm-002)

All current language profiles (English, German, Spanish, Italian and French) are available. New languages will be added via a new software release or language patch. This is available from the next level of support.

Languages		
Name	Filename	Status
Deutsch	Lang_German.dll	Disabled
Español	Lang_Spanish.dll	Active
English (US)	Lang_English_US.dll	Active
Français	Lang_French.dll	Active
Italiano	Lang_Italian.dll	Active
English (UK)	lang_English_UK.dll	Active

3 This procedure is complete.

Network Profiles

Network Profiles define the IP address domains that are supported by the CICM. Only terminals from within a valid IP address domain can be connected to the CICM. An IP address domain is identified by the network device that connects it to the public IP address space that contains the CICM. Typically, this is a Network Address Translation (NAT) device. Refer to the **NAT and firewalls** section in the *NN 10252-611 CICM Security and Administration* document for additional information.

Centrex by definition is a carrier-hosted featured voice service offer to enterprises. Centrex IP maintains feature transparency to CS2K Centrex. One key difference between Centrex and Centrex IP is that with Centrex IP, enterprises are served over a converged IP network instead of a CS2K network. Each enterprise has its own enterprise IP network. It normally uses private IP addresses for communication within the enterprise, and public IP addresses for communication outside the enterprise through a Network Address Translator (NAT) associated with its gateway router.

Each enterprise IP network is uniquely represented by a network profile on the CICM that serves this enterprise. A Network Profile identifies the IP address domain of the enterprise, represented by the public IP address of the enterprise NAT, along with an associated VMG that serves this enterprise.

Network Profiles provide an effective means for authentication and control of Centrex IP traffic. Centrex IP traffic is only allowed to flow between the CICM and the IP address domains that are specified by the Network Profiles on the CICM.

Network profiles can only be created, changed and deleted by an administrator. They are stored on the Element Manager and applied to a CICM.

Network profile configuration changes are immediately effective for new terminal connections. You do not need to restart the CICM to implement the changes; they are immediate. However, it is required to restart terminals if they are assigned a new network domain.

Enterprise IP address domain representation For terminals behind a NAT, this NAT presence must be defined in the network profile. The network profile specifies the public IP address and the subnet of the NAT, and (optional) the associated VMG. This essentially specifies an IP address domain being served by a VMG, just as a NAT defines an IP address domain.

For an enterprise that uses public IP addresses (i.e. no NAT is needed), the administrator can still create a Network Profile for it, either by using the network domain "0.0.0.0, 0.0.0.0" or by specifying the subnet from which those customers originate (e.g. 47.165.169.0, 255.255.255.0).

VMG association There are three possible ways that a Network Profile may be associated with VMGs, depending on the number of terminals in the enterprise.

- For an enterprise with up to 639 terminals, the Network Profile of this enterprise needs to be associated with one VMG only.
- For an enterprise with more than 639 terminals, the Network Profile of this enterprise needs to be associated with two or more VMGs. Each VMG has a maximum of 639 terminals.
- One VMG can be associated with multiple small-sized enterprises whose terminals together add up to 639. In this case, the intraswitching for that VMG on the CS2K has to be turned off.

The purposes for making VMG associations are:

- Security
A user in one enterprise network domain cannot log in as a user from another enterprise because the VMG association only allows

users from an enterprise to log in from the enterprise's own IP domain.

- **Administrative checkpoint**
Each VMG can be associated with a single network domain to provide an administrative checkpoint. If your intent is to put intraswitching on a VMG, associate the VMG with a single network profile.
- **Terminal count**
The CICM keeps a count of the terminals in each network domain and records the high water mark.

Example: Network domain addressing In this section an example is provided to illustrate the concept of network domain addressing. In this example, there are the following two enterprises:

- Enterprise 1 has a NAT with a single public address 47.165.168.100, and is served off VMG1.
- Enterprise 2 has a NAT with a single public address 47.165.168.200, and is served off VMG2.

Intraswitching is VMG specific. It is only activated for calls between two lines on the same VMG. It is recommended to activate intraswitching because of the following advantages:

- Improved voice quality
- Increased CICM capacity
- Reduced bandwidth requirements from the enterprise to the carrier

However, intraswitched calls cannot traverse NAT boundaries (for example, a call between a user in enterprise 1 and a user in enterprise 2), for the following reasons:

- Routing will likely be blocked for security purposes (e.g. firewall rules that prevent it).
- RTP packets use non-routable private IP addresses that are either overlapped between two enterprises, or viewed unreachable.

The two enterprises will be configured through the CICM Element Manager's Network Profile Web page as follows:

- Enterprise 1: 47.165.168.100, 255.255.255.255
- Enterprise 2: 47.165.168.200, 255.255.255.255

The mask 255.255.255.255 informs CICM to consider only clients originating from the single IP address 47.165.168.100 to be in Enterprise 1.

A user in Enterprise 1 network domain cannot log in as a user from Enterprise 2 because the VMG association only allows users from an enterprise to log in from the enterprise's own IP domain.

In this example, if a new Enterprise 3 is created and the administrator wants to use spare capacity from VMG2, the association will prevent it. If new users from Enterprise 3 are assigned to VMG2 and the intraswitching for VMG2 on the CS2K is turned on, they can't log in until the association is removed or the intraswitching for VMG2 on the CS2K is turned off.

NATs often only have a single IP address into which they multiplex the active connections by mapping them to unique ports. A NAT with four interfaces, for example, would be datafilled with the two least significant bits missing. Thus for 47.165.168.100, the mask 255.255.255.252 would permit addresses 47.165.168.100, 101, 102, and 103 to be considered part of the network domain.

Users in Enterprise 1 will be configured with LENS on VMG1, and users in Enterprise 2 will be configured with LENS on VMG2.

Procedure 21 Create a Network Profile

At the CICM - element manager home page

- 1 Click on the **network** option on **Profiles** section of the left navigation bar.

*Response: The **network profiles modification (cicm-em)** page opens.*

ntrex IP
ent Manager
NORTEL
NETWO

- CICM
- status
- configuration
- terminals
- users
- maintenance
- CICM-EM
- status
- synchronization
- profiles
- audio
- enterprise
- language
- network
- user
- feature
- diagnostics
- diagnostics

network profiles modification (cicm-em) (no sync)

The CS2000 maintains a network topology database. CICM terminals must be assigned to the appropriate network location before call processing can be performed correctly. There are two ways that the location of a terminal can be determined:

- Network Profile.** A mapping can be created identifying IP address ranges that represent the network location. This is typically the public address range for the network address translation device connecting a remote location.
- Auto-Discovery Networks.** The terminal can provide its location after obtaining it from a server on its local network (e.g. DHCP server).

Network Profiles

Address	Subnet	Network Location	Enterprise Profile	Default Location Information	Delete
0.0.0.0	0.0.0.0	CS-LAN		None specified	
47.135.42.218	255.255.255.255	cablabCICMEnterprise1		None specified	
47.135.42.219	255.255.255.255	cablabCICMEnterprise3		None specified	
47.135.42.220	255.255.255.255	cablabCICMEnterprise2		None specified	

Auto-Discovery Networks

Network Location	Enterprise Profile	Default Location Information
alteonott2		None specified
cablabCICMEnterprise1		None specified
cablabCICMEnterprise2		None specified
cablabCICMEnterprise3		None specified

- ▶ add new profile
- ▶ apply one or more profiles stored on the CICM-EM to one or more CICMs
- ▶ change the profiles stored on the following CICM
- ▶ update auto-discovery networks

- 2 Click on the **add new profile** option on the right menu.
*Response: The **network profile creation (cicm-em)** page opens.*

Centrex IP Client Manager

NORTEL NETWORKS

CICM

status

configuration

terminals

users

maintenance

CICM-EM

status

synchronization

profiles

audio

enterprise

language

network

user

feature

network profile creation (cicm-em) [no sync]

Details ?	
Address	<input type="text"/>
Subnet	<input type="text"/>
Lease Period (min)	<input type="text"/>
Retry Count	<input type="text" value="2"/>
Associated enterprise profile	<input type="text"/>
Associated network location	CS-LAN ▼
Associated Limited Bandwidth Link Identifier	<input type="text"/>

▶ create profile

▶ edit default location information

▶ return to network profile modification

3 Datafill the network profile fields.

Note: Click on the ? icon for detailed definitions of these fields.

- a **Address.** This specifies the network address of the subnet that contains the range of public addresses available to a NAT device.
- b **Subnet.** This specifies the subnet mask for the subnet that contains the range of public addresses available to a NAT device.
- c **Lease period (minutes).** The defined period for which any UDP port mapping is defined.

Note: For 2.5 EM and 2.5 gateways, the lease period is set at 2 minutes, and cannot be changed. The lease period field in the **network profile creation** page will be greyed out and have a **2** entry.

For 2.5 EM and pre-2.5 gateways, and for 6.12 EM and 6.12 gateways, the lease period is variable and the field can be datafilled.

For 7.0 EM and 7.0 gateways, the lease period is variable and the field can be datafilled.

- d Retry count.** The Retry count is the number of times a terminal will attempt to connect to a CICM node before it fails over and attempts to connect to the other node. A terminal connecting to a CICM with an IP address described by this Network Profile will have this retry connection count. This Network Profile needs to have been applied to the CICM or be associated with an Enterprise Profile which has been applied to the CICM for this to take effect. Leaving the field blank will result in the retry count taken from the Terminals Settings for that CICM.
- e Associated Enterprise Profiles.** (Read only) This field shows the Enterprise Profile associated with this Network Profile. The association is made from the Enterprise Profile to the Network Profile, and is shown here for information only.
- f Associated VLCM/VMG.** This option is only shown when editing a profile on a specific CICM.

Intraswitching can only be successful if both terminals in the call are hosted in the same network domain. To prevent calls from failing when this condition is not met, a VLCM/VMG can be associated with a particular network domain. Only terminals hosted in the network domain that a particular VLCM/VMG is associated with are permitted to log in to lines hosted on that VLCM/VMG.

Note 1: A pre-2.5 CICM cannot be associated to an Enterprise Profile.

Note 2: A Network Profile created on a pre-2.5 EM cannot be associated to an Enterprise Profile. It is recommended to delete Network Profiles created on pre-2.5 EMs, and re-create them (if needed) on the upgraded 2.5, 6.12, or 7.0 EM.

- g Global Middlebox Name/ID.** These two fields are visible only temporarily. The value of these fields are derived from the CS2000 Management Server.
 - h Associated network location.**
 - i Associated Limited Bandwidth Link Identifier.**
- 4 After completing the field datafill click on the **create profile** menu option.
*Response: The **profile creation results** page displays the results of the action.*
 - 5 This procedure is complete.

Procedure 22 Change a Network Profile

At the CICM - element manager home page on the Element Manager Web pages

- 1 Select the **Network** option from the **Profiles** section of the left navigation bar.

Response: The network profiles modification (cicm-em) page opens.

The screenshot shows the 'network profiles modification (cicm-em)' page in the Nortel Element Manager. The left navigation menu is visible, with 'profiles' selected. The main content area contains the following text:

The CS2000 maintains a network topology database. CICM terminals must be assigned to the appropriate network location before call processing can be performed correctly. There are two ways that the location of a terminal can be determined:

- **Network Profile.** A mapping can be created identifying IP address ranges that represent the network location. This is typically the public address range for the network address translation device connecting a remote location.
- **Auto-Discovery Networks.** The terminal can provide its location after obtaining it from a server on its local network (e.g. DHCP server).

Network Profiles

Address	Subnet	Network Location	Enterprise Profile	Default Location Information	Delete
0.0.0.0	0.0.0.0	CS-LAN		None specified	
47.135.42.218	255.255.255.255	cablabCICMEnterprise1		None specified	
47.135.42.219	255.255.255.255	cablabCICMEnterprise3		None specified	
47.135.42.220	255.255.255.255	cablabCICMEnterprise2		None specified	

Auto-Discovery Networks

Network Location	Enterprise Profile	Default Location Information
alteonott2		None specified
cablabCICMEnterprise1		None specified
cablabCICMEnterprise2		None specified

The right-hand sidebar contains the following actions:

- add new profile
- apply one or more profiles stored on the CICM-EM to one or more CICMs
- change the profiles stored on the following CICM (dropdown menu showing 'cicm-002')
- update auto-discovery networks

- 2 Click on the IP address of the network profile to edit.

Response: The network profile <IP_address/subnet> (cicm-em) page opens.

ntrex IP
ent Manager

CICM
status
configuration
terminals
users
maintenance

CICM-EM
status
synchronization

profiles
audio
enterprise
language
network
user
feature

diagnostics
diagnostics

network profile '47.135.42.218/255.255.255.255' (cicm-em)

Details	
Address	<input type="text" value="47.135.42.218"/>
Subnet	<input type="text" value="255.255.255.255"/>
Lease Period (min)	<input type="text" value="2"/>
Retry Count	<input type="text" value="2"/>
Associated enterprise profile	<input type="text"/>
Associated network location	<input type="text" value="cablabCICMEnterprise1"/>
Associated Limited Bandwidth Link Identifier	<input type="text"/>

Default location information	
Default civil location	No civil location specified
Default civil location (DHCP format)	No civil location specified
Default spatial location	No spatial location specified
Default spatial location (DHCP format)	No spatial location specified

save your changes to this profile

edit default location information

return to network profile modification

- 3** Edit the network profile fields in the **Details** section as required, then click on the **save your changes to this profile** option on the navigation bar on the right.

Note: Click on the ? icon for definitions of these fields.

*Response: The **profile save results** page confirms the update completion.*

- 4** To edit **default location information**:
- Click on the edit default location information option in the navigation bar on the right.

*Response: The **edit default location information: <IP_address/subnet** page opens.*

- Datafill the fields in the **Type of Location**, **Civil Location**, and **Spatial Location** sections, then click on **save changes**.

Note: Click on the ? icon for definitions of these fields.

5 This procedure is complete.

Procedure 23 Delete a Network Profile

At the CICM - element manager home page of the element manager Web pages

1 Select the **Network** option from the **Profiles** section of the left navigation bar.

Response: The network profiles modification (cicm-em) page opens.

The screenshot shows the 'network profiles modification (cicm-em)' page. The left navigation menu includes options like CICM, status, configuration, terminals, users, maintenance, CICM-EM, status, synchronization, profiles, audio, enterprise, language, network, user, feature, diagnostics, and diagnostics. The main content area has a title 'network profiles modification (cicm-em) [no_sync]' and a description: 'The CS2000 maintains a network topology database. CICM terminals must be assigned to the appropriate network location before call processing can be performed correctly. There are two ways that the location of a terminal can be determined: • Network Profile. A mapping can be created identifying IP address ranges that represent the network location. This is typically the public address range for the network address translation device connecting a remote location. • Auto-Discovery Networks. The terminal can provide its location after obtaining it from a server on its local network (e.g. DHCP server).' Below this is a table titled 'Network Profiles' with columns: Address, Subnet, Network Location, Enterprise Profile, Default Location Information, and Delete. The table contains four rows of profile data. To the right of the table is a sidebar with buttons: 'add new profile', 'apply one or more profiles stored on the CICM-EM to one or more CICMs', 'change the profiles stored on the following CICM' (with a dropdown menu showing 'cicm-002'), and 'update auto-discovery networks'.

Address	Subnet	Network Location	Enterprise Profile	Default Location Information	Delete
0.0.0.0	0.0.0.0	CS-LAN		None specified	
47.135.42.218	255.255.255.255	cablabCICMEnterprise1		None specified	
47.135.42.219	255.255.255.255	cablabCICMEnterprise3		None specified	
47.135.42.220	255.255.255.255	cablabCICMEnterprise2		None specified	

2 Click on the **Delete** (trash can) icon for the Network Profile to delete.

Response: The deletion action is confirmed.

3 Click on the **delete** (trash can) icon for the network IP address to be deleted.

Response: The status page confirms the deletion.

4 This procedure is complete.

Procedure 24 Apply a Network Profile stored on the EM to a CICM

At the network profiles modification (cicm-em) page of the element manager Web pages

- 1 Click on the **apply one or more profiles stored on the CICM-EM to one or more CICMs** option on the menu on the right.

*Response: The **apply network profile** page opens.*

- 2 Datafill the **Profile** and **CICM** fields.
Note: Click on the ? icon for definitions of these fields.
- 3 Click the **apply profile(s)** menu option on the right.
*Response: The **profile apply results** status page opens and confirms completion.*
- 4 This procedure is complete.

Procedure 25 Enable/disable network domain address licensing

At the network profiles modification (cicm-em) page of the element manager Web pages

- 1 Select the CICM applicable from the drop-down menu in the **change the profiles stored on the following CICM** menu option on the right, then click on the **change the profiles stored on the following CICM** text.

*Response: The **network profiles modification (<cicm_name>)** page opens.*

network profiles modification (cicm-200)

The CS2000 maintains a network topology database. CICM terminals must be assigned to the appropriate network location before call processing can be performed correctly. There are two ways that the location of a terminal can be determined:

- **Network Profile.** A mapping can be created identifying IP address ranges that represent the network location. This is typically the public address range for the network address translation device connecting a remote location.
- **Auto-Discovery Networks.** The terminal can provide its location after obtaining it from a server on its local network (e.g. DHCP server).

Network Profiles

Address	Subnet	Network Location	Enterprise Profile	Default Location Information	Delete
0.0.0.0	0.0.0.0	CS-LAN		None specified	
47.135.42.218	255.255.255.255	cablabCICMEnterprise1		None specified	
47.135.42.219	255.255.255.255	cablabCICMEnterprise3		None specified	
47.135.42.220	255.255.255.255	cablabCICMEnterprise2		None specified	

change network profiles stored on the CICM-EM

Enable Network Domain Address Licensing

- 2 On the right menu bar, click on the **Enable/Disable Network Domain Address Licensing** text bar to toggle between **enable** and **disable**, as required.

Response: A status page opens and confirms the results of the action.

- 3 This procedure is complete.

User Profiles

A User Profile is a set of default settings for a group of users. A User Profile can contain feature key settings, language, timezones, and permissions.

User profiles may be created, changed and deleted. They are stored on the Element Manager and applied to a selected CICM.

A user will inherit settings from the user profile configured, unless overridden locally. Overrides to user profiles may be applied or deleted by the administrator.

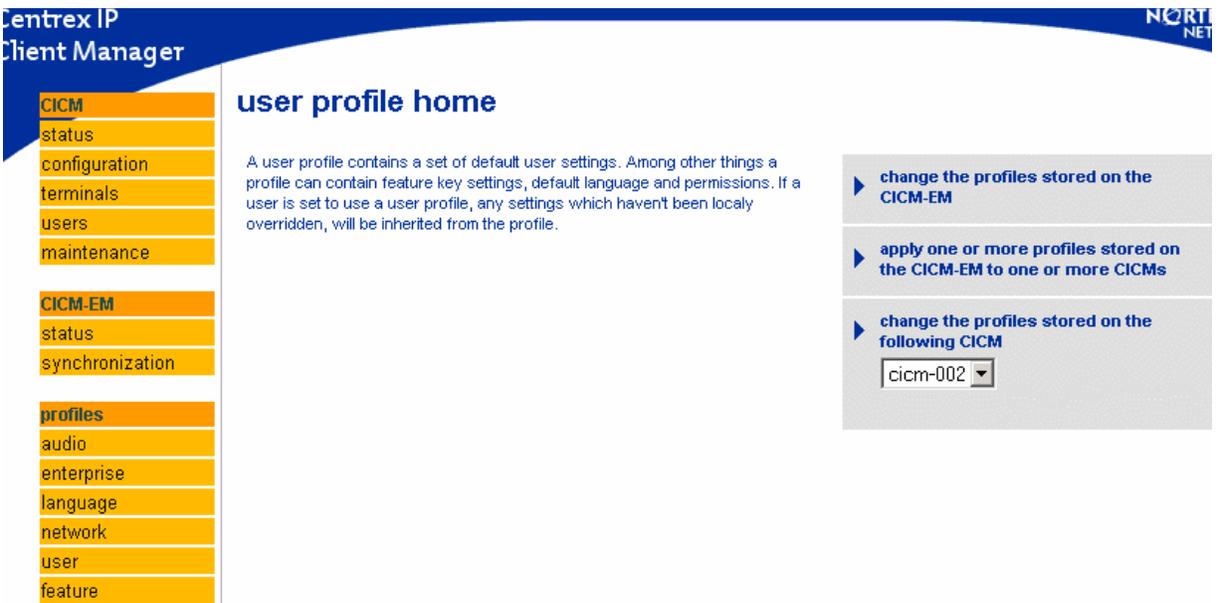
Note: To create users (user ID, password, etc.), refer to the *Security and Administration* section of this document.

Procedure 26 Create a User Profile

At the CICM - Element Manager home page

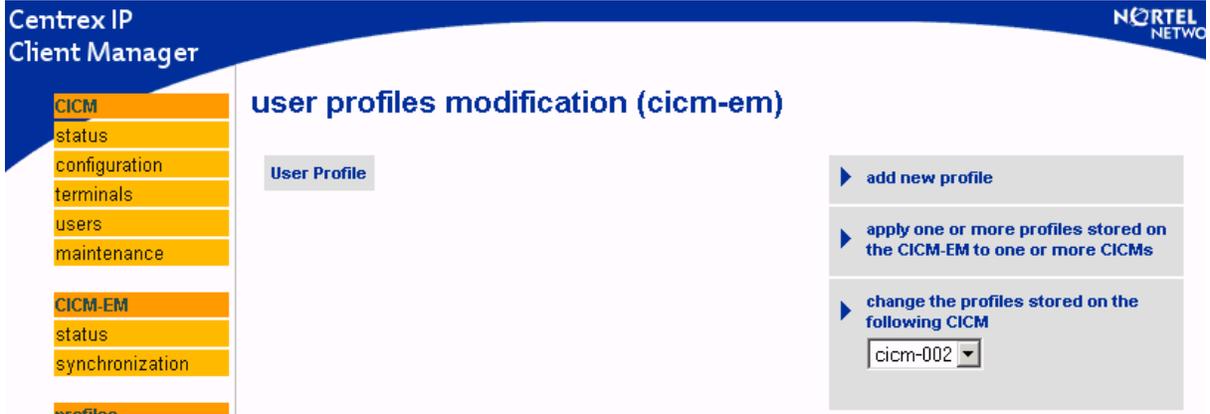
- 1 Select **user** from the **Profiles** section of the left menu bar.

Response: The user profile home page opens.

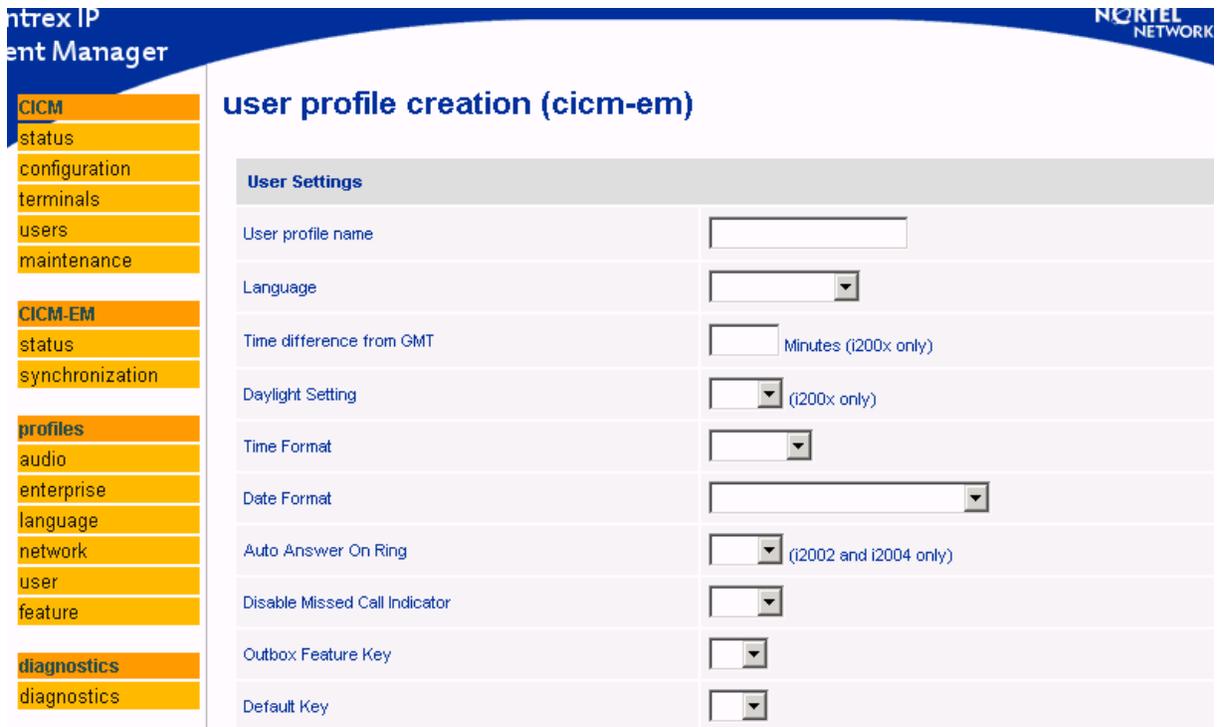


- 2 Click on the **change the profiles stored on the following CICM-EM** menu option on the right.

Response: The user profiles modification (cicm-em) page opens.



- 3 Click on the **add new profile** option on the right menu.
*Response: The **user profile creation (cicm-em)** screen opens.*



- 4 Datafill the fields, then click on the **create profile** menu option on the right.
Note: For definitions of these fields, click on the ? icon for each field.

*Response: The **user creation results** screen displays confirmation of file creation. The user profile is stored on the CICM Element Manager.*

- 5 This procedure is complete.

Procedure 27 Change a User Profile

At the user profile home page on the Element Manager Web pages

- 1 Select the **change the profiles stored on the CICM-EM** menu option on the right.

*Response: The **user profiles modification (cicm-em)** page opens.*



- 2 Click on the user profile name that you want to modify.
*Response: the **user profile edit** page opens.*
- 3 Revise the user profile fields as required, then click on the **save your changes to this profile** menu option on the right.

Note: For definitions of these fields, click on the ? icon for each field.

Response: The status page opens and confirms completion of the edit.

- 4 This procedure is complete.

Procedure 28 Delete a User Profile

At the user profile home page on the Element Manager Web page

- 1 Click on the **change the profiles stored on the CICM-EM** menu option on the right.

*Response: The **user profiles modification (cicm-em)** page opens.*

- 2 Click on the **delete** (trash can) icon for the profile you want to delete.

Response: A status page opens and confirms the deletion.

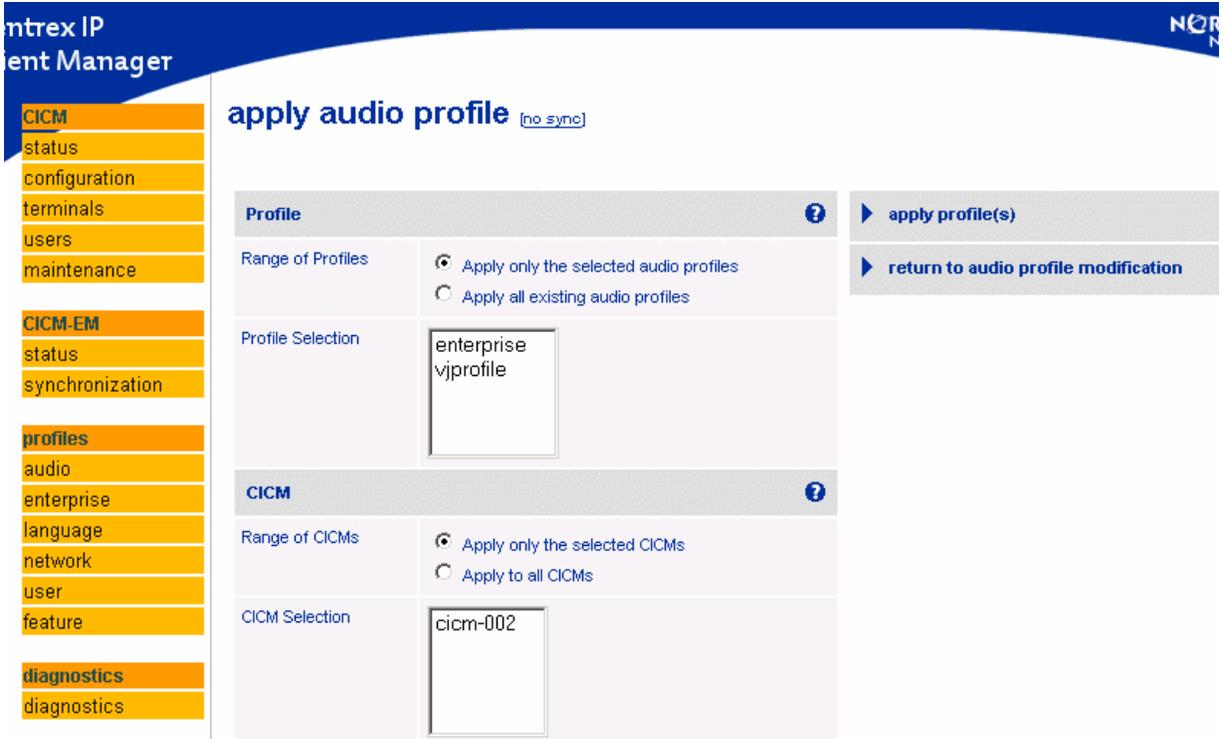
- 3 This procedure is complete.

Procedure 29 Apply a User Profile to a CICM

At the user profile home page of the element manager Web pages

- 1 Click on the **apply one or more profiles stored on the CICM-EM to one or more CICMs** menu option on the right.

*Response: The **apply user profile** page opens.*



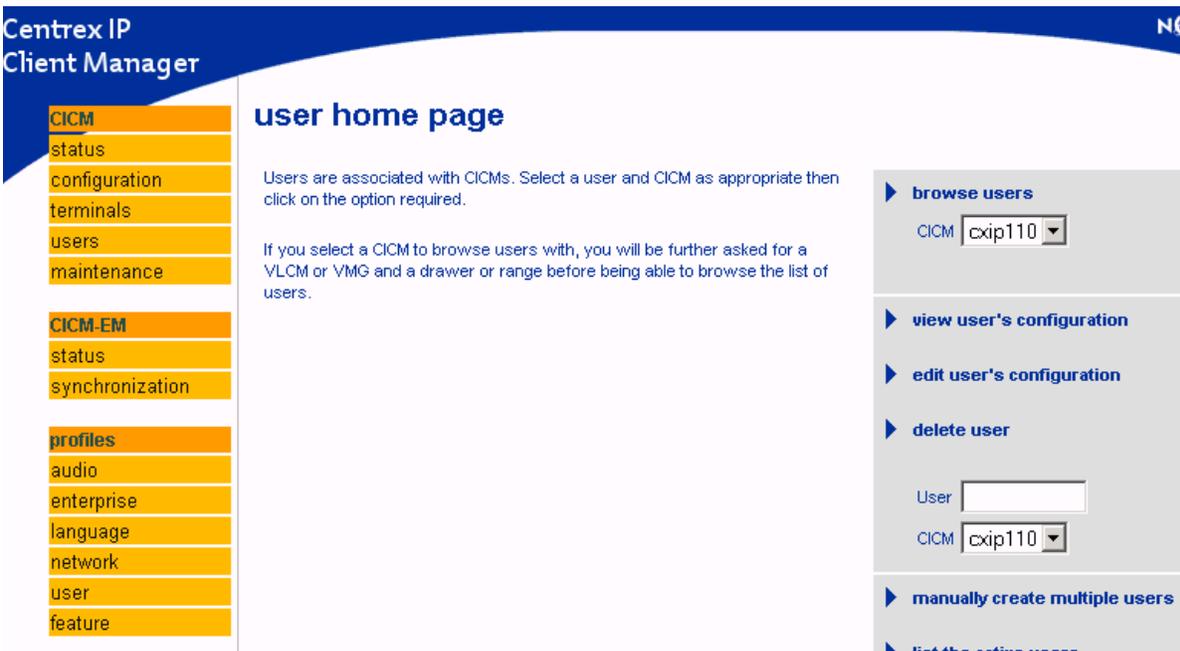
- 2 Select the profiles to apply and the CICMs to apply them to, by datafilling the fields on the **apply user profile** page.
 - Note 1:** Click on the ? icon for definitions of each field.
 - Note 2:** Use the **CTRL** key to select more than one CICM.
- 3 Click the **apply profile(s)** menu option on the right.
- 4 This procedure is complete.

Procedure 30 Apply/remove User Profile overrides

At the element manager home page

- 1 Click on the **users** option from the **CICM** section of the left navigation bar

*Response: The **user home page** opens*



At the user home page

- 2 Select the CICM from the **browse users** on drop-down menu, then click on the **browse users** on text.

*Response: The **users on CICM <cicm_name> (range <#-#> on vmg <name>)** page opens.*

users on cicm cicm-002 (range 0-63 on vmg 'vmg0') [\[no_sync\]](#)

Line No	User	User Profile	Operation ?	Line No	User	User Profile	Operation ?
0001	7230001	cicmDefault	delete	0032	7230032	cicmDefault	delete
0002	7230002	cicmDefault	delete	0033	7230033	cicmDefault	delete
0003	7230003	cicmDefault	delete	0034	7230034	cicmDefault	delete
0004	7230004	cicmDefault	delete	0035	7230035	cicmDefault	delete
0005	7230005	cicmDefault	delete	0036	7230036	cicmDefault	delete
0006	7230006	cicmDefault	delete	0037	7230037	cicmDefault	delete
0007	7230007	cicmDefault	delete	0038	7230038	cicmDefault	delete
0008	7230008	cicmDefault	delete	0039	7230039	cicmDefault	delete
0009	7230009	cicmDefault	delete	0040	7230040	cicmDefault	delete
				0041	7230041	cicmDefault	delete

browse users on
 CICM:
 VMG:
 Range:

view user's configuration
edit user's configuration
delete user

User:

- 3** In the User list, click on the user ID that you want to apply/remove overrides to,
 OR

Enter the user number in the **edit a user's configuration** menu option, then click on the **edit a user's configuration** text.

*Response: The **edit user <username> on <cicm_name>** page opens.*

ntrex IP
ent Manager

CICM
status
configuration
terminals
users
maintenance

CICM-EM
status
synchronization

profiles
audio
enterprise
language
network
user
feature

diagnostics
diagnostics

edit user 7230001 on cicm-002 [no sync]

User statistics ?	
User name	7230001
Total Call Count	0
Login Status	Idle
Master Terminal	none
Slave Terminal	none
Auto Login Terminals	none
Total Login Failures	0
Login Count	0
Login Failure Count	0
Login Time	None

User settings ?	
Password	<input type="password" value="XXXXXXXXXX"/>
Profile	cicmDefault ▾

CS2k Provisioning Information ?	
VMG	vmg0 ▾
Line Number	1 ▾

Audio profiles for recent terminals ?

- ▶ save changes
- ▶ force user logout
- ▶ user overrides
- ▶ reset user counters
- ▶ delete user
- ▶ back to user pages for cicm-002

- 4 Click on **user overrides** menu option on the right.

*Response: The **profile overrides for user <name> on <cicm_name>** page opens. The default settings are loaded from the user's profile (if one exists).*

entrex IP
Client Manager

NORTEL
NETWORKS

profile overrides for user 000001 on cxip180

This page allows you to save changes to an individual user, which will override the default settings which are loaded from the user's profile. Setting any field to blank will cause the CICM to use the setting from the user's profile.

User Settings	
User profile name	<input type="text" value="000001"/>
Language	<input type="text"/>
Tone Set	<input type="text"/>
Time difference from GMT	<input type="text"/> Minutes (i200x only)
Daylight Setting	<input type="text"/> (i200x only)
Auto Answer On Ring	<input type="text"/> (i200x only)
Disable Missed Call Indicator	<input type="text"/>
Outbox Feature Key	<input type="text"/>
Default Key	<input type="text"/>
Never auto-hide feature keys	<input type="text"/>
Number of Extension Modules	<input type="text"/> (m6350 only)
Disable Adv. Functionality	<input type="text"/> (i200x only)

- 5 Datafill the fields that you want to override for this user, then click on the **save changes** option on the right.
 - Note 1:** For field definitions, click on the ? icon for each field.
 - Note 2:** Fields datafilled will override the default settings on the user's profile.
 - Note 3:** Fields left blank will default to the user profile.
 - Note 4:** To remove an override in a particular field, set the field to blank.

Response: The status page opens to confirm the action taken.
- 6 To remove all overrides, click on the **remove all overrides** menu option on the right.

Response: The status page opens to confirm the action taken.
- 7 This procedure is complete.

Feature Profiles

The Feature Profile governs how features behave on the terminals supported by a CICM. The attributes of each feature can cause the feature to be hidden or shown, based on the state of other features on the terminal. This allows maximum use to be made of the limited number of feature keys available on some terminals.

Use the following procedure to configure Feature Profiles.

Procedure 31 Configure Feature Profile

At the CICM - Element Manager home page

- 1 Select **feature** from the **profiles** section of the left navigation bar.

Response: The feature profile home page opens.

The screenshot shows the 'feature profile home' page in the Client Manager. The left navigation bar is on the left, with 'feature' selected under the 'profiles' section. The main content area has the following text:

feature profile home

A feature profile governs how features behave on the terminals supported by a CICM .

The attributes of each feature can cause the feature to be hidden or shown based on the state of other features on the terminal. This allows maximum use to be made of the limited number of feature keys provided by some terminals.

Some features behave like a DN feature, this can be specified in another attribute. The CICM will attempt to record incoming calls onto DN features.

Note:

- Feature profiles only apply to a version 3.0 CICM or later
- You can't create or delete feature profiles, there is one predefined for each supported feature type.
- You may need to restart the CICM for changes in feature profiles to fully take effect.
- Care should be taken when changing feature profiles because some changes may cause undesirable effects.

On the right side, there are three action buttons:

- ▶ change the profiles stored on the CICM-EM
- ▶ apply one or more profiles stored on the CICM-EM to one or more CICMs
- ▶ change the profiles stored on the following CICM
 - cxip110

- 2 Select the relevant CICM from the drop-down menu on the right navigation bar, then click on the **change the profiles stored on the following CICM** text.

Response: The feature profiles modification (<cicm_name>) page opens. This provides the feature profile, for the CICM selected. The feature profile consists of a list of features; each feature has a set of attributes which can be configured.

Centrex IP Client Manager

- CICM
 - status
 - configuration
 - terminals
 - users
 - maintenance
- CICM-EM
 - status
 - synchronization
- profiles
 - audio
 - enterprise
 - language
 - network
 - user
 - feature
- diagnostics
 - diagnostics

feature profiles modification (cicm-201)

Name	Attributes
3 Way Call	Hide when DN Active
ACB	
Agent	DN Feature
Agent Stat	
AgentPDN	
ActSummary	
Ans_Agent	
Ans_Emerg	
AutoAnswer	
Autodial	
BLF	
BsvOverride	
Call Agent	
Call Back	
Call Force	
Call Super	
Call Wait	
CallCover	
Conference	Hide when DN Active
CtrlIFlow	
CustTrace	
CWD	
Dir_Park	
DN	DN Feature

change feature profiles stored on the CICM-EM

CICM-EM Version 7.11.144

- On the **feature profiles modification (<cicm_name>)** page, click on the name of each feature you want to configure.
*Response: The feature profile <#> (<cicm_name>) page opens for each feature chosen. The following figure illustrates the **3 Way Call** feature.*

4 Configure the feature as follows:

Note: Click on the ? icon for a definition of the fields.

- To configure this feature as a DN (dynamic) feature, choose **Yes** from the drop-down menu on the **DN Feature** line, or choose **NO** to not designate it as a **DN Feature**.
- To configure the **Hide Mode**, choose from the drop-down menu on the **Hide Mode** line:
 - Never
 - When DN is active
 - when DN is inactive
- Then click on the **save your changes to this profile** menu option.

*Response: The **profile save results** page displays configuration results.*

5 To configure other features, repeat step 3 and 4 for each feature.

6 This procedure is complete.

Enable/Disable Dynamic Feature Key

Use the following procedure 33 to enable/disable dynamic feature key functionality on a terminal type basis, using the EM Terminal Configuration Web pages. This setting cannot be overridden by any other setting (i.e. if the Dynamic feature key functionality is disabled on a terminal type basis the feature cannot be activated in any other way for that specific terminal type).

Note: Users logged into the gateway when the functionality is enabled/disabled will not pick up the changes until they log out and back into the CICM.

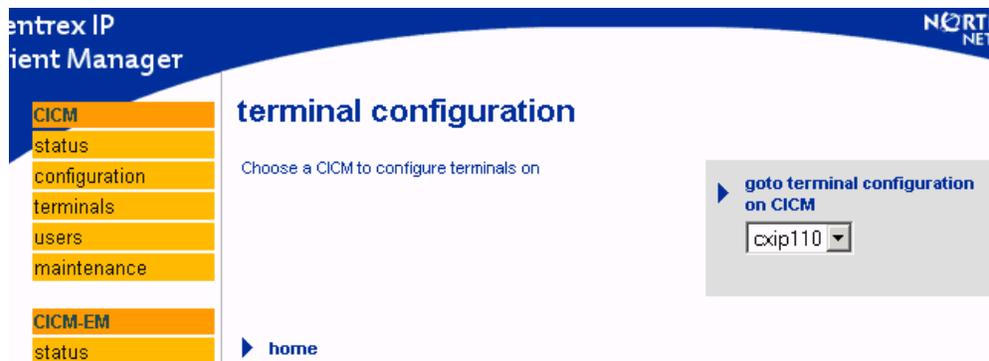
Use Procedure 33 to enable or disable the Dynamic Feature Key functionality by user overrides. These setting changes will take effect immediately.

The user may also disable the functionality from the terminal itself in the **Menu\Feature\Options** menu. These setting changes will take effect immediately.

Procedure 32 Enable/Disable Dynamic Feature key (terminal type)

At the CICM - Element Manager home page

- 1 Click on **terminals** from the **CICM** section of the left menu bar.
Response: The terminal configuration page opens.



- 2 Select the CICM from the drop-down menu, then click on the **go to terminal configuration on CICM** option.
Response: The terminals on <cicm_name> page opens.

Centrex IP Client Manager NORTEL NETWORKS

terminals on cicm-200

This page can be used to view settings for an individual terminal (if you know the terminal identifier) or it can provide an audit of the terminals on the CICM.

The firmware update page can be used to specify the supported firmware levels for a particular terminal type and the details on how terminals can be upgraded.

The configuration page can be used to specify the attributes of a particular terminal type. Care should be taken when configuring options on this page, the settings affect all terminals of the specified type on the gateway.

Terminal Settings ⓘ

Retry Count

- ▶ save retry count
- ▶ firmware auto update
- ▶ view terminal
- ▶ terminal audit
- ▶ firmware update
- ▶ configuration

- 3 On the **terminals on <cicm_name>** page, select the terminal type (m6350, IP Phone 2001, IP Phone 2002, or IP Phone 2004) you want to configure from the drop-down menu on the **configuration** option on the menu bar on the right, then click on the **configuration** option.

Response: The <type> terminal configuration <cicm_name> page opens. The following figure illustrates the IP Phone 200x type of terminal.

Centrex IP
Client Manager

CICM
status
configuration
terminals
users
maintenance

CICM-EM
status
synchronization

profiles
audio
enterprise
language
network
user
feature

diagnostics
diagnostics

i2004 terminal configuration (cicm-200)

Feature Key Attributes		?	▶ Apply changes
Number of physical feature keys (on the main set)	<input type="text" value="6"/>		
Number of features available on the main set (pages of features are used if there are not enough physical feature keys)	<input type="text" value="11"/>		
Automatically hide features	<input type="text" value="Yes"/>		
Number of extension modules supported	<input type="text" value="0"/>		
Number of features available on each extension module (max 22)	<input type="text"/>		
Voice Parameters		?	
Default Audio Profile	<input type="text" value="enterprise"/>		
Default Voice Codec	<input type="text" value="G.711 (Auto)"/>		
Secondary Voice Codec	<input type="text" value="G.729a"/>		
RTP port number (must be an even number)	<input type="text" value="25000"/>		
ACD Options		?	
Disable Handset	<input type="text" value="No"/>		
Disable Handsfree	<input type="text" value="No"/>		
Default Volume Settings		?	
Prevent users modifying Default Volumes	<input type="text"/>		

- 4 To configure this terminal type as a DN (dynamic) feature, choose **Yes** from the drop-down menu on the **Automatically hide features** key attribute, then click on the **Apply changes** text on the right.

Note: Users logged into the gateway when the functionality is enabled/disabled will not pick up the changes until they log out and back into the CICM.

*Response: The **updating terminal configuration** Web page opens to confirm the changes.*

- 5 This procedure is complete.

Procedure 33 Enable/Disable Dynamic Feature key (user)

overrides)

At the CICM - Element Manager home page

1 Click on **users** from the left CICM menu.

*Response: The **user home page** opens.*

The screenshot shows the 'Centrex IP Client Manager' interface. On the left is a navigation menu with categories: CICM (status, configuration, terminals, users, maintenance), CICM-EM (status, synchronization), profiles (audio, enterprise, language, network, user, feature), and diagnostics (diagnostics). The main content area is titled 'user home page' and contains the following text: 'Users are associated with CICMs. Select a user and CICM as appropriate then click on the option required.' and 'If you select a CICM to browse users with, you will be further asked for a VLCM or VMG and a drawer or range before being able to browse the list of users.' On the right is a navigation bar with options: 'browse users' (with a CICM dropdown set to 'cxip220'), 'view user's configuration', 'edit user's configuration', 'delete user' (with a User input field and a CICM dropdown set to 'cxip220'), 'manually create multiple users', 'list the active users', and 'edit the configuration of a range of users'.

2 Select the CICM from the drop-down menu on **browse users** option of the right navigation bar, then click on the **browse users** text.

*Response: The **users on CICM <cicm_name> (range # on vmg_name)** page opens.*

ix IP Manager NORTEL NETWORKS

users on cicm cicm-200 (range 0-63 on vmg 'vmg0')

Line No	User	User Profile	Operation ?	Line No	User	User Profile	Operation ?
				0032	7220032	cicmDefault	delete
0001	7220001	cicmDefault	delete	0033	7220033	cicmDefault	delete
0002	7220002	cicmDefault	delete	0034	7220034	cicmDefault	delete
0003	7220003	cicmDefault	delete	0035	7220035	cicmDefault	delete
0004	7220004	cicmDefault	delete	0036	7220036	cicmDefault	delete
0005	7220005	cicmDefault	delete	0037	7220037	cicmDefault	delete
0006	7220006	cicmDefault	delete	0038	7220038	cicmDefault	delete
0007	7220007	cicmDefault	delete	0039	7220039	cicmDefault	delete
0008	7220008	cicmDefault	delete	0040	7220040	cicmDefault	delete
0009	7220009	cicmDefault	delete	0041	7220041	cicmDefault	delete
0010	7220010	cicmDefault	delete	0042	7220042	cicmDefault	delete
0011	7220011	cicmDefault	delete	0043	7220043	cicmDefault	delete
0012	7220012	cicmDefault	delete	0044	7220044	cicmDefault	delete
0013	7220013	cicmDefault	delete	0045	7220045	cicmDefault	delete
0014	7220014	cicmDefault	delete	0046	7220046	cicmDefault	delete
0015	7220015	cicmDefault	delete	0047	7220047	cicmDefault	delete
0016	7220016	cicmDefault	delete	0048	7220048	cicmDefault	delete
0017	7220017	cicmDefault	delete	0049	7220049	cicmDefault	delete
0018	7220018	cicmDefault	delete	0050	7220050	cicmDefault	delete

► browse users on

CICM

VMG

Range

► view user's configuration

► edit user's configuration

► delete user

User

► manually create multiple users

► list the active users

► edit the configuration of a range of users

► automatically create a range of users

► audit users

- 3 From the list in the **User** column, click on the user name to configure

*Response: The **edit user <name> on <cicm_name>** page opens.*

ntrex IP
ent Manager

CICM
status
configuration
terminals
users
maintenance

CICM-EM
status
synchronization

profiles
audio
enterprise
language
network
user
feature

diagnostics
diagnostics

edit user 7230001 on cicm-002 [no sync]

User statistics ?	
User name	7230001
Total Call Count	0
Login Status	Idle
Master Terminal	none
Slave Terminal	none
Auto Login Terminals	none
Total Login Failures	0
Login Count	0
Login Failure Count	0
Login Time	None

User settings ?	
Password	<input type="password" value="*****"/>
Profile	<input type="text" value="cicmDefault"/>

CS2k Provisioning Information ?	
VMG	<input type="text" value="vmg0"/>
Line Number	<input type="text" value="1"/>

Audio profiles for recent terminals ?	
--	--

- ▶ save changes
- ▶ force user logout
- ▶ user overrides
- ▶ reset user counters
- ▶ delete user
- ▶ back to user pages for cicm-002

- 4 Click on the **User overrides** option on the right menu.
*Response: The **profile overrides for user <name> on <cicm_name>** Web page opens.*

IP Manager NORTEL NETWORKS

profile overrides for user 7220002 on cicm-200

This page allows you to save changes to an individual user, which will override the default settings which are loaded from the user profile (if one exists)
Setting any field to blank will cause the CICM to use the setting from the user's profile

User Settings	
User profile name	7220002
Language	<input type="text"/>
Tone Set	<input type="text"/>
Time difference from GMT	<input type="text"/> Minutes (i200x only)
Daylight Setting	<input type="text"/> (i200x only)
Time Format	<input type="text"/>
Date Format	<input type="text"/>
Auto Answer On Ring	<input type="text"/> (i2002 and i2004 only)
Disable Missed Call Indicator	<input type="text"/>
Outbox Feature Key	<input type="text"/>
Default Key	<input type="text"/>
Auto-hide feature keys	<input type="text"/>

- 5 To enable dynamic feature key functionality, choose **Yes** from the drop-down menu in the **Auto-hide feature keys User Setting** field,
OR
To disable dynamic feature key functionality, choose **No** from the drop-down menu in the **Auto-hide feature keys User Setting** field.
Then
Click on the **save changes** option on the right menu.
Response: A confirmation of the override change is displayed.
- 6 This procedure is complete.

Security profiles

The Security profile Web page allows for the configuration of CICM security features. There are three security features available:

- Management of RSA keys for the CICM-EM and its associated CICMs
- The ability to view the security policies of associated CICMs
- The ability to view the security policies of associated enterprises on a CICM-EM

The CICM-EM Security Web pages are illustrated in the following figures.

Figure 3 Security profile



Figure 4 Security: RSA keys

Centrex IP Client Manager

security configuration: rsa keys [no_sync]

Management of RSA Keys.

RSA Key	Status	Public Key Fingerprint	Actions
Current	Deallocated		Generate New RSA Key
Previous	Deallocated		

Push Action	Key to Propagate
(None Available)	

[security configuration](#)

Figure 5 View security policies of CICMs

Centrex IP Client Manager

security summary for cicms [no_sync]

Use this page to view the security settings for CICMs.

CICM	Default Security Policy	Non Secure Client Threshold	Secure Client Threshold	Reset Security
cicm-200	non secure	0	0	No View Terminal Settings
cicm-rtg	unavailable			

[security configuration](#)

Figure 6 View security policies of enterprises

Centrex IP Client Manager

security summary for enterprises [no_sync]

Use this page to view the security settings for enterprises.

Enterprise	Security Policy	Non Secure Client Threshold	Secure Client Threshold	Reset Security
------------	-----------------	-----------------------------	-------------------------	----------------

[security configuration](#)

Line provisioning for CICM clients

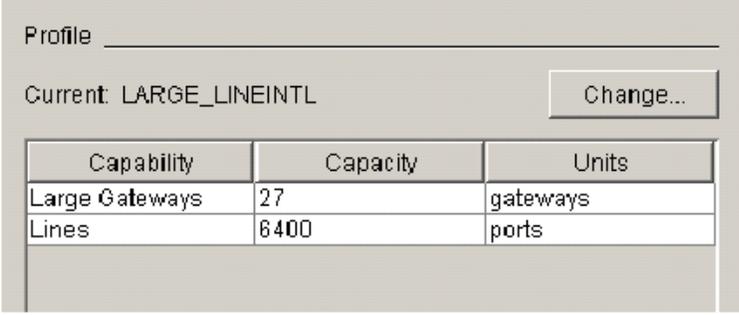
The procedure used to provision a CICM client on the CS2000 is very similar to the method used to provision a line on other line gateways.

Procedure 34 CS2000 Line provisioning for CICM clients

At the Element Manager desktop

- 1 Connect to the CS2000 Management Server for the chosen CS2000.
- 2 Ensure that the GWC is provisioned to support Large Lines Gateways.

Example:



The screenshot shows a configuration window with a 'Profile' field and a 'Current: LARGE_LINEINTL' label. A 'Change...' button is located to the right of the current profile name. Below this is a table with three columns: 'Capability', 'Capacity', and 'Units'. The table contains two rows of data: 'Large Gateways' with a capacity of 27 and units of 'gateways', and 'Lines' with a capacity of 6400 and units of 'ports'.

Capability	Capacity	Units
Large Gateways	27	gateways
Lines	6400	ports

- 3 Use the Associate Media Gateway dialog box to associate a CICM gateway with the chosen GWC.

Associate Media Gateway

Gateway name: rochan-2.nortel.net

Gateway IP address: 47.165.178.165

Gateway controller name: GWC-10

Gateway profile name: CICM

Gateway site name: LG

Signal Protocol

Protocol type: MEGACO (4)

Protocol port: 2944

Protocol version: 1.0

Selected Profile Contents

Reserved terminations: 1024

GWC profile number: 57

Service type: LINE

Category: 1

OK Cancel

Response 1: The Gateway List will display a registration of the CICM gateway against the GWC.

Gateway List

Name	IP Address	Profile	Max T...	Res ...	Protocol	Pr...	Prot...	PEP Ser...	NAT Na...	Node N...	N...
cxip120a.nortel.net	47.165.76.120	CXIPCM	1000	1000	megaco	1.0	2944	NOT_SET	NOT_SET	LG 00 4	30
rochan-2.nortel.net	47.30.178.165	CXIPCM	1024	1024	megaco	1.0	2944	NOT_SET	NOT_SET	LG 00 6	43
test.nortel.net	0.0.0.1	CXIPCM	1000	1000	megaco	1.0	2944	NOT_SET	NOT_SET	LG 00 5	41

Response 2: A logical group will automatically be created in table LGRPINV on the CS2000.

```

TABLE: LGRPINV
>lis all
TOP
GRPNO SRVRNAME GRPTYPE LGRPOPTS
-----
LG 00 0 GWC 6 C $
LG 00 1 GWC 13 C $
LG 00 2 GWC 14 C $
LG 00 3 GWC 15 C $
LG 00 4 GWC 9 C $
LG 00 5 GWC 9 C $
LG 00 6 GWC 9 C $ ← RESULTING ENTRY
BOTTOM
    
```

- 4 Log into OSSGATE and issue the NEW command to create new lines.

Example

```

NEW $ 8124012 M5216 ETB3PRIVGRPA 0 0 208 1 Y rochan-2.nortel.net tp/0002 $
      DN      LCC                               CIM Gateway          Endpoints
    
```

*Response 1:
On the CS2000 Management Server:*

Line List			
Name	Gateway	Node Number	Terminal Number
tp/0001	rochan-2.nortel.net	43	1
tp/0002	rochan-2.nortel.net	43	2

*Response 2:
On the CS2000 (use the QLEN command):*

```

>qlen 8124012
-----
LEN:      LG      00 6 00 01
TYPE: SINGLE PARTY LINE
SNPA: 208
DIRECTORY NUMBER:      8124012
LINE CLASS CODE: M5216 SET
CUSTGRP:  ETB3PRIVGRPA SUBGRP: 0  NCOS: 0  RING: Y
CARDCODE: GWLEBS      GND: N  PADGRP: PKNIL  BNV: NL MNO: Y
PM NODE NUMBER      :      43
PM TERMINAL NUMBER  :      2
OPTIONS:
  NONE
  KEY      DN
  ---      --
  1        DN          2088124012
  KEY      FEATURE
  ---      -----
  NONE

```

GWLEBS is the International Line Cardcode for pPhone/EBS sets. In North American markets this value will be RDTEBS

5 This procedure is complete.

Configure PAM authentication on a CICM-EM

Use the following procedure for configuring PAM authentication on a CICM-EM. There is no configuration for PAM authentication for the CICM.

Procedure 35 Configure PAM authentication on a CICM-EM

At the CICM

1 Telnet/connect to the EM node A and open a Command Line Interface (CLI).

2 Run the **preboot pamauth /interactive** command.

Response: The CLI presents the prompt:

Will this Element Manager use the PAM on the SSPFS to authenticate users? [Y/N, default=N].

3 Enter **Y**.

Note: You MUST have a trusted certificate on the IEMS before entering Y.

Response: The CLI presents the prompt:

Will this EM connect the PAM server via HTTPS? [Y/N, default=N]]

4 Enter **Y**.

Response: The CLI presents the prompt:

Please enter the IP address of the PAM server.

5 Enter the IP address of the PAM server.

Example

47.135.42.226

Response: The CLI presents the prompt to save or abort the command.

6 Enter **Y** to save

Response: The CLI presents the command summary to confirm the input, for example:

You have entered the name of the primary SSPFS PAM proxy as: 47.135.42.226 Is this correct? [Y/N, default=Y]

7 Enter **Y** to confirm the input.

Note: If you answer Y, you MUST have FTP's the .cer file to both EM nodes. The following sub-steps provide the procedure to install secure certificate on the EM.

a Connect to the PAM server via HTTPS? Y/N default = N.

Enter **Y**

b Enter the FQDN of the SSPFS PAM proxy:

- ucars0033c.ca.nortel.com = Cablab
- ucars0003c.ca.nortel.com = Ott2

c Enter the IP address of this PAM server

- 47.135.42.226 = Cablab
- 47.135.42.194 = Ott2

d Do you want to import a certificate? Y/N default = N

Enter **Y**

Note 1: A Security Certificate is required for communicating via HTTPS to the PAM server. If you are using a certificate purchased from a valid signing authority (e.g. Verisign, Thawte, etc.) then enter **N** to the prompt as the certificate will be automatically trusted. If you are using a self-signed or unsigned certificate, then answer **Y**, as it is required to import this type of certificate.

Note 2: Ensure that the unsigned certificate is placed on the EM before proceeding. If the certificate is not in the

current directory, then the path must be provided as part of the file name. e.g. C:\data\myCert.cer

- e Enter the certificate to use to validate the PAM server:
d:\data\cablab.cer

Connection to PAM via HTTPS

Primary SSPFS PAM Proxy FQDN:
ucars0033c.ca.nortel.com

Primary SSPFS PAM Proxy IP Address:
47.135.42.226

Security Certificate
d:\data\cablab.cer

- f **Is this correct? Y/N default = Y**
Enter **Y**

- 8 For this to take effect, you must stop, then start the PAM authentication service, as follows:
 - a At the CLI, enter the **net stop pamauthservice** command.
 - b At the CLI, enter the **net start pamauthservice** command.
- 9 Repeat the entire procedure for node B.
- 10 Test PAM authentication by logging into EM using **central database** username and password as well as **.administrator**
- 11 This procedure is complete.

Add a Backup EM to the Primary EM

Use this procedure to add a Backup EM (BEM) into a CICM configuratoin which only has a Primary EM (PEM). Step one is an optional step for the case when the new backup EM is already being used to manage separate CICMs and it is intended to have all the CICMs jointly managed by a PEM and BEM pair.

Procedure 36 Add a Backup EM to the Primary EM

At a PC attached to the Administration LAN of the CICM

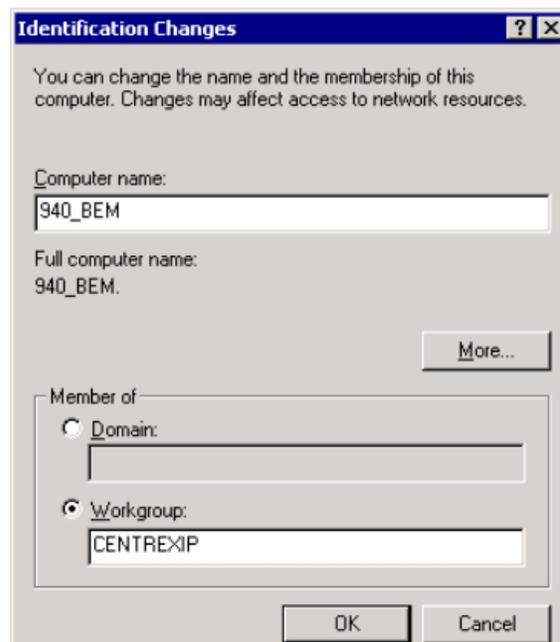
- 1 Merge data between the two existing EMs.
Manually copy all required information that is currently resident on the PEM that will become the BEM, to the PEM that will remain as PEM for the PEM/BEM pair.

Required information may include, but is not limited to:

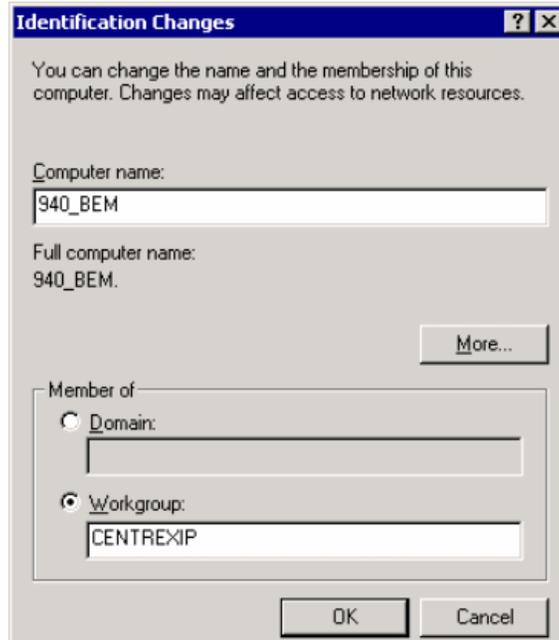
- User profiles
- Audio profiles
- Network profiles
- Enterprise profiles
- List of CICMs managed by the EM
- The names of node 0 and node 1 of each of the CICMs

NOTE: Use this step only if you want to convert an existing primary EM to be the backup for another primary EM. If the backup EM to be added is an entirely new machine, then skip this step and proceed to step 2.

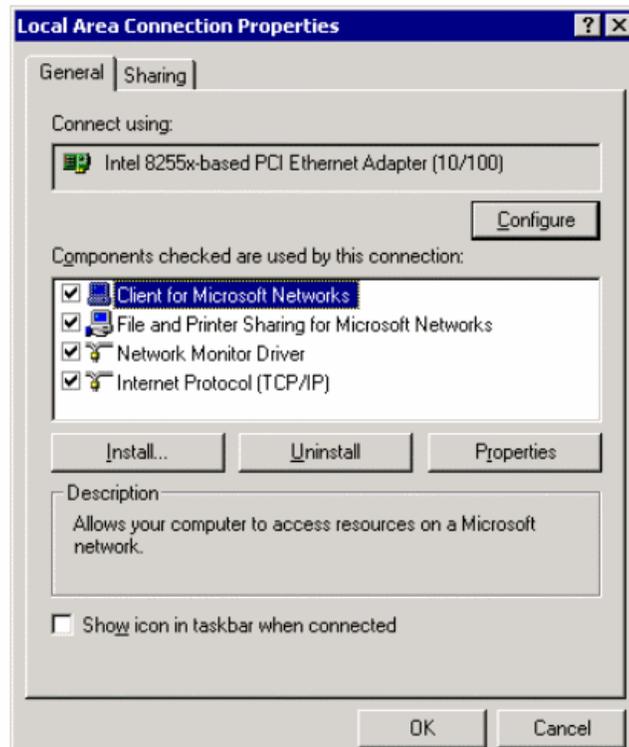
- 2 Re-image and configure the BEM using the *Loading and Configuration Installation Method* from the *Backup and Restore Tool CD*, following these guidelines:
 - a At the PC desktop, right-click on **My Computer**, then select the **Properties** tab, then select the **Network Identification** Tab. Click on **Properties** button to open the **Identification Changes** screen shown in the following figure.



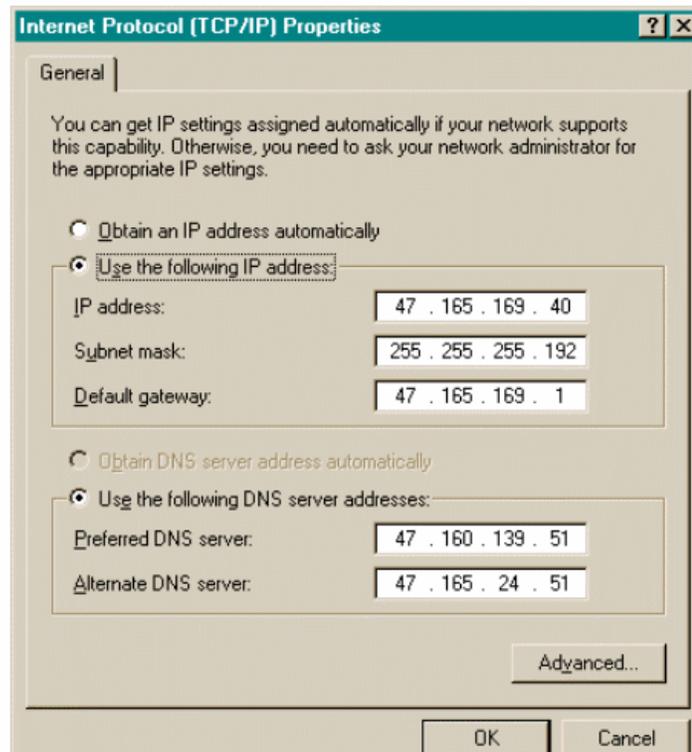
- 3 On the Identification Changes dialog box, provide the computer name (e.g. 940_BEM) and the workgroup (the default is **centrexip**). It will be the same as the primary EM workgroup).



- 4 Right-click on **My Network Places**, select **Properties** tab, then right-click on **local area connection** and select **Properties**



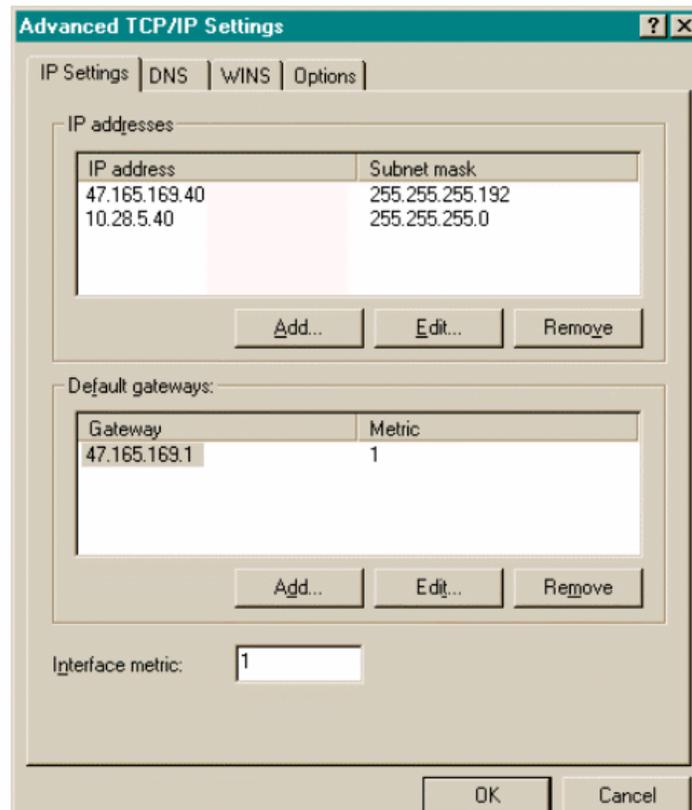
- 5 Select **Internet protocol (TCP/IP)**, then click on **Properties**.



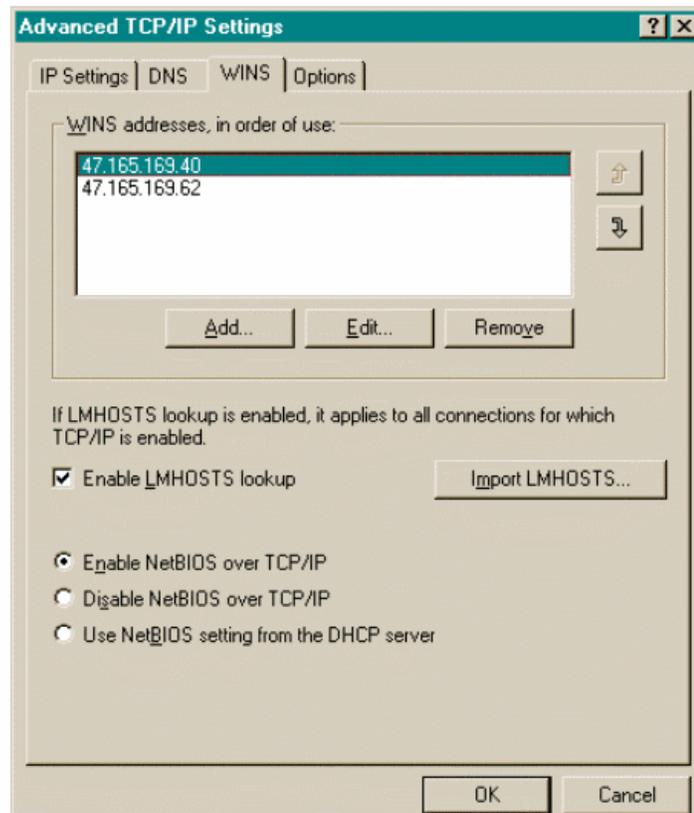
- 6 Click on the **Advanced** tab.
By default you will be in the IP Settings configuration.
Remove the existing default IP address and provide the correct IP address of the Backup EM (for example, 47.165.169.40).

Note: If required, the default IP address can be added after the actual IP address is added, but it is optional. It should only be added if it belongs to the same network as the Backup EM IP address. Also add the default gateway details.

- 7 Select the **WINS** tab from following figure to open WINS server details.



- 8 Input the Primary and Backup EM IP addresses as the WINS servers. For example, 47.165.169.40 and 47.165.169.62 as shown in the following figure.



- 9 Shut down the Backup EM in order to avoid any data synchronisation from Backup to Primary Element Manager (which would occur in the next step if it is not shut down).
- 10 Configure the Primary EM to Accommodate the Backup EM, as follows:
 - a Run the command **preboot elementmanager /interactive** on the PEM to give it the name of the BEM, as shown in the following figure.

```

C:\WINNT\System32\cmd.exe
C:\Documents and Settings\Administrator>preboot elementmanager /interactive

The Element Manager has additional data that needs to be set
[EM domain/machine names, DCOM protocol preferences etc].

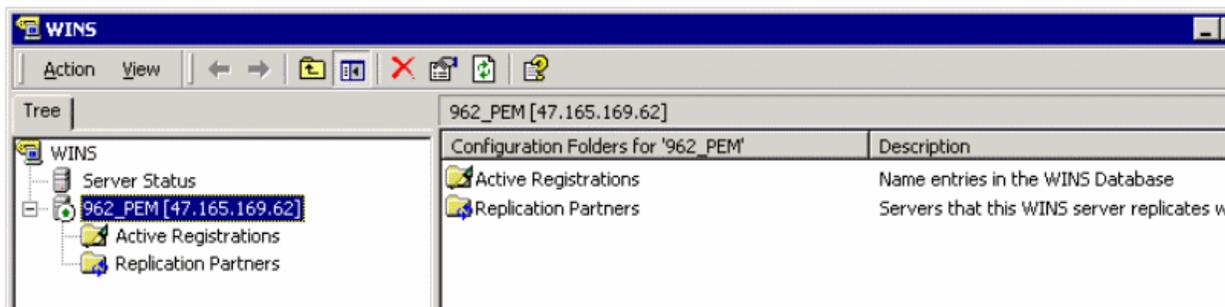
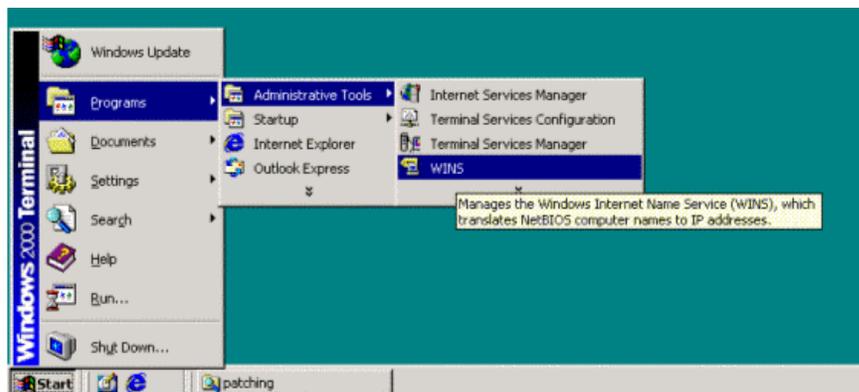
Setting up Element Manager environment.

This computer is called '962_PEM'. Is it the Primary Element Manager [Yes] ?y
Is there a Backup Element Manager [No] ?y
Enter Secondary Element Manager machine name : 940_BEM

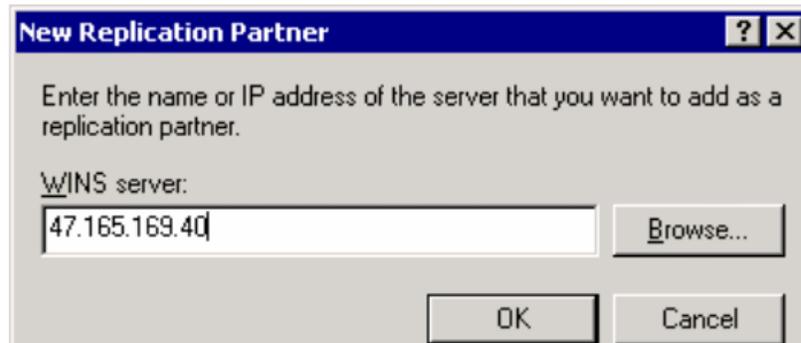
Setting DCOM protocols.
No change required to DCOM protocol settings.
Element Manager environment successfully configured.

C:\Documents and Settings\Administrator>_
    
```

- b Set up the BEM as the replication partner on the WINS of the PEM, as follows:
 - i Click on **Start**
 - ii then click on **Programs**
 - iii then click on **Administrative Tools**
 - iv then click on **WINS**



- c Right-click on the **Replication partners** tab then select **New replication partner** to provide the IP address of the BEM.



- d Restart the Primary EM.
- 11 Configure the Backup EM to Accommodate the Primary EM, as follows:
 - a Wait for the Primary EM to be back in service.
 - b Boot the Backup EM
 - c Repeat Step 10 for the Backup EM.
(i.e. run **preboot elementmanager /interactive** and provide the appropriate details. Include information about the Primary EM under the WINS of the Backup EM.
 - d Reboot the Backup EM.
 - Note:** The BEM should now be synchronized with the PEM.
 - 12 End of procedure.

Configure Apache Proxy Server for CICM-EM

Use the *Configure Apache Proxy* procedure to configure the Apache Proxy Server for CICM-EM.

Procedure 37 Configure Apache Proxy Server for CICM-EM

At the IEMS (proxy) server

- 1 Start cli by entering **cli**
- 2 Select the number associated with **Configuration**.
- 3 Select the number associated with the **Apache Proxy Configuration**.
- 4 Select the number associated with **add_proxy_conf**
- 5 Enter the IP address of the primary CICM-EM.

- 6 Enter the IP address of the secondary CICM-EM.
- 7 At the optional field, enter port number 444, then go to the next field.
- 8 At the port field, enter port number 444.
- 9 Enter **Y** to continue.
- 10

If	Do
Another proxy configuration setting is required	Continue with steps 11 through 16
Another proxy configuration setting is not needed	This procedure is complete. No additional steps are needed.

- 11 Select the number associated with **add_proxy_conf**
- 12 Enter the IP address of the CICM-EM.
- 13 Enter the local tag **centrexip**
- 14 Enter the remote tag **centrexip**
- 15 At the port field, enter the port number 444.
- 16 Enter **Y** to continue.
- 17 End of procedure.

