Nortel Communication Server 1000

# Subscriber Manager Fundamentals

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# Contents

**6**

# New in this Release

Subscriber Manager Fundamentals is a new document created to support Communication Server 1000 Release 5.5.

## Overview

Subscriber Manager is an intuitive and user-friendly Web-based interface that is deployed as a plug-in application above the Enterprise Common Manager (ECM) framework. Subscriber Manager provides a centralized location for the management of subscriber information for enterprise services.

With Subscriber Manager, administrators can:

- easily manage subscribers and subscriber accounts (phone services) within your network
- quickly search, sort, and update single and multiple subscribers and subscriber accounts within a single application interface
- synchronize account information between Subscriber Manager and elements

Prior to ECM Subscriber Manager, subscribers and accounts were managed by individual element managers or element management systems. Subscriber Manager eliminates the need to configure and manage separate subscriber management applications for specific products in a management system.

Subscriber Manager provides security, user access control, simplified management tasks, and improved workflow efficiency.

The following subscriber management functions can be performed using Subscriber Manager:

- Create subscribers
- Search subscribers
- View and update subscribers

- Delete subscribers

- Create a subscriber account

- View and update a subscriber account

- Delete an account

- Publish account properties

- Synchronize accounts

## Benefits and features of Subscriber Manager

Subscriber Manager has many benefits and features to help administrators perform subscriber operations with greater efficiency. Examples are as follows:

- central location to manage subscribers, subscriber accounts, and elements within a network

- Web service interface with a common User Interface (UI) within a management system

- common terminology used by elements that interwork with Subscriber Manager

- security that includes Authentication, Authorization, and Auditing (AAA)

- secure communication that uses private certificate authority and X.509 certificate management

- Single Sign On (SSO), password authentication, and role- and instance-based access control

- backup and restore capabilities

- logs for all Subscriber Manager transactions

- synchronization between subscriber data and a customer corporate LDAP server

- basic and advanced search options to find a subscriber or a set of subscribers

For Release 5.5, the following two new features are added to CND 2.2:

- CSV Synchronization

- CSV Export

## Security

The ECM framework manages secure access to Web applications and provides security for Web interfaces and Web utilities. The ECM security domain provides the central point for Authentication, Authorization, and Auditing (AAA); open, standards-based authentication; and policy-based authorization with a single, unified framework.

With ECM, the authorization process, also known as access control, determines and enforces assigned privileges for an authenticated user of ECM. Therefore, access control for Subscriber Manager is managed in the ECM security framework.

## Other changes

### Revision History

| | |
|---|---|
| February 2008 | Standard 01.04. Up-issued to reflect changes in technical content. |
| January 2008 | Standard 01.03. Up-issued to reflect changes in technical content. |
| December 2007 | Standard 01.02. Up-issued to reflect changes in technical content. |
| December 2007 | Standard 01.01. This is a new document created to support Communication Server 1000 Release 5.5. |

# How to get help

This chapter explains how to get help for Nortel products and services.

## Getting help from the Nortel Web site

The best way to get technical support for Nortel products is from the Nortel Technical Support Web site:

http://support.nortel.com/go/main.jsp

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. From this site, you can:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

## Getting help over the telephone from a Nortel Solutions Center

If you do not find the information you require on the Nortel Technical Support Web site, and you have a Nortel support contract, you can also get help over the telephone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following Web site to obtain the telephone number for your region:

http://www.nortel.com/help/contact/global/index.html

## Getting help from a specialist by using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

http://www.nortel.com/help/contact/erc/index.html

## Getting help through a Nortel distributor or re-seller

If you purchased a service contract for your Nortel product from a distributor or authorized re-seller, contact the technical support staff for that distributor or re-seller.

# Introduction

## Purpose

This document contains the information you need to use Subscriber
Manager Release 1.0. This document describes the benefits, features, and
functions of Subscriber Manager and provides information to perform the
following tasks:

- how to install and configure Subscriber Manager and configure the
  CND connection
- how to manage subscribers
- how to manage accounts (phone services)
- how to synchronize accounts

## Navigation

# Fundamentals of Subscriber Manager

This chapter contains information to help you understand the benefits, features, and functions of Subscriber Manager. This chapter also discusses navigation, security, subscribers, subscriber accounts, and subscriber phone services.

## Navigation

## Introduction

Subscriber Manager is an intuitive and user-friendly Web-based interface that is deployed as a plug-in application to the Enterprise Common Manager (ECM) framework. Subscriber Manager provides a centralized location for the management of subscriber information for enterprise services.

With Subscriber Manager, you can:

- easily manage subscribers, subscriber accounts, and subscriber phone services within your network

- quickly search, sort, and update single and multiple subscribers and subscriber accounts within a single application interface

Prior to the ECM Subscriber Manager, subscribers and accounts were managed by individual element managers or element management systems. Subscriber Manager eliminates the need to configure and manage separate subscriber management applications for specific products in a management system.

Subscriber Manager provides security, user access control, simplified management tasks, and improved workflow efficiency.

## Subscriber Manager components

The Subscriber Manager plug-in application is installed on the ECM framework. Subscriber Manager uses the ECM framework logging facility, including the log viewer interface, the security framework, and the Web server. Each ECM framework is installed with specific requirements for hardware platforms and operating systems that are applicable to Subscriber Manager.

Users access the ECM framework and Subscriber Manager through Microsoft Internet Explorer 6.02600 or later.

The ECM framework is deployed on either a Nortel selected IBM or Hewlett Packard Commercial Off The Shelf (COTS) server.

The Subscriber Manager application is installed with the ECM framework from the ECM DVD. Subscriber Manager can co-reside with Element Manager.

For more information about how to install Subscriber Manager, see "Installing Subscriber Manager" (page 42).

For more information about ECM, see *Enterprise Common Manager Fundamentals (NN43001-116).*

For more information about Linux and the ECM applications, see *Linux Platform Base and Applications Installation and Commissioning (NN43001-315).*

Subscriber Manager uses the Common Network Directory (CND) for its data store, including the CND's backup and restore feature. Subscriber Manager is dependent on the CND for LDAP synchronization and bulk updates of subscribers. The CND has specific hardware platform and operating system requirements.

For more information about CND, see *Common Network Directory 2.2 Administration , NN43050-101*.

## Subscriber Manager client capacity

Table 1 "Subscriber Manager client capacity" (page 17) lists the maximum number of subscribers, accounts, elements, and simultaneous users supported in Subscriber Manager.

**Table 1**
**Subscriber Manager client capacity**

| Subscriber Manager thresholds | Maximum capacity |
|---|---|
| The maximum number of subscribers supported in one Subscriber Manager | 200,000 |
| The maximum number of accounts supported in one Subscriber Manager | 1,000,000 |
| The maximum number of accounts supported for a subscriber | 100 |
| The maximum number of CS 1000 elements supported | 500 |
| The maximum number of simultaneous users supported when performing the same work flow | 10 |

## Benefits and features of Subscriber Manager

Subscriber Manager has many benefits and features to help administrators perform subscriber operations with greater efficiency. Examples are as follows:

- central location to manage subscribers and subscriber accounts
- common Web based interface within a management system
- common terminology used by elements that interwork with Subscriber Manager
- security that includes Authentication, Authorization, and Auditing (AAA)
- secure communication that uses private certificate authority and X.509 certificate management
- Single Sign On (SSO), password authentication, and role- and instance-based access control

- backup and restore capabilities

- logs for all Subscriber Manager transactions

- synchronization between subscriber data and a customer corporate LDAP server

- basic and advanced search options to find a subscriber or a set of subscribers

# Security

The ECM framework manages secure access to Web applications and provides security for Web interfaces and Web utilities. The ECM security domain provides the central point for Authentication, Authorization, and Auditing (AAA); open, standards-based authentication; and policy-based authorization with a single, unified framework.

With ECM, the authorization process, also known as access control, determines and enforces assigned privileges for an authenticated user of ECM. Therefore, access control for Subscriber Manager is managed in the ECM security framework.

For more information about ECM security, see *Enterprise Common Manager Fundamentals (NN43001-116)* and *Security Management Fundamentals (NN43001-604)*.

Table 2 "Built-in permission assignments for Subscriber Manager" (page 18) shows the built-in role permission assignments for Subscriber Manager that are installed with Subscriber Manager.

**Table 2**
**Built-in permission assignments for Subscriber Manager**

| Built-in permission | Description |
|---|---|
| Subscriber Manager Read Only | The user has read-only access to Subscriber Manager. |
| Subscriber Manager Read Write | The user can access Subscriber Manager, change the configuration of Subscriber Manager, and edit subscriber data. |

**ATTENTION**
The security administrator must assign one or both of the permissions to existing roles before a user can access Subscriber Manager.

## Functionality

The ECM security domain provides the launch point for Subscriber Manager. You can access Subscriber Manager when you log on to the ECM framework or through a direct Web link. When Subscriber Manager is installed in the ECM framework, the Subscriber link is provided in the ECM navigator, as shown in Figure 1 " ECM navigator" (page 19).

**Figure 1**
**ECM navigator**
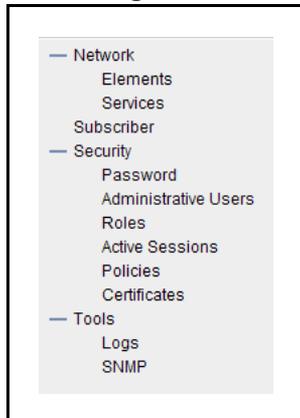


You can also launch Subscriber Manager by navigating to the **Network > Services** Web page.

From the Subscriber link or the Services Web page, you can access the various functions to configure the required subscriber, subscriber account, and subscriber phone services for subscribers within a network. As shown in Figure 2 "Subscriber Manager navigator" (page 19), the Subscriber Manager navigator contains the following links:

- Common Manager

- Subscribers

- Synchronize Accounts

- Common Network Directory

**Figure 2**
**Subscriber Manager navigator**
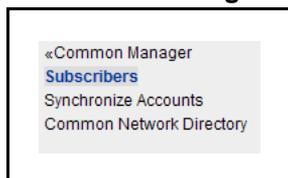


- **Common Manager**: Use this link to return to the ECM framework

- **Subscribers**: Use this link to perform the following tasks:

— search for subscribers

— view and update subscriber information

— add a new subscriber

— delete a subscriber

— add and delete a subscriber account

— view, update, and publish subscriber phone properties

- **Synchronize Accounts**: Use this link to synchronize account information between Subscriber Manager and elements and to assign or delete anonymous accounts. For more information about anonymous accounts, see "Account synchronization" (page 29).

- **Common Network Directory**: Use this link to configure and test the connection for the Common Network Directory (CND).

## Session timeout

After 30 minutes of inactivity, Subscriber Manager times out and you are logged out without any warning from all Subscriber Manager Web pages. The session is cancelled, and you must log on again. Any data modifications made on screen, but not submitted to the system, are lost.

**Closing the browser window and logging out**
If you close the browser window or log out of Subscriber Manager when a request submitted to the system is in progress, the request continues to process and completes.

## Log formats

ECM provides log viewer and file download functionality for retrieving Subscriber Manager log files. The log viewer is only available from the ECM navigation menu. Subscriber Manager transactions and error logs are formatted in accordance with W3C extended log format by the ECM framework.

Table 3 "Subscriber Manager log information" (page 20) describes the information that is captured in each log entry.

**Table 3**
**Subscriber Manager log information**

| Log information | Description |
| --- | --- |
| Date | Provides the date the log file was captured in the following format: 20070209T113030-0500 |

**Table 3**
**Subscriber Manager log information (cont'd.)**

| Log information | Description |
| --- | --- |
| Log Level | Displays the type of log4j level incident.<br><br>• DEBUG<br><br>• INFO<br><br>• WARN<br><br>• ERROR<br><br>• FATAL |
| Message (Msg) | Displays an error message and/or a Subscriber Manager transaction. |
| Logger | Displays the log package and class name. |
| Source user (Src usr) | Displays the user name. |
| Source (Src) | Displays the source device host name or IP address. |
| Process | Displays the application process name. |
| Log type | Displays the log type.<br><br>• Application<br><br>• Exception |

For more information about Subscriber Manager log files, see "Fault management" (page 73). For information on how to view Subscriber Manager log files, see "Viewing log files" (page 37).

## Subscribers

A subscriber is a person, location, or project that uses services within a network. Most often a subscriber is an employee of a company or organization. An example of a location subscriber is an elevator with telephone services.

Subscriber properties are divided into four sections in the New Subscriber Web page as described in Table 4 " Subscriber property sections" (page 22).

The only required property for a subscriber is last name.

**Table 4**
**Subscriber property sections**

| Section | Description |
|---|---|
| Identification | Use this section to enter the Last name, First name, Middle Name, Preferred Name, Employee ID, Subscriber type and Language for a new subscriber. A Comment can also be recorded. |
| Directory and Phone Numbers | Use this section to enter the extension number, external number, ESN number, cell number, pager number, and fax number for a new subscriber. |
| Address | Use this section to enter a subscriber's e-mail, office location, and mailing address information. |
| Organization | Use this section to enter a subscriber's job title, department, company, and service start and end dates. |

For information on how to add a new subscriber, see "Managing subscribers" (page 51).

### Validation errors

Subscriber Manager validates service start date and service end date. All other properties are validated by the LDAP directory.

The LDAP directory processes only one validation error at a time. Users receive any additional validation errors when an error is saved or applied to the system until all errors have been resolved.

The comment field on the Figure 15 "New Subscriber Web page" (page 52) can have a maximum of 1000 characters. All other fields on the New Subscriber Web page can have a maximum of 256 characters.

### Search subscribers

Subscriber Manager provides both basic and advanced searching options to find subscribers within a network. The basic search page is the default search page. Table 5 "Subscriber Manager search options" (page 23) shows the search criteria for basic and advanced search options.

**Table 5**
**Subscriber Manager search options**

| Type of search | Search criteria |
|---|---|
| Basic | With the basic search feature, you can search for a subscriber only by:<br><br>• Last Name<br><br>• First Name |
| Advanced | With the advanced search feature, you can search for a subscriber by:<br><br>• Last Name<br><br>• First Name<br><br>• Employee ID<br><br>• Department<br><br>• Date<br>  — Service end date<br>  — Service start date<br><br>• Miscellaneous<br>  — Cell phone number<br>  — City<br>  — Comment<br>  — Company<br>  — Country<br>  — ESN phone number<br>  — Email<br>  — Employee Id<br>  — Extension phone number<br>  — External phone number<br>  — Job title<br>  — Language<br>  — Location<br>  — Middle name<br>  — Pager number<br>  — Post office box<br>  — Postal code/ZIP<br>  — Preferred name |

| Type of search | Search criteria |
|---|---|
| | — Province/state<br><br>— Street<br><br>— Type<br><br>With the advanced search feature, you can choose to search only for subscribers whose deletion is pending or failed, if desired. |

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**ATTENTION**
When a user leaves the advanced search Web page, all information that was entered for the advanced search is lost except the subscriber name.

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### Wild cards
Subscriber Manager supports the asterisk (*) wild card that is used to return specific search criteria.

Table 6 "Search wild card" (page 24) shows how the asterisk (*) wild card is used in Subscriber Manager.

*Note:* The asterisk (*) wild card can not be used to search for Service start date or for Service end date.

**Table 6**
**Search wild card**

| Search wild card examples | Search results |
|---|---|
| abc* | Returns all values that begin with abc. |
| * or blank | Returns all values. |
| *abc | Returns all values that end with abc. |
| *abc* | Returns all values that contain abc. |

### Search results
The maximum number of entries that can be returned for a search is 1000. If a search result exceeds 1000, the search is cancelled and the user is asked to refine the search.

Users can choose the number of search results to be displayed on the search results page from the following values in the results per page list.

- 100

- 250

- 500

By default, search results are sorted in ascending order by last name and first name. Users can change the search result order by clicking the name heading in the Name column.

Users can sort the search results for each column by clicking the column heading. When users first click the column heading, the data is sorted in ascending order. When the user clicks the column heading a second time, the data is sorted in descending order.

## Subscriber deletion

When one or more subscribers are deleted, the subscriber entries in the CND are removed. However, these subscribers are not removed from a customer's corporate directory.

A subscriber cannot be deleted from the directory until all accounts are deleted. The accounts for a subscriber must first be deleted and then the subscriber deleted.

### Deletion status

Table 7 "Deletion status" (page 25) describes the types of status that occur when a user deletes a subscriber.

**Table 7**
**Deletion status**

| Deletion status types | Description |
|---|---|
| Pending deletion | A subscriber with pending deletion status is automatically removed from the directory when all accounts have been successfully deleted. |
| Failed deletion | A subscriber with failed deletion status is displayed in red with an asterisk beside the subscriber name field. |

To resolve a failed deletion, check the logs in the element or click on the failed account to go to the account details page in the element. A subscriber fails deletion if the accounts cannot be removed from the Subscriber Manager data store. When this occurs, the Subscriber Manager application log displays the following error message:

"Failed to delete account [account information] for subscriber [subscriber information]."

To delete a subscriber with failed deletion status, errors must be resolved in the elements.

# Accounts

An account is a provisioned service, available through an element, for a subscriber. A subscriber can have more than one account, such as an account for a telephone service, conferencing service, and voice mail service.

## Required subscriber account properties

Subscriber Manager only requires the subscriber's last name to create a new subscriber. Individual elements have specific requirements for required subscriber properties for the creation of accounts.

Table 8 "Subscriber account properties" (page 26) lists the required properties for creating an account.

**Table 8**
**Subscriber account properties**

| Account properties | Required property | Description | Action |
|---|---|---|---|
| Service | Yes | Lists the services that are available, based on the elements in the ECM element table.<br><br>*Note:* In Subscriber Manager Release 1.0, only "Telephony" service is available. | Select a service. |
| Element | Yes | Lists the element that is providing the service (for example, CS 1000). | Select an element. |
| Target | Yes | Lists all targets managed by the selected element (for example, for CS 1000 element, targets are the customer numbers configured in the call server). | Select a target. |
| Template | Yes | Lists all templates available in Element Manager for the selected target. | Select a template. |

## Account status

Table 9 "Account operation and task status" (page 27) describes the types of account status that occur for operations and tasks performed in Subscriber Manager.

**Table 9**
**Account operation and task status**

| Status | Description |
|---|---|
| Active | A configured account that is activated by the element. The service is available for the subscriber. |
| Pending Activation | There is a delay in activating the account. The reasons for the delay are dependent on the element. For example, the element may have the account activation scheduled to occur at a later time. |
| Pending Deletion | There is a delay in deactivating or deleting the account. |
| Pending Update | An update to the account has not been activated in the system or an account in the element is changed but the changes take effect to the element at a later time. |
| Failed Deletion | This status is similar to the failed activation status, but occurs during a deletion operation. |
| Failed Update | An update operation has failed. Normally, this account has a pending update status prior to the failed update status. |
| Invalid | An account does not have a valid Element in the Elements table in ECM. |

### Account deletion

With Subscriber Manager, the following conditions apply for account deletions:

- Multiple accounts can be deleted at the same time.

- Accounts can be deleted between different elements and service types.

- If a deletion fails for an account, the process logs the failure and continues with the deletion of the remaining accounts.

## Account deletion status

During the deletion process, the deleted account can still be listed in the Subscriber Detail page. However, the status of each account is changed to pending deletion. The accounts remain at pending deletion until one of the following occurs:

* The element updates the account due to an error when deleting the account. The status is changed to failed deletion.

* The element deletes the account through the Subscriber Manager Web service.

* The element aborts the deletion of the account. The account status returns to active status.

## Publish account properties

When account properties are published, account information is copied to specific subscriber properties within the system.

Publishing account specific information allows the user to synchronize account specific information in the corporate directory.

By default, the first account created for any distinct service type is automatically published.

The following conditions apply when publishing accounts:

* Only one account for each service type can be published to the subscriber data.

* When a new account is selected for publishing, it overwrites any data already present in the particular subscriber attribute.

* If an existing account is published and the user needs to publish a different account, publishing the different account removes the publish flag from the old account in the account list.

* External applications such as LDAP Subscriber Synchronization and CSV Subscriber Synchronization can result in data mismatch between the subscriber properties and the published account properties.
  If a data mismatch occurs, users must do one of the following:

  — update the account

  — manually update the subscriber properties

  — select the account and click Publish

  — synchronize the affected accounts with the element

> **ATTENTION**
> Account synchronization with the element only happens if the account information in Subscriber Manager becomes out of sync with the data in the element.

- If a published account is deleted, the published data is cleared from the subscriber properties. To publish the data for a different account of the same service type, select the desired account and click the publish button.

- Account status does not impact the publishing of account information.

- If two accounts of different service types publish to the same subscriber property, the last account published overwrites the previously published value.

### Account synchronization

Subscriber accounts in the directory can become out of sync with the accounts in the elements due to a network outage or database corruption. Subscriber Manager provides an account synchronization feature to synchronize account information between Subscriber Manager and the elements.

The account data in the elements is considered the master data during the synchronization process. When a subscriber account in Subscriber Manager becomes out of sync with the element, the account data from the element is copied to the account data in Subscriber Manager.

### Synchronization rules

Table 10 "Synchronization scenarios" (page 29) lists the various rules and operations for the synchronization process for different scenarios.

**Table 10**
**Synchronization scenarios**

| Scenario | Action |
|----------|--------|
| An account exists in the element that does not exist in Subscriber Manager. Also, the subscriber ID for the account in the element is either invalid (does not exist in the directory) or empty. | A subscriber must be manually assigned to the account. The account is known to Subscriber Manager as an anonymous account. |
| An account exists in the element that does not exist in Subscriber Manager, but the account has a subscriber ID that exists in the directory. | The account is automatically created in Subscriber Manager. |
| An account exists in Subscriber Manager but does not exist in the element. | The account is automatically removed from Subscriber Manager. |

**Table 10**
**Synchronization scenarios (cont'd.)**

| Scenario | Action |
|---|---|
| An account exists in Subscriber Manager and the element. However, the data in the account is not the same in Subscriber Manager and the element. | The account is automatically updated in Subscriber Manager to match the element. |
| An account in Subscriber Manager and element match. | No action. |
| A subscriber is pending deletion and has only one account that does not exist in the element. | The account and subscriber are automatically deleted from Subscriber Manager. |

Only one synchronization process can occur at one time. The synchronization process queues all selected elements. When the synchronization process starts, the user cannot modify the process until the synchronization process is completed or stopped.

### Anonymous accounts

When a synchronization process completes, a summary page is displayed that shows up to a maximum of 100 anonymous element accounts in Subscriber Manager. The user can assign the anonymous accounts to subscribers in Subscriber Manager or delete the accounts from the element.

## Subscriber phone services

Subscriber Manager provides a functionality to publish phone properties for subscribers. This allows you to synchronize the phone specific attributes in an enterprise corporate directory.

When configuring phone services for subscribers, the subscriber names are sent to the Call Party Name Display (CPND) in Element Manager. The subscriber name is linked to the CPND name of the phone prime Directory Number (DN). describes the rules used in Element Manager for configuring the CPND name. The rules are listed in order of preference.

**Table 11**
**Rules for CPND name**

| Subscriber name used | Rules for setting the CPND name |
|---|---|
| Preferred name | The preferred name is set as the CPND first name and the CPND last name is left empty. |

**Table 11**
**Rules for CPND name (cont'd.)**

| Subscriber name used | Rules for setting the CPND name |
|---|---|
| First name and last name | The subscriber first name is set as the CPND first name, and the subscriber last name is set as the CPND last name. |
| Last name | The subscriber last name is set as the CPND last name. |

When a phone is assigned to a subscriber, the following phone attributes are published in Subscriber Manager:

- preferredDirectoryNumber

- cpndName

The Prime DN is used as the preferredDirectoryNumber value and the CPND name associated with the Prime DN is used as the cpndName.

Subscriber Manager publishes the attributes to the Common Network Directory (CND). The CND then publishes the attributes to the corporate LDAP server. For more information about publishing attributes from CND to the corporate LDAP server, see *Common Network Directory 2.2 Administration , NN43050-101*.

## Configuration for subscriber accounts (phone services)

Subscriber Manager allows users to add and configure accounts (phone services) for subscribers with available templates in Element Manager. When configuring subscriber accounts (phone services), the user is redirected from Subscriber Manager to Element Manager.

A template contains attributes that are common to a CS 1000 phone type. Once a template is created, you can use it to apply these common attributes to a group of phones, without having to repetitively define the same value for each phone. In general, using a template is a more efficient method of adding large numbers of phones than maintaining each phone individually.

For more information on creating templates in Element Manager, see *Element Manager System Reference - Administration (NN43001-632)*.

For information on configuring subscriber accounts (phone services), see .

# Common Network Directory connection

The Common Network Directory (CND) Connection Details Web page displays the network location and log on information for connecting to the CND. Changes that are made to the properties on the CND Connection Details Web page are not submitted to the CND.

Subscriber Manager and CND have the following default application account and password:

- Default account: SubMgr
  The default account cannot be changed.

- Default password: submgrpass
  Nortel recommends that you change the default password when you first log on to Subscriber Manager.

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**ATTENTION**
The default password must be changed in the CND Manager before the password is changed in the CND Connection Details Web page in Subscriber Manager.

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For more information about CND, see *Common Network Directory 2.2 Administration , NN43050-101*.

## Transport layer security and secure socket layer

Nortel recommends that TLS/SSL is selected on the Common Network Directory (CND) Connection Details Web page to provide security for Subscriber Manager.

# Common procedures

The following sections in this chapter describe common procedures that you can use for Subscriber Manager.

## Navigation

## Launching Subscriber Manager

Before you can launch Subscriber Manager, you must first logon to the Enterprise Common Manager (ECM).

Use the steps in the following procedure to launch Subscriber Manager.

**Procedure 1**
**Launching Subscriber Manager**

| Step | Action |
| --- | --- |
| **1** | Open the Web browser. |
| **2** | Enter one of the following in the Address bar and press **Enter**. |

- ECM framework IP address
  When you enter the ECM framework IP address, a Web page opens stating that you must access Enterprise Common Manager using the Fully Qualified Domain Name (FQDN) for the ECM server. Click the link on this Web page to use the FQDN for the ECM server.

- Fully Qualified Domain name (FQDN) for the ECM server

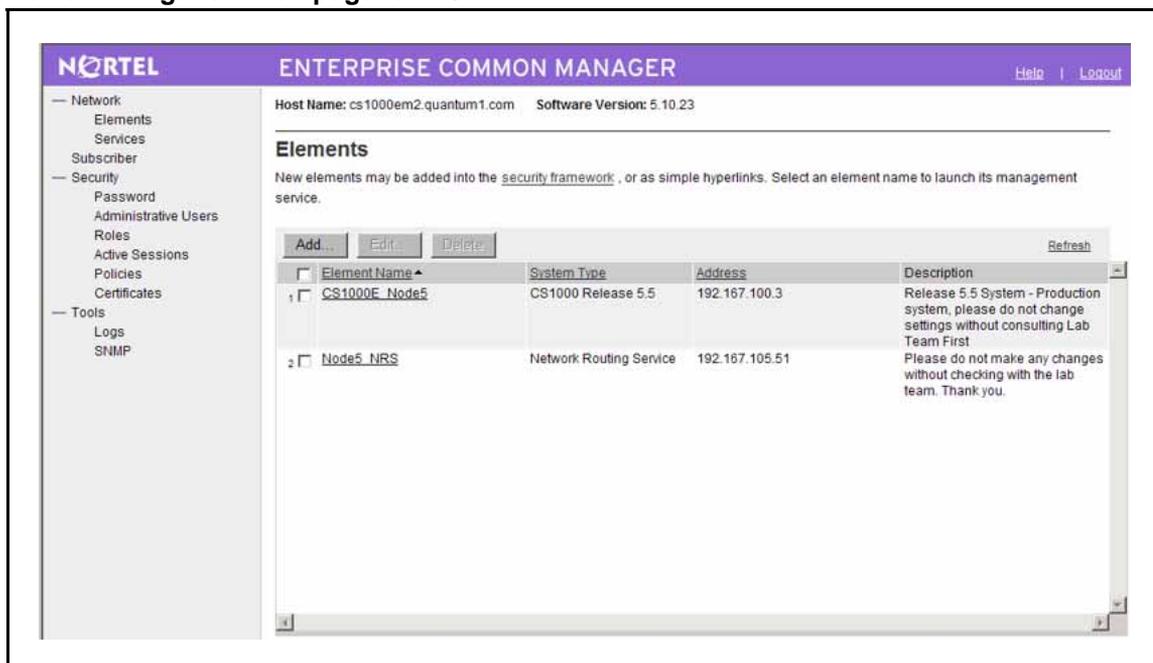The ECM framework **Logon** Web page opens.

**Figure 3**
**Logon Web page**
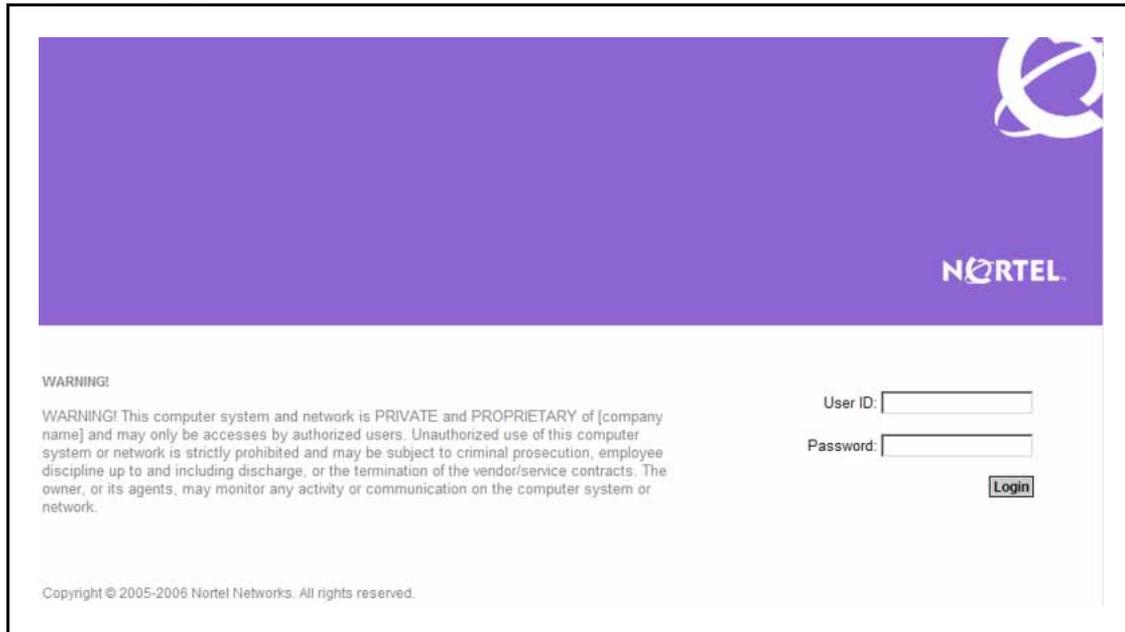


**3** In the **User ID** field, type your user ID.

**4** In the Password field, type your password.

**5** Click **Login**.

The default navigation Web page for ECM opens as shown in
Figure 4 "Default navigation Web page for ECM" (page 34).

**Figure 4**
**Default navigation Web page for ECM**

**6** From the left navigation pane, click **Subscriber** to launch
Subscriber Manager.

> *Note:* The security administrator must assign one or both
> of the built-in permissions summarized in Table 2 "Built-in
> permission assignments for Subscriber Manager" (page 18) to
> existing roles for a user to access Subscriber Manager. For
> more information about Subscriber Manager permissions, see
> "Security" (page 18).

---

**--End--**

---

## Help and Logout links

The **Help** and **Logout** links are located on the right side of the Subscriber
Manager Web page header. See Figure 5 "Help and Logout links" (page
35).

**Figure 5**
**Help and Logout links**



### Help link

Click the **Help** link to access the **Subscriber Manager Help File**. The
Subscriber Manager Help File opens in a new Web page.

Subscriber Manager provides context-sensitive help. That is, the help
page displayed depends on the Subscriber Manager Web page from
which it is opened. Once a help page is opened, click the **Show** link in
the upper left corner of the page to display the **Contents** and an **Index** of
the **Subscriber Manager Help File**.

For more information on accessing and navigating the **Subscriber
Manager Help File** see Procedure 2 "Getting help" (page 36).

### Logout link

Click the **Logout** link to terminate the current Enterprise Common
Manager session. See Procedure 3 "Logging out of ECM" (page 37).

### Common Manager link

Click the **Common Manager** link on the **Subscriber Manager navigator**
to return to the ECM Web page without terminating the current ECM
session. See Figure 2 "Subscriber Manager navigator" (page 19).

## Getting help

You can receive online assistance for the current Web page you are viewing in Subscriber Manager.

Use the steps in the following procedure to get help for Subscriber Manager.

**Procedure 2**
**Getting help**

| Step | Action |
| --- | --- |
| **1** | Click the **Help** link located at the right side of the Subscriber Manager web page header, as shown in Figure 5 "Help and Logout links" (page 35).<br><br>A Help web page, related to the contents of the current web page in Subscriber Manager, opens in a new browser window. |

**Figure 6**
**Help web page example**
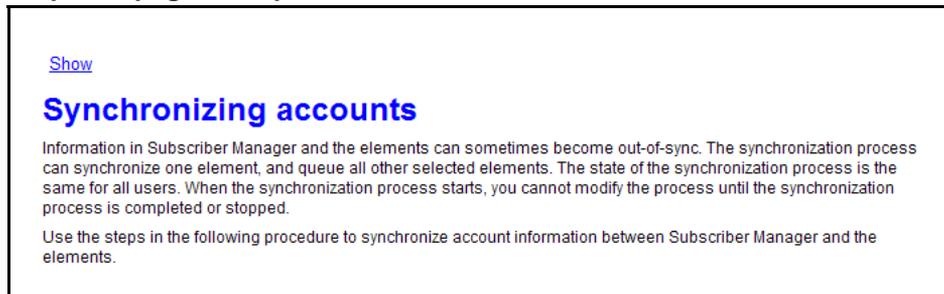


| | |
| --- | --- |
| **2** | Click the **Show** link in the upper left corner of the Help web page. The Subscriber Manager Help File Navigator pane appears. |

**Figure 7**
**Subscriber Manager Help File Navigator**
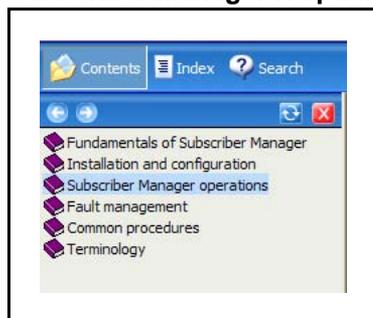


| | |
| --- | --- |
| **3** | From the Help File Navigator pane, perform one of the following actions:<br><br>• Click a topic to view the help content for the topic.<br><br>• Click **Index** to view a list of topics in alphabetical order. |

In the Index field, type a key word in the text field to quickly find a topic.

- Click **Search**.
  In the **Search** field, type in the word or words you wish to search for and click **Go**.
  Topics that contain the entered word or words appear below the field in the Help File Navigator pane.

- Click the left or right arrows to scroll through the Subscriber Manager Help file.

- Click the **Sync TOC** button (next to the **X** button), to display the Contents of the Subscriber Manager Help file.

- Click the **X** button to close the Subscriber Manager Help File navigator.

--End--

## Log out of ECM

See to log out of the ECM. Logging out of the ECM terminates the current session.

**Procedure 3**
**Logging out of ECM**

| Step | Action |
|------|--------|
| **1** | Click the **Logout** link on the right side of the Subscriber Manager Web page header. |

The **Enterprise Common Manager Logout successful** Web page opens.
**Figure 8**
**ECM Logout successful Web page**

Logout successful. Your secure session has ended.
Login Again

| Step | Action |
|------|--------|
| **2** | Close the browser window. |

--End--

## Viewing log files

Log files for Subscriber Manager are viewed in the ECM log viewer. From the log viewer, you can review or download log files.

Use the steps in the following procedure to review or download log files for Subscriber Manager.

**Procedure 4**
**Viewing log files**

| Step | Action |
|------|--------|
| **1** | Log on to ECM. |
| **2** | From the navigation pane, click **Tools** > **Logs**. |
| | The **Logs** Web page opens and displays the directory list for recorded logs. |

**Figure 9**
**Logs Web page**



| **3** | From the **Filename** column, click the desired Subscriber Manager log to review the file information in the current window. |
|------|--------|
| | To open a log file in a new browser window, right-click the name of a log file and select Open in new window. |
| | To download a log file, right-click the name of a log file and select **Save target as**. Select a location on the computer to save the log file. |
| | *Note:* To view compressed log files with the extension .gz, you must download the file. |

**--End--**

# Installation and configuration

This chapter provides information to install Subscriber Manager in the
ECM framework and to configure the CND connection.

## Navigation

-
-
-
-

## Task flows

This section provides high-level task flows for the installation of the
Subscriber Manager application, as they relate to the overall installation
of the Linux-based Nortel Enterprise Common Manager (ECM). For a
complete list of task flows for the installation and upgrade of the Linux
base and accompanying management applications on commercial
off-the-shelf (COTS) servers, refer to *Linux Platform Base and Applications
Installation and Commissioning, NN43001-315*.

**Figure 10**
**Linux base and applications install for primary or backup ECM server**



Task flow A - Linux base and applications install for primary or backup ECM server

- Start
- Install Linux base on the COTS server — NN43001-315
- Installing ECM with EM?
  - No → Install ECM with NRS — NN43001-315 → End
  - Yes → Installing SM?
    - No → Install ECM with EM — NN43001-315 → End
    - Yes → Install ECM with EM and SM — NN43001-315 → End
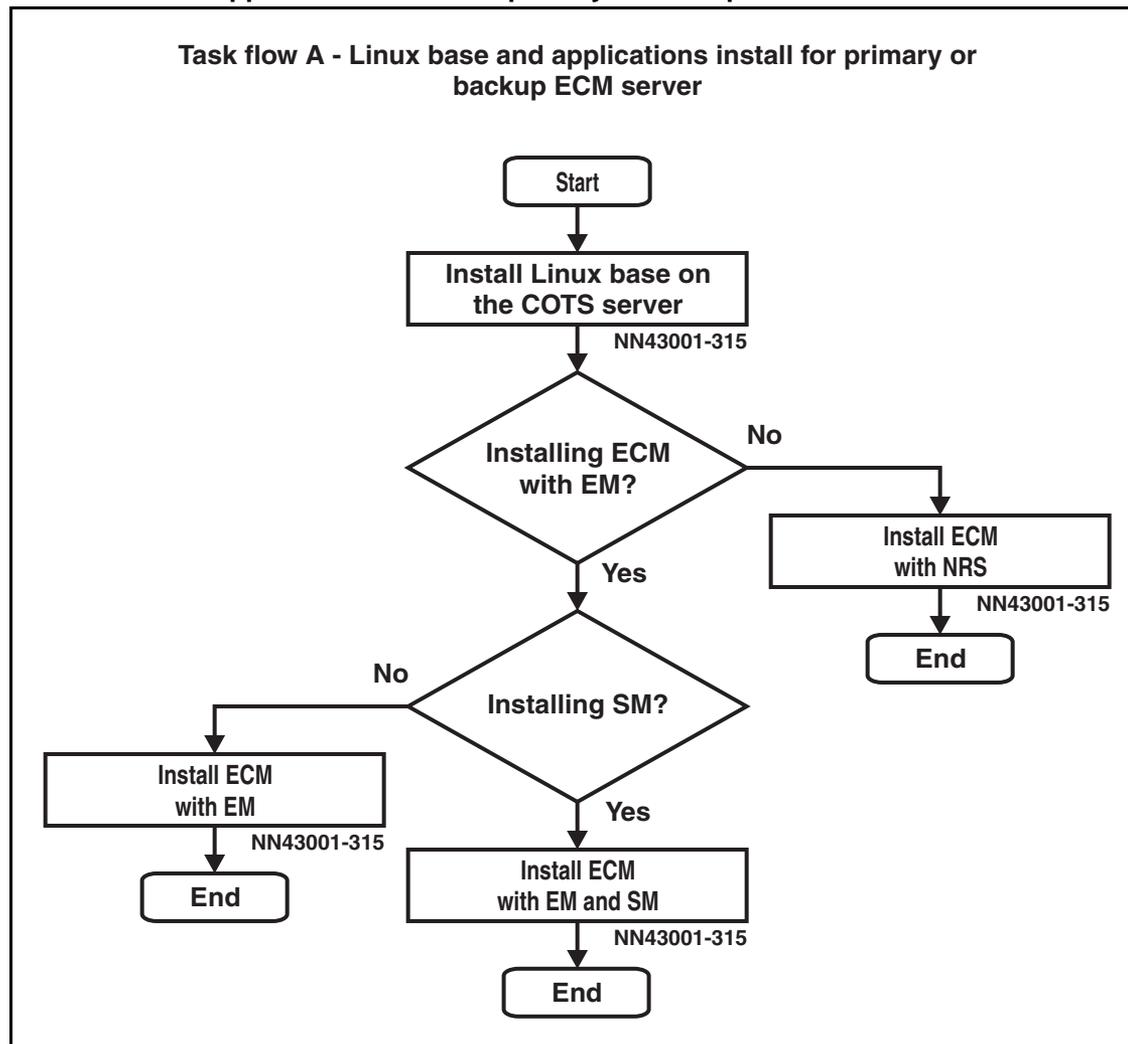
**Figure 11**
**Linux base and applications upgrade for primary or backup ECM server with EM and adding SM**



Task flow E - Linux base and applications upgrade for primary or backup ECM server with EM and adding SM

Start

Is CND running release 2.2?

No → Is CND running release 2.1?

No → Migrate CND data to a fresh install of CND 2.2
NN43050-101

Yes → Upgrade CND to release 2.2
NN43050-101

Yes → Invoke the upgrade command on the ECM server to upgrade the Linux base
NN43001-315

After Linux base upgrade, insert the MGMT application CD and invoke the appinstall command
NN43001-315

Select the appropriate option to install ECM, EM, and SM
NN43001-315

End

**Figure 12**
**Subscriber Manager installation and configuration**

```
┌─────────────────────────────────────────────────────────┐
│  Task flow M - Subscriber Manager installation and      │
│  configuration                                           │
│                                                          │
│                    ┌──────────┐                          │
│                    │  Start   │                          │
│                    └────┬─────┘                          │
│                         │                                │
│              ┌──────────────────────┐                    │
│              │   Install ECM with   │                    │
│              │     EM and SM        │                    │
│              └──────────────────────┘                    │
│                    NN43001-315                           │
│                         │                                │
│              ┌──────────────────────┐                    │
│              │    Configure ECM     │                    │
│              └──────────────────────┘                    │
│                    NN43001-116                           │
│                         │                                │
│              ┌──────────────────────┐                    │
│              │ Create phone templates│                   │
│              │  from within EM for the│                  │
│              │    Call Server       │                    │
│              └──────────────────────┘                    │
│                    NN43001-632                           │
│                         │                                │
│              ┌──────────────────────┐                    │
│              │ Install and configure│                    │
│              │      CND 2.2         │                    │
│              └──────────────────────┘                    │
│                    NN43050-101                           │
│                         │                                │
│              ┌──────────────────────┐                    │
│              │    Configure SM      │                    │
│              └──────────────────────┘                    │
│                    NN43001-120                           │
│                         │                                │
│                    ┌──────────┐                          │
│                    │   End    │                          │
│                    └──────────┘                          │
└─────────────────────────────────────────────────────────┘
```
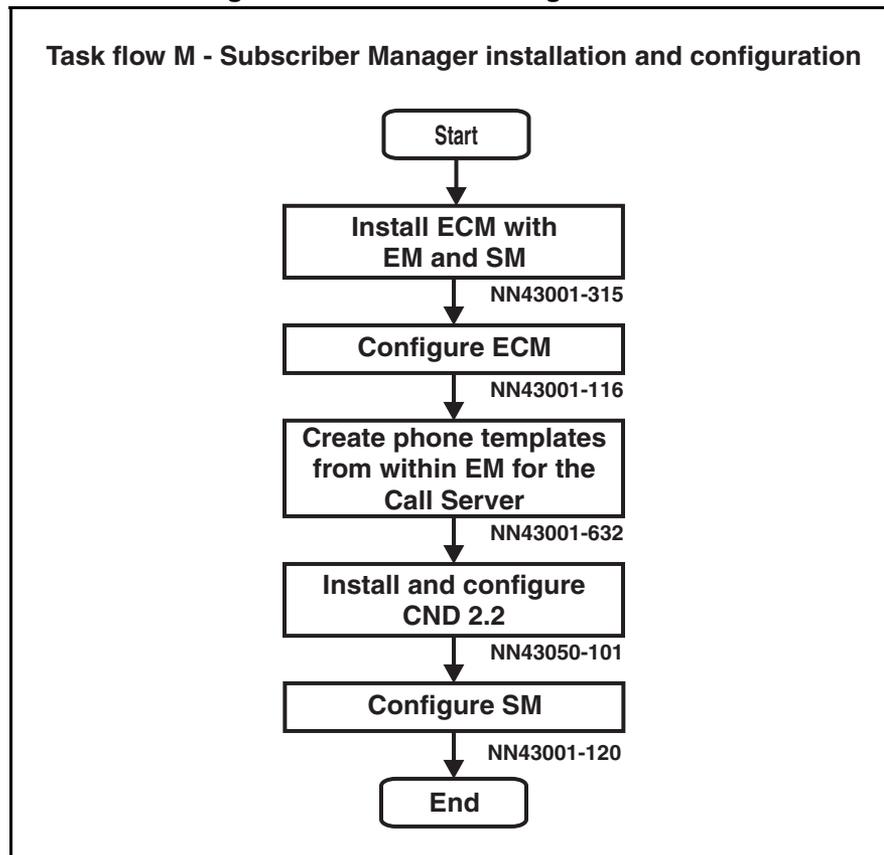
## Installing Subscriber Manager

The Linux-based Subscriber Manager is a component of the Nortel Enterprise Common Manager (ECM). The ECM provides security and navigation infrastructure services for the following Web-based management applications:

- Element Manager (EM)

- Network Routing Service (NRS) Manager

- Subscriber Manager (SM)

It is best practice to configure both a Primary and a Backup Security Server per ECM security domain. This assures a highly available authentication and authorization service for:

- OAM users who need to access managed systems/elements in the ECM security domain

- auxiliary applications that rely on continuous availability of the ECM framework Web services API to monitor and control the CS 1000

There are two ECM installation media: an NRS application Install CD and an EM application Install DVD. ECM Framework, EM and Subscriber Manager are installed from the EM application Install DVD. Installation of ECM Framework is the first part of the Nortel application installation. The **appinstall** command begins by installing the ECM Framework, then goes on to install the specific Linux-based Nortel applications.

## Prerequisites

Before subscribers can be added and accounts provisioned using Subscriber Manager:

1. The Nortel-customized Red Hat Enterprise Linux operating system must be installed on a Nortel selected IBM or Hewlett Packard stand-alone COTS server.
   For more information on installing the Linux operating system, see *Linux Platform Base and Applications Installation and Commissioning (NN43001-315)*.

2. ECM and the Primary Security Service must be installed. Optionally a Backup Security Service may be installed. It is best practice to configure a Backup Security Service when one or more Nortel Linux-based servers are joined as members of an existing ECM Security Domain, to ensure continued access to ECM-based system management applications in case of failure of the ECM Primary Security service.
   For more information on ECM and the ECM security domain, see *Enterprise Common Manager Fundamentals (NN43001-116)* and *Security Management Fundamentals (NN43001-604)*.

3. EM and Subscriber Manager must be installed. The EM application Install DVD provides two installation options for Subscriber Manager:

   — The Primary ECM Server (install EM, Subscriber Manager and the primary ECM security service)

   — A Backup ECM Server (install EM, Subscriber Manager and a backup ECM security service)

   For more information on installing ECM, EM and Subscriber Manager, see *Linux Platform Base and Applications Installation and Commissioning (NN43001-315)*.

4. Administrative user accounts must be created and roles and permissions for accessing EM and Subscriber Manager from ECM must be assigned.

For more information on creating Administrative user accounts and assigning roles and permissions, see *Enterprise Common Manager Fundamentals (NN43001-116)*.

5. The Common Network Directory (CND) 2.2 release 2.2.73 or later must be installed on a Windows server. CND can be installed on Windows XP, Windows 2000 Server, or Windows 2003 Server. There are limitations on locales and service packs on each operating system. For details, see *Common Network Directory 2.2 Administration , NN43050-101*.
Installation of the CND application on a Windows server includes CND, CND Manager and the LDAP directory. The CND application is included on the EM application Install DVD.

6. The CND connection must be configured to connect Subscriber Manager to the CND.
To configure the CND connection, see "Configuring the CND connection" (page 44).

7. Templates must be created in EM.
For more information on creating templates in EM, see *Element Manager System Reference - Administration (NN43001-632)*.

## Configuring the CND connection

When Subscriber Manager is installed in ECM, the CND connection properties must be configured to connect the Subscriber Manager to the CND.

### Configuring the CND connection

Use the steps in the following procedure to edit the required CND connection details for a new installation of Subscriber Manager.

**Procedure 5**
**Configuring the CND connection**

| Step | Action |
| --- | --- |
| **1** | Log on to ECM. |
| **2** | From the left navigation pane, click **Subscriber** > **Common Network Directory.**<br><br>The **Common Network Directory (CND) Connection Details** Web page opens, as shown in Figure 13 "Common Network Directory (CND) Connection Details Web page" (page 45). |

**Figure 13**
**Common Network Directory (CND) Connection Details Web page**



| | |
|---|---|
| **3** | In the **Host** field, type the IP address or DNS recognizable host name where CND is installed. |
| **4** | In the **Port** field, type the connection port of CND. |
| | The default port is 389. When TLS/SSL is checked, enter **636** to change the port number. |
| | *Note:* **TLS/SSL** must be configured on the CND server before changing the port number to **636**. |
| **5** | In the **SubMgr account password** field, enter the password. |
| | Nortel recommends that you change the default password after you install Subscriber Manager. |
| | *Note:* The password must first be changed in the CND and then changed in Subscriber Manager. The password set in Subscriber Manager must be the same as the password set in the CND for the **SubMgr** account. For more information about how to change the default password, see *Common Network Directory 2.2 Administration , NN43050-101*.. |
| **6** | Select the **TLS/SSL** check box, if **TLS/SSL** is configured on the CND server.. |
| **7** | (Optional ) Click **Test Connection** to confirm the data entered and that there is a connection to a valid CND. |
| | When the test connection process is complete, one of the following status messages appears beside the **Test Connection** button: |

- Connection test passed

- Connection test failed
  When the connection test fails, a message is displayed that describes why the connection failed.

**8** Click **Save** to save your changes, or click **Cancel** to discard your changes.

---

**--End--**

---

## Editing the CND connection

Use the steps in the following procedure to edit the CND connection details as required.

**Procedure 6**
**Editing the CND connection details**

| Step | Action |
| --- | --- |

**1** Log on to ECM.

**2** From the left navigation pane, click **Subscriber** > **Common Network Directory.**

The **Common Network Directory (CND) Connection Details** Web page opens, as shown in .

**3** Edit the information as desired for the following fields:

- **Host**

- **Port**
  The default port is 389. When TLS/SSL is checked, enter **636** to change the port number.

    *Note:* **TLS/SSL** must be configured on the CND server before changing the port number to **636**.

- **TLS/SSL**

- **SubMgr account password**

**4** Click **Test Connection** to confirm the data is entered and connects to a valid CND.

When the test connection process is complete, one of the following status messages appears beside the **Test Connection** button:

- Connection test passed

- Connection test failed
  When the connection test fails, a message is displayed that describes why the connection failed.

**5**     Click **Save** to save your changes, or click **Cancel** to discard your changes.

---

**--End--**

---

### Testing the CND connection

Use the steps in the following procedure to test the CND connection to ensure Subscriber Manager connects to the CND.

**Procedure 7**
**Testing the CND connection**

| Step | Action |
|------|--------|

**1**     Log on to ECM.

**2**     From the left navigation pane, click **Subscriber** > **Common Network Directory.**

The **Common Network Directory (CND) Connection Details** Web page opens, as shown in Figure 13 "Common Network Directory (CND) Connection Details Web page" (page 45).

**3**     Click **Test Connection**.

When the test connection process is complete, one of the following status messages appears beside the **Test Connection** button:

- Connection test passed

- Connection test failed
  When the connection test fails, a message is displayed that describes why the connection failed.

---

**--End--**

---

## Moving subscriber and account data to a new installation of CND

Use the steps in Procedure 8 "Moving subscriber and account data to a new installation of CND" (page 47) to move subscriber and account data to a new version of the CND.

**Procedure 8**
**Moving subscriber and account data to a new installation of CND**

| Step | Action |
|------|--------|

**1**     Start the CND Manager from the old CND, and run a backup of the data.

**2**      Start the CND Manager from the new CND, and then restore the data from the backup.

For more information about starting the CND Manager and restoring the backup, see *Common Network Directory 2.2 Administration , NN43050-101*.

**3**      Log on to ECM.

**4**      From the left navigation pane, click **Subscriber** > **Common Network Directory**.

The **Common Network Directory (CND) Connection Details** Web page opens, as shown in .

**5**      In the **Host** field, type the IP address or DNS recognizable host name where CND is installed.

**6**      In the Port field, type the connection port of CND. The default port is 389. When TLS/SSL is checked, enter 636 to change the port number.

*Note:* **TLS/SSL** must be configured on the CND server before changing the port number to **636**.

**7**      In the **SubMgr account password** field, enter the password.

Nortel recommends that you change the default password after you install Subscriber Manager.

*Note:* The password must first be changed in the CND and then changed in Subscriber Manager. The password set in Subscriber Manager must be the same as the password set in the CND for the **SubMgr** account. For more information about how to change the default password, see *Common Network Directory 2.2 Administration , NN43050-101*.

**8**      Select the **TLS/SSL** check box, if **TLS/SSL** is configured on the CND server.

**9**      Click **Test Connection**.

When the test connection process is complete, one of the following status messages appears beside the **Test Connection** button:

- Connection test passed

- Connection test failed
  When the connection test fails, a message is displayed that describes why the connection failed.

**10**      If the test passed, click **Save**.

The **Managing Subscriber** Web page opens, as shown in

**Figure 14**
**Managing Subscriber Web page**



**--End--**

# Subscriber Manager operations

This chapter provides information about how to configure subscribers, subscriber accounts, and subscriber phone services for subscribers within your management system.

## Navigation

-
-

## Managing subscribers

The procedures in this section describe the functions available in Subscriber Manager to manage subscribers within your network.

The Managing Subscriber Web page is the default Web page that opens when you click the Subscriber link in the ECM left navigation pane. From the Managing Subscriber Web page, you can view, add, edit, delete, or search for subscribers.

### Adding a new subscriber

Use the steps in the following procedure to add a new subscriber in Subscriber Manager.

**Procedure 9**
**Adding a new subscriber**

| Step | Action |
|------|--------|
| 1 | Log on to ECM. |
| 2 | From the left navigation pane, click **Subscriber**. |
|   | The **Managing Subscriber** Web page opens, as shown in . |
| 3 | From the **Subscribers** section, click **Add**. |

The **New Subscriber** Web page opens, as shown in Figure 15 "New Subscriber Web page" (page 52).

**Figure 15**
**New Subscriber Web page**



4    Type the required information for the new subscriber in the following five sections:

- **Identification**

  — Last name

     *Note:* Last name is a mandatory field.

  — First name
  — Middle name
  — Preferred name
  — Employee ID
  — Subscriber type
     Use this field to identify the type of subscriber such as, employee, project, roles, or location.
  — Language
  — Comment
     Use this field to enter any specific information for the subscriber.

- **Directory and Phone Numbers**

  — Extension
  — External

- — ESN
- — Cell
- — Pager
- — Fax
- **Address**
  - — E-mail
  - — Office location
- **Mailing address**
  - — Street
  - — City
  - — Province/State
  - — Country
  - — Postal/Zip code
- **Organization**
  - — Job title
  - — Department
  - — Company
  - — Service start date
  - — Service end date

  To enter a service start or end date, you can perform one of the following actions:

  - — Type the service start date as YYYY-MM-DD.
  - — Click the calendar icon beside the **Service start date** field and select a date.

**5**    Click **Save** to apply the changes, or click **Cancel** to return to the **Managing Subscriber** Web page.

If all mandatory fields have been completed, the **Search for Subscribers** Web page opens and the added subscriber is listed in the **Subscribers found** section.

If all mandatory fields have not been completed, the **New Subscriber** Web page refreshes with a message indicating missing mandatory fields.

*Note:* When adding a new subscriber, if the subscriber's first and last name match an existing subscriber in the directory, a warning message is displayed as shown in Figure 16 "New Subscriber warning Web page" (page 54). Click **Save** or **Apply** to continue with the operation, or click **Cancel** to abort the operation.

**Figure 16**
**New Subscriber warning Web page**



**--End--**

When a new subscriber is added to the system, an account can be
added for the new subscriber. For more information about how to add a
subscriber account, see "Adding an account for a subscriber" (page 60).

## Searching subscribers

Use the basic or advanced search features in Subscriber Manager to
quickly and easily search for subscribers within your network.

### Performing a basic search for a subscriber

Use the steps in the following procedure to perform a basic search to find
subscribers within your management system. With the basic search, you
can search for a subscriber only by last name, first name, or last and first
name.

**Procedure 10**
**Performing a basic search for a subscriber**

| Step | Action |
|------|--------|
| **1** | Log on to ECM. |
| **2** | From the left navigation pane, click **Subscriber**. <br><br> The **Managing Subscriber** Web page opens, as shown in Figure 14 "Managing Subscriber Web page" (page 49). |
| **3** | From the **Search for Subscribers** section, in the **Name** field, perform one of the following actions: <br><br> • type the last name of the subscriber <br><br> • type the last name and first name of the subscriber <br><br> • type the first name of the subscriber |

> **ATTENTION**
> When searching for a subscriber with both last and first names, a comma is required after the last name (smith, john).
>
> When searching for a subscriber with the first name, a comma is required before the name (, john).
>
> You can also use the asterisk (*) wild card to return specific search results, as described in Table 6 "Search wild card" (page 24).

**4**      Select a value from the **Results per page** drop down list.

**5**      Click **Search**.

        The search results are displayed in the **Subscribers found** section of the **Managing Subscriber** Web page.

**6**      Click **Reset** to clear the search values and to perform a new search.

<div align="center">

**--End--**

</div>

### Performing an advanced search for a subscriber

To perform an advanced search for a subscribers within your management system, see Procedure 11 "Performing an advanced search for a subscriber" (page 56). With the advanced search feature, you can search for a subscriber by:

- name, middle name, or preferred name
- employee ID
- department
- cell phone number
- service start or end date
- post office box, street, city, province/state, country, postal code/ZIP
- job title
- language
- location
- e-mail, ESN or external telephone number, pager number, extension,
- company
- comment
- type

**Procedure 11**
**Performing an advanced search for a subscriber**

| Step | Action |
|------|--------|
| **1** | Log on to ECM. |
| **2** | From the left navigation pane, click **Subscriber**. |
| | The **Managing Subscriber** Web page opens, as shown in Figure 14 "Managing Subscriber Web page" (page 49). |
| **3** | From the **Search for Subscribers** section, next to the **Name** field, click **Advanced Search**. |
| | The **Search for Subscribers** Web page for the advanced search opens, as shown in Figure 17 "Search for Subscribers Web page for an advanced search" (page 56). |

**Figure 17**
**Search for Subscribers Web page for an advanced search**



| Step | Action |
|------|--------|
| **4** | From the **Search for Subscribers** Web page, enter information for the following advanced search fields: |

- **Name**
- **Employee ID**
- **Department**
- From the first drop down list (of miscellaneous fields), select one of the following

&mdash; Cell phone number

&mdash; City

&mdash; Company

&mdash; Country

&mdash; Comment

&mdash; ESN phone number

&mdash; Email

&mdash; Employee Id

&mdash; Extension phone number

&mdash; External phone number

&mdash; Job title

&mdash; Language

&mdash; Location

&mdash; Middle name

&mdash; Pager number

&mdash; Post office box

&mdash; Postal code/ZIP

&mdash; Preferred name

&mdash; Province/state

&mdash; Street

&mdash; Type

- From the date drop down list select **Service end date** or **Service start date** including the **From** and **To** fields.

  To enter a date in the **From** and **To** fields, click the calendar icon beside them or type the date as YYYY-MM-DD in the appropriate fields.

**5** Select **Only search for subscribers whose deletion is pending or failed**, if desired.

**6** From the **Results per page** list, select a value.

**7** Click **Search**.

The search results are displayed in the **Subscribers found** section of the **Managing Subscriber** Web page.

**8** Click **Reset** to clear the search values and perform a new search.

---

**--End--**

---

> **ATTENTION**
> When you perform a basic or advanced search, you can use the asterisk (*) wild
> card to return specific search results. For more information about the asterisk (*)
> wild card, see Table 6 "Search wild card" (page 24).

## Viewing or updating subscriber properties

You can view or update subscriber properties in your system to ensure the
information is accurate and up-to-date.

Use the steps in the following procedure to view or update the properties
for a selected subscriber.

**Procedure 12**
**Viewing or updating subscriber properties**

| Step | Action |
| --- | --- |
| 1 | Search for a Subscriber. To search for a subscriber see Procedure 10 "Performing a basic search for a subscriber" (page 54), or Procedure 11 "Performing an advanced search for a subscriber" (page 56). |
| 2 | From the **Subscribers found** section, click the subscriber's name. |
| | The **Subscriber Detail** Web page for the selected subscriber opens, as shown in Figure 18 "Subscriber Detail Web page" (page 58). |

**Figure 18**
**Subscriber Detail Web page**

**3** View or edit the properties as required.

**4** When changes are made to the subscriber properties, perform one of the following actions:

- Click **Apply** to save the changes. Or,

- Click **Save** to save the changes to the target.
  The **Managing Subscriber** Web page opens. Or,

- Click **Cancel** to discard the changes.
  The **Managing Subscriber** Web page opens.

**--End--**

### Deleting a subscriber

You can delete a subscriber that is no longer required in your system.

Use the steps in the following procedure to delete a subscriber with or without accounts.

**Procedure 13**
**Deleting a subscriber**

| Step | Action |
| --- | --- |
| **1** | Search for a Subscriber. To search for a subscriber see |
| **2** | From the **Subscribers found** section, select the check box beside the name of the subscriber or subscribers you wish to delete. |
| **3** | Click **Delete**.<br><br>A confirmation dialog box opens. |
| **4** | Click **OK** to proceed with the deletion or **Cancel** to cancel the deletion. |

**--End--**

## Managing subscriber accounts

The procedures in this section provide information about managing accounts for subscribers within your network.

The **Managing Subscriber** Web page is the default Web page that opens when you click the Subscriber link in the ECM left navigation pane. From the **Search for Subscribers** Web page, you can view, add, edit, or delete subscriber accounts. From the **Subscribers found** section of the **Search for Subscribers** Web page you can update subscriber properties. To update subscriber properties, see .

### Adding an account for a subscriber

Use the steps in the following procedure to add an account for a subscriber.

**Procedure 14**
**Adding an account for a subscriber**

| Step | Action |
|------|--------|
| 1 | Search for a Subscriber. To search for a subscriber see , or to find the desired subscriber. |
| 2 | From the **Subscribers found** section, click the name of the subscriber. |
|    | The **Subscriber Detail** Web page opens for the selected subscriber, as shown in . |
| 3 | From the **Accounts** section, click **Add**. |
|    | The **Accounts** Web page opens for the selected subscriber, as shown in . |

**Figure 19**
**Accounts Web page**
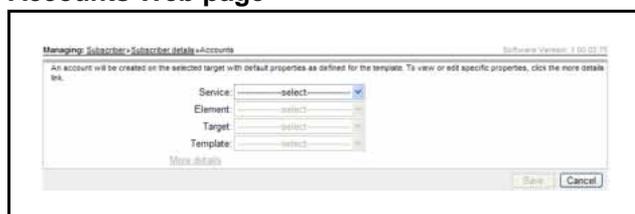


| Step | Action |
|------|--------|
| 4 | Select an option from the list for each of the following four required properties: |
|    | • **Service** |
|    | • **Element** |
|    | • **Target** |
|    | • **Template** |
| 5 | Perform one of the following actions: |

- Click **Save** to save the account information and accept the default values for the account in the system and to return to the **Subscriber Detail** Web page.
  The new account is displayed in the **Accounts** list for the subscriber.

- Click **Cancel** to discard the account creation and to return to the **Subscriber Detail** Web page.

- Click **More details** to configure additional properties for the account.
  The **Phone Details** page for the new account opens as shown in Figure 20 " Phone Details Web page" (page 61).
  **Figure 20**
  **Phone Details Web page**



> **ATTENTION**
> The **Phone Details** page is provided by Element Manager.

If **More details** was selected, follow steps 6 and 7.

**6** Enter the additional properties for the account.

**7** Perform one of the following actions:

- Click the **Finish** button to save the account information in the element and return to the **Subscriber Detail** web page.
  The new account is displayed in the **Accounts** list for the subscriber.

- Click the **Cancel** button to discard the account creation and return to the **Accounts** web page.

- Click the **Validate** to validate the phone details against the Call Server to ensure there are no errors.

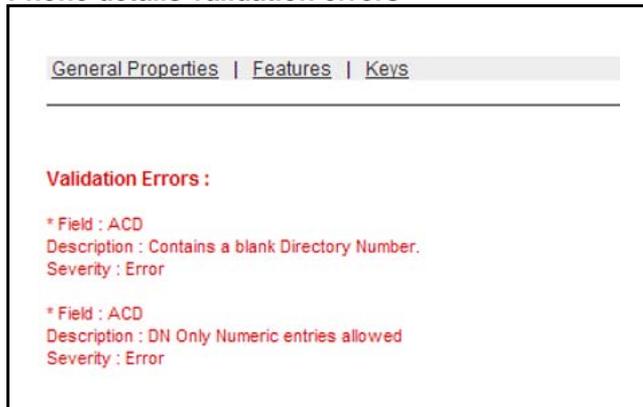The validation results are displayed on the **Phone details** web page.

— If no validation errors are found, the following message appears.

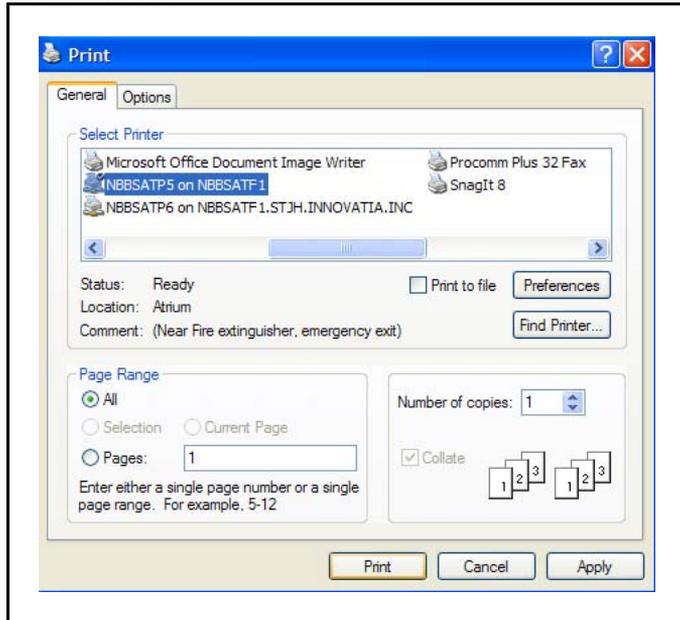**Figure 21**
**No Phone details validation errors**
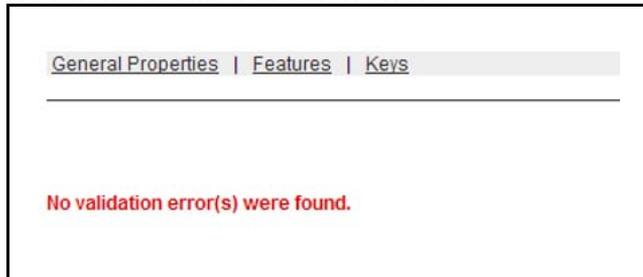


— If validation errors are found, the following type of message(s) appears

**Figure 22**
**Phone details validation errors**



- Click the **Print** button to initiate a print of the **Phone details** web page.
  The **Print** window appears.

**Figure 23**
**Print window**



- Click the **Print** button to print the **Phone details** web page to the chosen printer destination.

---

**--End--**

---

## Viewing or updating a subscriber account

You can view or update the properties of an account to ensure the required or new information for a subscriber is entered in your system. Use the steps in the following procedure to view or edit the properties for a subscriber account.

**Procedure 15**
**Viewing or updating a subscriber account**

| Step | Action |
|------|--------|
| **1** | Search for a Subscriber. To search for a subscriber see Procedure 10 "Performing a basic search for a subscriber" (page 54), or Procedure 11 "Performing an advanced search for a subscriber" (page 56) to find the desired subscriber. |
| **2** | From the **Subscribers found** section, click the name of the subscriber.<br><br>The **Subscriber Detail** Web page opens for the selected subscriber, as shown in Figure 24 "Subscriber Detail Web page" (page 64). |

**Figure 24**
**Subscriber Detail Web page**
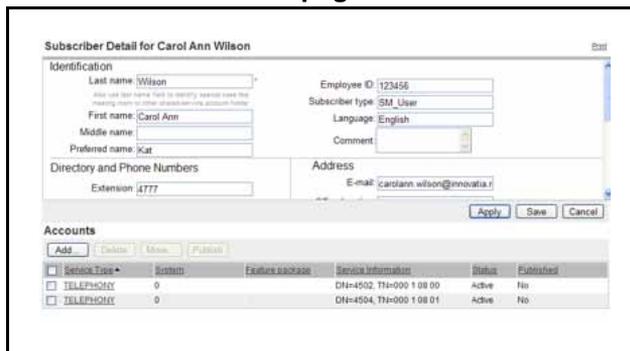


**3**    In the **Accounts** section, from the **Service Type** list, click the
         service type that you wish to view or update.

         The **Phone Details** Web page opens for the selected service
         type.

**4**    View or edit the properties as required.

**5**    When changes are made to account properties, perform one of
         the following actions:

         • Click **Save** to save the account information in Subscriber
           Manager and in the element and to return to the **Subscriber
           Detail** Web page.
           The **Accounts** list in the **Subscriber Detail** Web page is
           refreshed.
           Or

         • Click **Cancel** to discard the account creation and to return to
           the **Subscriber Detail** Web page.

---

**--End--**

---

### Deleting subscriber accounts

Use the steps in the following procedure to delete one or more accounts
that are no longer required for a subscriber.

**Procedure 16**
**Deleting subscriber accounts**

| Step | Action |
|------|--------|

**1**    Search for a Subscriber. To search for a subscriber see
         Procedure 10 "Performing a basic search for a subscriber" (page
         54) , or Procedure 11 "Performing an advanced search for a
         subscriber" (page 56) to find the desired subscriber.

**2**    To delete all accounts for a subscriber, select the check box beside the name of the subscriber in the **Subscribers found** section of the **Managing Subscriber** Web page and click **Delete All Accounts**.

The **Managing Subscriber** Web page refreshes.

**3**    To delete one or more accounts for a subscriber, click the name of the subscriber in the **Subscribers found** section of the **Managing Subscriber** Web page.

The **Subscriber Detail** Web page opens for the selected subscriber, as shown in .

**4**    In the **Accounts** section, select the check box beside a service type to delete the account for the selected subscriber.

> *Note:* You can select one or more accounts to delete.

**5**    Click **Delete**.

A confirmation dialog box opens.

**6**    Click **OK** to proceed with the deletion or **Cancel** to cancel the deletion.

---

**--End--**

---

## Publishing account properties

Use the steps in the following procedure to copy information to specific subscriber properties within your system, and to synchronize account specific information in the corporate directory.

**Procedure 17**
**Publishing account properties**

| Step | Action |
|------|--------|
| **1** | Search for a Subscriber. To search for a subscriber see , or to find the desired subscriber. |
| **2** | From the **Subscribers found** section, click the name of the subscriber. <br><br> The **Subscriber Detail** Web page opens for the selected subscriber, as shown in . |
| **3** | In the **Accounts** section, select the check box beside a service type. |

**4**   Click **Publish**.

The account properties are copied to specific subscriber properties in your system. Only certain account properties are published. See "Subscriber phone services" (page 30)for details about the publishing rules between Element Manager and Subscriber Manager.

**--End--**

## Synchronizing accounts

Information in Subscriber Manager and the elements can sometimes become out-of-sync. The synchronization process can synchronize one element, and queue all other selected elements. The state of the synchronization process is the same for all users. When the synchronization process starts, you cannot modify the process until the synchronization process is completed or stopped.

Use the steps in the following procedure to synchronize account information between Subscriber Manager and the elements.

**Procedure 18**
**Synchronizing accounts**

| Step | Action |
| --- | --- |
| **1** | Log on to ECM. |
| **2** | From the left navigation pane, click **Subscriber** > **Synchronize Accounts**.<br><br>The **Synchronize Accounts** Web page opens, as shown in Figure 25 "Synchronize Accounts Web page" (page 66). |

**Figure 25**
**Synchronize Accounts Web page**
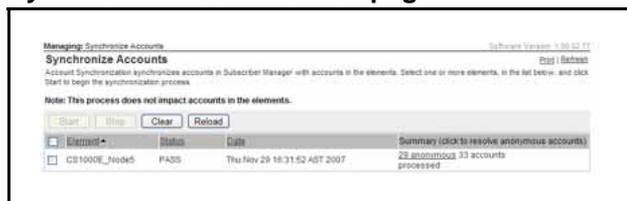


**3**   Select the check box beside one or more elements, and then click **Start** to begin the synchronization process.

Once the synchronization process is started, the only action you can take is to click the **Stop** button to stop the synchronization process. The **Start**, **Clear**, and **Reload** buttons are disabled.

*Note:* When you click the **Stop** button, the tasks in progress are stopped when the required processes are completed.

---

**--End--**

---

During the synchronization process, the **Status** column for each element indicates the current status of the synchronization process. Statuses include:

- **QUEUED**
  The synchronization task is queued and will run automatically once other synchronization tasks have completed.

- **RUNNING**
  The synchronization task is running.

- **STOPPING**
  The synchronization task is stopping. In this case, a user clicked the **Stop** button. Tasks that are running stop only once certain critical processes are complete.

- **ABORTED**
  The synchronization task aborted before the task completed. This is the final result of the user clicking the **Stop** button.

When the synchronization process is complete, the **Status** column is updated for each element with either a **PASS** or **FAIL** entry. A **PASS** status indicates that the synchronization task finished to completion. A **FAIL** status indicates that the synchronization task failed to complete. Check logs for information as to why the failure occurred. The **Summary** column displays the number of accounts processed, the number of anonymous accounts, the number of accounts added, and the number of accounts deleted.

From the **Summary** column, you can click on the number of anonymous accounts to assign or delete the anonymous accounts. For more information, see .

## Assigning or deleting anonymous accounts

When a synchronization process completes, a summary shows any anonymous element accounts in Subscriber Manager. You can assign the anonymous account to subscribers in Subscriber Manager or delete the accounts from the element.

Use the steps in the following procedure to assign an anonymous account to a subscriber in your system.

**Procedure 19**
**Assigning an anonymous account**

| Step | Action |
|------|--------|
| **1** | Log on to ECM. |
| **2** | From the left navigation pane, click **Subscriber > Synchronize Accounts.**<br><br>The **Synchronize Accounts** Web page opens, as shown in Figure 25 "Synchronize Accounts Web page" (page 66). |
| **3** | From the **Synchronize Accounts** Web page, in the **Summary** column, click the link for the number of anonymous accounts.<br><br>The **Anonymous Account** Web page opens, as shown in Figure 26 " Anonymous Account Web page" (page 68). |

**Figure 26**
**Anonymous Account Web page**



| Step | Action |
|------|--------|
| **4** | Select the check box beside one of the anonymous accounts. |
| **5** | Type the subscriber name in the **Name (Last, First)** text field.<br><br>*Note:* If the last name is not unique, a drop down list of Subscribers appears. Select a Subscriber from the list and the **Name (Last, First)** text field auto fills. |
| **6** | Click **Assign**.<br><br>The **Anonymous Account** Web page refreshes with an update of the **Status** of the assigned account. |

**--End--**

Use the steps in the following procedure to delete anonymous accounts in your system.

**Procedure 20
Deleting an anonymous account**

| Step | Action |
|------|--------|
| **1** | Log on to ECM. |
| **2** | From the left navigation pane, click **Subscriber > Synchronize Accounts.** |
| | The **Synchronize Accounts** Web page opens, as shown in Figure 25 "Synchronize Accounts Web page" (page 66). |
| **3** | From the **Synchronize Accounts** Web page, in the **Summary** column, click the link for the number of anonymous accounts. |
| | The **Anonymous Accounts** Web page opens for the anonymous accounts, as shown in Figure 26 " Anonymous Account Web page" (page 68). |
| **4** | Select the check box beside one of the anonymous accounts. |
| **5** | Click **Delete**. |
| | A confirmation dialog box opens. |
| **6** | Click **OK** to proceed with the deletion. |
| | The **Anonymous Account** Web page refreshes with an update of the **Status** of the assigned account. |
| | Or |
| | Click **Cancel** to cancel the deletion. |

**--End--**

# Troubleshooting

Ensure that the prerequisites for adding subscribers and provisioning accounts in Subscriber Manager, summarized in "Prerequisites" (page 43) are verified and validated by the ECM administrator.

## Navigation

- "Problems and course of action to resolve them" (page 71)

## Problems and course of action to resolve them

Perform the indicated actions to resolve the following problems:

1. Unable to access Subscriber Manager from ECM

   a. Error Message indicates that you don't have access to Subscriber Manager.
   The ECM Administrative user account is assigned a Role that does not include access to Subscriber Manager. You must have an ECM Administrator change your Role to one that does have access to Subscriber Manager. For more information on creating ECM Administrative user accounts and assigning roles and permissions, see *Enterprise Common Manager Fundamentals (NN43001-116).*

   b. Error Message - Web site can't be found.
   Subscriber Manager Link is not working, which indicates Subscriber Manager did not get installed correctly. For information on installing ECM, EM and Subscriber Manager, see *Linux Platform Base and Applications Installation and Commissioning (NN43001-315).*

2. An error page is displayed when first logged into Subscriber Manager
   The problem is related to either "a" or "b" in item 1.

3. Trouble creating subscriber accounts

   a. Error message - Element Manager can't be accessed
   Have the ECM administrator check the access to Element Manager. If the problem still exists, verify that the Element is on the network with an IP ping. Then have the ECM administrator "Edit" the Element and verify the connection parameters.

# Fault management

This chapter contains information about the types of log files recorded for Subscriber Manager. Subscriber Manager transaction and error logs are formatted in accordance with W3C extended log format by the ECM framework.

For more information about how to view Subscriber Manager log files, see

## Navigation

## Overview

Log files are created when data is added, changed, or deleted in Subscriber Manager. Subscriber Manager creates log files only for changes performed through the Subscriber Manager Web service interface or the Subscriber Manager Web user interface.

Logs are also created for any errors that occur during a session of Subscriber Manager.

## Log file types

For Subscriber Manager, the following log file is created:

subscriberManager.alog

The subscriberManager.alog log file is automatically saved and zipped for each day. The zipped log file is labelled as follows:

subscriberManager-yyyymmdd.alog.gz

# Appendix Terminology

## User

Administrator using the Subscriber Manager application.

## Subscriber

A subscriber is a person, location, or project that uses services within a network. Most often a subscriber is an employee of a company or organization. An example of a location subscriber is an elevator with telephone services.

## Element

The Call Server as listed in the Elements table in the Enterprise Common Manager framework.

## Account

An account is a provisioned service, available through an element, for a subscriber. A subscriber can have more than one account, such as an account for a telephone service, conferencing service, and voice mail service.

## Target

Each element can further break down where an account is provisioned through the use of a target. In a CS1000 system customer numbers are targets.

## Service type

The type of service being provided to the Subscriber such as Telephony.

## Template

A template contains attributes common to a CS1000 phone type. Once a template is created, you can use it to apply these common attributes to a group of phones, without having to repetitively define the same value

for each phone. In general, using a template is a more efficient method of adding large numbers of phones than maintaining each phone individually. A template is created on an element.

# Index

Nortel Communication Server 1000

# Subscriber Manager Fundamentals

**NORTEL**