



APPENDIX **C**

Hosted Unified Communications Services Customer Administration

Revised: 08/12/2010, OL-23270-01

This document describes the options available to Customer administrators within the Hosted Unified Communications Services (UCS) system. The options available to the Customer administrator depend on the specific Hosted UCS implementation. If you have questions about the availability of a specific option, contact the Provider administrator for the Hosted UCS system. The following sections describe the options available to the Customer administrator on each submenu:

- [Setup Tools, page C-9](#)
- [Provider Administration/Feature Templates, page C-9](#)
- [Resources/Phone Inventory, page C-10](#)
- [General Tools, page C-11](#)
- [General Administration, page C-12](#)
- [Location Administration, page C-17](#)

Overview

This section includes the following topics:

- [User Interface Guidelines, page C-1](#)
- [Provisioning Guidelines, page C-3](#)
- [Managing Phones, page C-4](#)
- [Managing Internal and External Numbers, page C-7](#)
- [Managing Services, page C-8](#)
- [Using the Pilot Number, page C-9](#)

User Interface Guidelines

Note the following conventions used in Hosted UCS menus and associated administration pages:

- Links to other pages are bright blue.

- Required fields are indicated by a red asterisk (*).
- Error messages are displayed in red type.
- Changes to a page are not saved until you click the **Add**, **Submit**, or **Modify** button, which is required to complete the transaction.
- A transaction record generally appears after submitting each change, which indicates if the transaction is successful or if a problem occurred. To view previously completed transactions, use the **Transactions** option on the General Tools menu.
- You can use the browser **Back** button to return to a previously viewed page, or you can click on any option in the navigation menu to go directly to a specific option.

Quick Search

Each page of the USM user interface includes a Quick Search link, which allows you to search the database for specific entries, including phones, extensions, and user accounts. The Quick Search page lets you search for entries of various types from a single page. The entries to which you have access are determined by the access privileges associated with the user account that you used to log into the system.

When you click the Quick Search link, the system displays a Quick Search page containing a list of the entries in the Hosted UCS database to which you have access. Select the options described in [Table C-1](#) from the **Search For** pull-down selection list to identify the type of entries for which you want to search.

Click on a blue link on this page to open the management page for the selected entry. To refine your search, select one of the following options from the **Search By** pull-down selection list.

- Pattern ends with—Enter the last few characters of the entry that you want to find.
- Pattern starts with—Enter the first few characters of the entry that you want to find.
- Pattern includes—Enter any string that is included in the entry that you want to find.

To specify the number of entries you want the system to display on a single page, select the number from the **Max Results** pull-down selection list.

Table C-1 Search Types

Search Type	Description
Location Searches	
Location	Find a location by name within the division or customer level.
Location with Site Code	Find a specific location by entering the site code.
Location of User	Find a location by entering a user account name.
Location of Phone	Find a location by entering the Mac address of a phone.
Extension Search	
Extension	Find an extension by its numeric identifier.
Extension associated with DDI	Find an extension by entering the external line to which it is registered.
Extension used by User	Find an extension by entering the associated user account.
Extension used by Phone	Find an extension provisioned on a phone by entering the MAC address of the phone.

Table C-1 Search Types

Search Type	Description
Mac Search	
Phone with Mac	Find a phone by entering the MAC address.
Phone with Extension	Find a phone by entering the associated extension.
Phone with DDI	Find a phone by entering the external line to which the phone is registered.
Phone with User	Find a phone by entering the associated user account name.
User Search	
Username	Find a user account by entering the user account name.
Surname	Find a user account by entering the last name associated with the user account.
Firstname	Find a user account by entering the first name associated with the user account.
User with Extension	Find a user account by entering the extension associated with the user account.

Provisioning Guidelines

The following summarizes the steps required to provision the Hosted UCS system. Many of these steps can be completed using the bulk data loaders (see [“Bulk Load” section on page C-11](#)).

1. (Service provider) Creates the customer account and adds the phones to the Hosted UCS phone inventory.
2. (Customer administrator) Creates divisions (if used), locations, and tenants for the customer.
3. (Customer administrator) Creates feature groups.
4. (Customer administrator) Moves the phones to the location.
5. (Location administrator) Creates the user accounts within location.
6. (Location administrator) Registers the phones, assigns phones to feature groups, and associates the phones with user accounts.
7. (Phone user) Logs in to the phone and sets preferences using the Self Care menu or the LCD display on the phone.

Hosted UCS immediately connects the PSTN when you add a location, which prevents verification of the site after installation and prior to cutover. Therefore, it may be better to deploy a location, verify that all the IP phones work within the location, assign all the DDIs, hunt groups, and so forth. After everything is working correctly, connect the telephony service to the PSTN using the **Connect** button on the Manage Telephony page (see the [“Telephony” section on page C-18](#)). If the connection to the PSTN fails (for example, the number porting may be incorrect, click **Disconnect**, resolve the issues, and try again.

Managing Phones

This section provides an overview of how to manage phones in the Hosted UCS system. It includes the following topics:

- [Phone Management Summary, page C-4](#)
- [Manually Adding Phones, page C-4](#)
- [Removing Phones, page C-5](#)
- [Autoprovisioning, page C-5](#)

Phone Management Summary

The following summarizes the overall tasks for making a new phone available to a user:

1. Add a phone (to the Hosted UCS system).

This is normally accomplished through bulk loading the Mac address, phone type, and associated button template. However, phones can also be added at the Provider Administration level.

2. Move a phone to the location.

This step is performed from the Customer Administration level by moving the phone to a specific location. This associates the phone with the subnet where it gets its IP address assigned. After completing this step, in the USM interface, this phone appears in an “Unregistered” state. However, the phone is registered with Unified CM and can be used to make calls to internal extensions and to make emergency calls. When a call is placed to an emergency number from a phone in this state, the dialing number used is the emergency number assigned to the location.

3. Register a phone (once registered, you can make and receive calls).

This step is performed at the Location Administration level by selecting the phone from a list of unregistered phones in the USM database. On the Phone Registration page for the selected phone, you select the feature group and allocate the DDI line number. This phone then appears in the Registered state in USM.

4. Associate a phone to a user account (once associated, the user account is listed in the corporate directory).

This step is performed at the location level from the User Management page for the location.

5. Log-on to a phone with a Mobility Profile (once logged-on, the phone adopts the user mobility profile). For information about using the Phone Management option, refer to *Customizing Your IP Phone*.

Manually Adding Phones

A phone can only be added by a service provider administrator and the phone is automatically added at the Provider level, assuming that the phone physically exists in the provider warehouse. This is normally performed as a Bulk Load process. Once a phone is added to the Hosted UCS system, the MAC address is added to the database and is then tracked by the resource management tools.

Before a phone can be connected to the physical network within a customer location, it must be moved within the Hosted UCS system to the relevant location.

When moving a phone to a location, the Hosted UCS system automatically allocates an IP address to the phone and links it to the phone MAC address within the Hosted UCS system database and the DHCP service.

Once a phone has been moved to a location within the Hosted UCS system, it can be provisioned by physically connecting it to the network. A phone is automatically provisioned by the Hosted UCS system when you connect it to the relevant VLAN, within the correct location. When the phone is provisioned, it receives an IP address and a default configuration file. It is operational, but does not allow a user to make or receive calls, other than emergency calls. You can then access the menu screens on the phone and confirm the default settings.

If the phone has not been moved into the location within the Hosted UCS system, it is not allocated an IP address when it is connected to the network. Similarly if you try to connect it to the wrong VLAN it also does not receive its IP address.

Phone registration allocates a Class of Service (CoS) and one or more phone numbers to the phone. Registration involves rebooting the phone by the Hosted UCS system and a new, updated configuration file being sent to the phone. The CoS defines the features and settings that the phone are allocated in its configuration file.

Associating a phone links a user account to a phone, thereby associating that user account with a telephone number. Only one user account can be associated with a single phone. Before association, the phone must be registered with the new CoS and preferences of the user account. The user is not required to log onto the phone.

If the phone CoS has “Phone Extension Mobility” allowed and the user account has a Mobility Profile allocated, then that user can log in to the phone and the phone adopts the user Mobility profile.

Removing Phones

The process of deleting a phone completely from the system, requires reversing each step in the opposite order in which they were performed. For example:

1. Log out, or disassociate the user account from the phone.
2. De-register the phone.
3. Move the phone from the location to the provider (de-provision).
4. Delete the phone from the phone inventory.

Autoprovisioning

The Hosted UCS system can automate the process of moving the phone to the location, provisioning, and registration. Phones must already be added to the phone inventory and preferences must be set for the customer and location must have been set to permit Autoprovisioning and to define the appropriate business rules, such as default the feature group and number range.

Once a phone is connected to a location network, the Hosted UCS system auto-discovers the phone and the relevant IP Subnet that it is connected to. Once the Hosted UCS system confirms that the phone MAC address is in the known pool of MAC addresses, it automatically assigns the phone to the correct location (IP Subnet) within the Hosted UCS system. The Hosted UCS system then triggers the DHCP server to issue an IP address, which allows the phone to obtain its configuration file. Once a phone is provisioned, you can use the Services button on the phone to confirm autoregistration.

The Hosted UCS system applies a default feature group and selects the lowest number from the internal number pool (with associated DDI if appropriate) to register the phone. The result is that an approved phone can be connected to any office within the correct location and the phones are automatically provisioned and register with a phone number, so that calls can be made to and from the phone.

Autoprovisioning can be used by customer administrators for mass rollouts to reduce deployment resources and risk of errors. The customer administrator can also use bulk loaders for the same purpose.

Autoprovisioning may be enabled or disabled at a global, regional or local level. Default number pools and class of service can be defined. Autoprovisioning must be enabled at both Customer and Location levels. In each case, Autoprovisioning is enabled or disabled for the global set of levels under the enabling level.

There are four customer settings for Autoprovisioning. These settings must be set by the provider administrator when the customer is created.

There are five Location settings for Autoprovisioning, as shown in [Figure C-1](#)

Figure C-1 Location Preferences for Autoprovisioning

<ul style="list-style-type: none"> ■ General Tools ■ General Administration <ul style="list-style-type: none"> ■ Users ■ Customers ■ Divisions ■ Tenants ■ Locations 	<ul style="list-style-type: none"> AutoFeatureLocation AutoLastResortFeatureLocation AutoMoveLocation AutoRegister AutoRegisterLowestLocation 	<ul style="list-style-type: none"> Feature Group for Phone based registration this location Feature Group for Last Resort Phones at this location Allow Auto Move of Phone to this location Automate the move to and registration of phones at a location Lowest allowed extension number for Phone based Auto registration this location
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To display these settings, click **Preferences** on the Location Management page (see the “[Locations](#)” section on page C-14). The location settings override the customer settings, but both customer and location settings must be set correctly for Autoprovisioning to occur. For example, if the AutoMoveCustomer setting is set to true, but the AutoMoveLocation setting is False, Autoprovisioning is not permitted for that Location.

The following summarizes the Autoprovisioning process:

1. IP Phones are added to USM Inventory and are assigned to a Reseller/Channel (and optionally to the Customer and/or Division levels).
2. A phone is valid for Autoprovisioning if the phone is assigned to a relevant Reseller, Customer or Division, as a parent to the Location. If the Phone is already assigned to a Location, then it has already been provisioned by USM. A Phone is not valid for Autoprovisioning, if it is still in Provider inventory, or is in the unassigned status.
3. The Location and Customer preference settings should be set to true and default settings should be entered.
4. On connection to a Location Voice VLAN switch port, the IP phone sends DHCP Discover/DHCP Request messages to the Hosted UCS Voice-DHCP server identified by the Voice IP Helper Addresses configured for the Voice VLAN.
5. The Voice-DHCP server responds to the DHCP Request message as follows:
 - Previously registered (valid) phones receives an IP address and associated DHCP options
 - Unregistered/Valid and Non-Valid phones are discovered and processed
 - The DHCP server detects the IP address of the edge-router forwarding the DHCP request
 - The DHCP server queries the USM server (providing the MAC address of the phone and IP address of the edge router)
 - USM identifies the location of the phone by reference to the list of IP addresses loaded into USM for valid Edge Routers/Subnets. These Edge Router IP addresses must be unique to a given subnet, in order to cater for Locations which have multiple subnets) if the phone is valid for Autoprovisioning, and if Autoprovisioning is enabled at the location.
 - USM moves the phone to the phone inventory to the required location, assign an IP address to the phone in the appropriate subnet, and configure the DHCP server to provide the relevant DHCP acknowledgement.

- USM also provisions the IP phone as an Unregistered device in the (CCM) IPPBX associated with the location. If the phone is not valid for Autoprovisioning, or if Autoprovisioning is not enabled at the location, USM does not configure the DHCP server and the phone does not receive a valid DHCP acknowledgement.
6. Following successful Autoprovisioning, the IP phone receives a valid IP address for its local subnet, receives the address of the relevant Unified CM TFTP server in its DHCP options and then registers with the relevant CCM IPPBX Subscriber server. The phone shows Unregistered in the Phone Mask and an internal only extension number on the first phone line.
 7. If a default feature group is set in the AutoFeatureLocation preference and the default phone number pools set in the AutoRegisterLowestLocation preference, then the phone also automatically registers with the respective default settings. Telephone calls can then be made on the registered phone.
 8. A Phone of Last Resort capability is provided by USMUSM. If this setting is enabled, then the first phone connected to a subnet is allocated with the AutoLastResortFeatureLocation default number. The Phone of Last Resort feature is only specific to certain organizations.
 9. USM can also automatically allocate the registered phone to a predetermined Pickup Group. If the XML-AutoPickupGroupName setting is enabled, then the registered phone is automatically added to the default pick-up group.

The Autoprovisioning process does not provide a regular transaction screen like other transactions. This is because Autoprovisioning runs in the background and is triggered only by a new, valid phone being connected to a location. USM does, however, capture the Autoprovisioning transaction in the transaction logs, available from the General Tools menu.

Managing Internal and External Numbers

External (or DDI) numbers are unique E.164 numbers that are not necessarily allocated to every business phone. A call from another company can only be placed to an external (DDI) number. You cannot call an internal number from outside the company. Internal numbers are allocated to every phone. They allow internal calls to be made between staff within a company, both intra- and inter-location. External numbers must be associated to an internal number before it can be registered with a phone, because every phone must have an internal number.

The following summarizes the process of managing numbers:

1. Add E.164 number range.
2. Create internal numbers when adding a location.
3. Move E.164 numbers to a location.
4. Associate E.164 number range to internal number range.
5. Register phone with one or more numbers.

An E.164 number range can only be added by a service provider administrator and the numbers are automatically added at the Provider level, assuming that the numbers have been allocated to the provider by the regulated authority. Once a number range has been added to the Hosted UCS system, the numbers are added to the Hosted UCS system database and are then tracked by the system management tools.

Internal numbers are created automatically when a location is created. Part of the location configuration process requires the number of internal lines to be specified and the Hosted UCS system automatically creates the configured number of internal numbers. Internal numbers can be added by modifying the configuration of a location. Internal numbers are created on the basis of the definitions created in the Dial Plan number construction section. This defines the number of digits in the site code and extension number.

Before an external number can be used by a phone on the physical network within a customer location, it must be moved within the Hosted UCS system to the relevant location. The Hosted UCS system maintains a record of where numbers are allocated.

Once an External Number Range has been moved to a location, it can then be associated with an internal number range. This procedure is performed at the Location level. If the external number range has not been moved into the correct location, it cannot be associated with the internal number range.

When a phone is registered, it is always given an internal number. If the CoS or feature group for the phone allows for an external or DDI number, then it also receives an external number. You cannot allocate an external or DDI number to a phone if the external number is not associated with an internal number for that location.

Managing Services

Managing services consists of the following major tasks:

1. Create Services at the Provider Level (Provider Management).
2. Allocate Services to Customer locations (General Administration).
3. Create and Allocate Services to feature groups (General Administration).
4. Allocate Services to Users (Location Administration).
5. Manage Services in Profile.

Services are created at the Provider level when a provider is created. Part of the provider configuration process requires the number of Services to be defined and the Hosted UCS system automatically creates the configured number of Services. Services can be added to by modifying the service counters within the Provider Management menu.

Before a service can be allocated to a user account within a customer location, it must be moved within the Hosted UCS system to the relevant location. This requires service counters to be increased at each level, including customer, division (if used), and location.

For information about incrementing service counters at each level refer to [<\\$xref>](#).

The Hosted UCS system maintains a record of where services are allocated through the service counters at each level. Additional services can be ordered at any one level by modifying the reserved services counters. Changes to service counters can be configured to create billing records, allowing service providers to charge customers when they re-order services.

Feature groups provide the mechanism for packaging services for user accounts. When you create a feature group, you define the services that are authorized for user accounts within that feature group. You cannot authorize services for user accounts any other way.

You allocate the feature group to a user account when you create the user account.

The customer administrator can modify a user account feature group and you can modify the underlying services within a feature group.

Once a user account has been allocated a feature group, the services in that feature group are present in their user account profile. For example, if they are allocated the User Mobility service, then the Mobility Profile option is present on their Manage User page.

Add services to the user account by modifying the User Profile in the Manage User page. Once the service has been added, you can configure the service for that user account. Again, using Mobility as the example, once the service has been added to the user account, the Mobility Profile Configuration link is present on the Manage User page.

Users can manage their own services on their Self Care pages, using the Manage Profile option. Certain service configuration variables (not all) are available under Self Care for the user to manage. The balance of the service configuration can be managed by the location administrator, using the Manage User page.

If you cannot add a service to a user account, verify the following:

- Does the user account have the correct feature group allocated?
- Does the location have sufficient services available to be allocated to this user account?

If the user account does not have the correct feature group, then you must change their feature group. If the location does not have sufficient service resources, then you need to re-order more resources from their parent company resources.

Using the Pilot Number

The pilot number is the primary identifier required when creating a customer within the IP Unity system. The Hosted UCS system ensures that the pilot number is unique for each customer. The pilot number is a unique identifier of the service within the network but also allows users to call the voicemail system to retrieve messages associated with their account (line number). The pilot number is created within the voicemail resource pages, but follows the standard E.164 number management process. The Hosted UCS internal number scheme (14 digit – CPID/RID/Sitecode/Ext) ensures that the pilot number remains unique, even when the same site code (999) and extension number are chosen by different customers.

Setup Tools



Note

The specific options available on this menu may vary depending on your Hosted UCS implementation.

This section describes Bulk Loads Samples option in the Setup Tools menu:

Bulk Load Samples

To view sample data used with the **Bulk Load** option for automated provisioning of phones and other resources, select the **Samples** option on the Setup Tools menu.



Note

For further details refer Chapter 3, Getting Started with Cisco Hosted Unified Communication Services Release 7.1(a)

Provider Administration/Feature Templates



Note

The specific options available on the Provider menu may vary depending on your Hosted UCS implementation.

This section describes the **Feature Templates** option on the Provider menu, which lets you configure templates that are used for managing the features available to different groups or phones or locations.

Feature groups provide the mechanism for packaging services for user accounts. When you create a feature group, you define the services that are authorized for user accounts to which the feature group is assigned.

A feature group template provides the features that are enabled by default when creating a new feature group. This makes it easier to maintain consistency among feature groups for different locations. You can then modify the feature group to enable or disable specific features for the location.

To create a feature group, complete the following steps:

Procedure

-
- Step 1** Click **Feature Templates** on the Provider Administration menu.
 - Step 2** To create a feature group template, click **Add**.
 - Step 3** Enable or disable each feature that you want to include or exclude from the feature group template.
 - Step 4** Click **Modify**.
-

Resources/Phone Inventory



Note

The specific options available on the Resources menu may vary depending on your Hosted UCS implementation.

This section describes the Phone Inventory option on the Resources menu. Phones are added to the Inventory by the provider administrator and allocated to customers. As the customer administrator, you can allocate phones to divisions, locations, and users. The Hosted UCS system tracks the inventory and provides feature management for each phone.

The Phone Inventory option lets you view information about phones, assign a phone to a location, and move a phone between locations.

To view the phone inventory or move a phone between locations, complete the following steps:

Procedure

-
- Step 1** Select **Phone Inventory** on the Resources Menu.
A Phone Inventory page having a list of the phones on the system with their location and status, is displayed. To search for a phone, select one of the following options from the Search by pull-down selection list:
 - MAC starts with
 - MAC ends with
 - Search by phone location
 - Extension Number Ends with
 - Extension Number Starts with
 - Full Internal Number

Enter as many characters as you know in the field provided and click **Search**. The search string is *not* case-sensitive.

- Step 2** Click the blue link in the MAC address column to view information about a specific phone or move it to a different location.
- Step 3** Click **Next**.
- Step 4** Select the location to which you want to move the phone from the pull-down selection list.
- Step 5** Click **Next**.
- Step 6** Click **Move Phone**.

The transaction record appears and the phone is moved to the designated location.

General Tools

**Note**

The specific options available on the General Tools menu may vary depending on your Hosted UCS implementation.

This section describes the following options on the General Tools menu.

- [Bulk Load, page C-11](#)
- [Transactions, page C-11](#)

Bulk Load

Use the Bulk Load Tools option to use a bulk data loader for importing data into the Hosted UCS system. A bulk data loader is an Excel spreadsheet that follows a strict format that allows information to be automatically loaded to the Hosted UCS system.

The following bulk loaders are provided with the Hosted UCS platform:

- Dial plan model loaders—including settings for USM, and dial plans for Cisco PGW, and Cisco Unified Communications (Unified CM)
- Configuration loaders—Provider, network, and reseller settings

**Note**

For further details refer the Getting Started with Cisco Hosted Unified Communication Services Release 7.1(a) guide.

Transactions

Use the **Transactions** option to view the status of recently completed transactions, such administrative changes, user login attempts, and password changes. When you select the **Transactions** option, the Manage Transaction page appears on the screen.

To search for a Transaction, select the appropriate option from the pull-down selection lists to specify the search criteria and click **Search**.

- Specify a time range:
 - Any Time
 - Within Hour
 - Within 24 Hours
- Select the type of criteria to use for searching:
 - Action type
 - Cancelled transactions
 - All transactions

General Administration

**Note**

The specific options available on the General Administration menu may vary depending on your Hosted UCS implementation.

This section describes the following options on the General Administration menu.

- [Users, page C-12](#)
- [Resellers, page C-12](#)
- [Buildings, page C-13](#)
- [Customers, page C-13](#)
- [Divisions, page C-13](#)
- [Locations, page C-14](#)
- [Feature Groups, page C-16](#)

Users

This section describes how to manage users across locations. User accounts are added within a location, using the **Users** option on the Location Administration menu. For information about creating and managing user accounts, refer to Appendix A, “Location Administration.” To change permissions for users within a location, refer to the [“Users” section on page C-20](#).

Use the **Users** option on the General Administration menu to view information about users across locations.

Resellers

Refer General Administration Options in Chapter 3 of the Getting Started with Cisco Hosted Unified Communication Services Release 7.1(a) guide.

Buildings

Refer General Administration Options in Chapter 3 of the Getting Started with Cisco Hosted Unified Communication Services Release 7.1(a) guide.

Customers

Refer General Administration Options in Chapter 3 of the Getting Started with Cisco Hosted Unified Communication Services Release 7.1(a) guide.

Divisions

Use the **Divisions** option on the General Administration menu to manage existing divisions or to add a new division. Divisions are used to group a large number of locations to simplify management of a very large number of locations. Each customer must have at least one division to add a location. There is no specific prerequisite information, other than the address and contact details, to add a division.

To manage divisions, complete the following steps:

Procedure

-
- Step 1** Select **Division** on the General Administration Menu.
A Division Management page containing a list of the divisions in the Hosted UCS system, is displayed. You can use this page to search for divisions in the database, to manage a specific division, or add a division.



- Note** If the Division Management page does not appear immediately, click the links on each page until it appears.
-

- Step 2** To manage an existing division, click the blue link in the Name column.
- Step 3** To add a division, click **Add**.
- Step 4** Complete any fields required.
- Step 5** Set the value of the Increase/Decrease Reservation field to identify the number of phones to allocate of each type for the current division.

The number of phones available for the division are listed in the Available From Parent column. These phones are allocated by the provider administrator to the customer. As the customer administrator, you can increase or decrease the number of phones of each type that you want to assign to the current division.
- Step 6** Set the value of the Increase/Decrease Reservation field to identify the number of services to allocate of each type for the current division.

The number of services available for the division are listed in the Available From Parent column. These services are allocated by the provider administrator to the customer. As the customer administrator, you can increase or decrease the number of services of each type that you want to assign to the current division.
- Step 7** Select the GUI branding option from the pull-down selection list.
- Step 8** Click **Modify**.

The division is added to the database.

Locations

When adding a new location, you must first confirm that the following tasks have been completed by your service provider:

- The new location has cabling installed within the building and individual offices are connected
- The Cisco ISR or 3600 line-powered switch has been installed on-site at the new location and connected to the service provider network
- The IP Subnet address (or Pool Addresses) have been allocated and the Edge Device has been configured for the IP Subnet
- The E.164 telephone numbers have been allocated
- Phones have been provisioned by the Hosted UCS system, allocated to the new location and are physically available at the new location

Obtain the following information from the service provider before adding a location:

- Hardware Group for the location: for example, QT-P1-PGW1-C1-CP
- Internal Site code for the location: for example, 7101
- PSTN Area code for the location: for example, 4
- Primary location Number (i.e. main number): for example, 86644000
- Emergency Number (for callback by emergency services): for example, 86644001
- Start and end range for E.164 telephone number range to be allocated to users in this location: for example, 86644000 to 86644999
- Phone MAC addresses: for example, 12.34.56.78.AB.90

The following is a summary of the tasks required to add a new location:

1. Add the location details, scope of services and infrastructure configuration the Hosted UCS system automatically configures the Cisco Unified Communications Manager, gatekeepers, transit switch and PSTN Gateway for the new location, and the new location is added to the Hosted UCS database.
2. Add new user details, including their services and features into the Hosted UCS system, including site administrators. The Hosted UCS system creates the users within the central database, linked to the new location.
3. Register the phones, which allows the location phones to be recognized by the Hosted UCS system when they are plugged into their new office locations. The Hosted UCS system configures the Cisco Unified CM and IP management system for the new phones, linking them to their location and IP Subnet.

Registered phones can acquire an IP address and obtain their configuration file (phone number) and once they have fully booted, operate as an authorized phone.

4. Associate each phone to the user, which links the user to their phone, allowing them to personalize the phone. The Hosted UCS system links the user to the phone within the central database. The phone operates as the user phone, until the user is disassociated with the phone. The user can personalize the settings of the phone. If the user logs in, the phone can access their settings/services, such as their Personal Directory.

Adding a Location

Note the following when adding locations:

- A location administrator cannot add a new location. Only division administrators or higher (including customer administrators) are authorized to add locations.
- You must add a location from the Location Management page.
- You must first add the parent customer (and division if used) before adding the location.
- After adding the location, add the associated phones and users.

To add a new location, complete the following steps:

Procedure

-
- Step 1** Select **Location** from the Location Administration menu.
A Location Management page containing a list of the locations in the Hosted UCS system, is displayed. You can use this page to search for locations in the database, to manage a specific location, or add a location.
- Step 2** To manage an existing location, click the blue link in the Name column.
- Step 3** To add a location, click **Add**.
- Step 4** Enter the details required for the current location.
The mandatory fields are indicated by a red asterisk.
- Step 5** Select Hardware Group from the drop-down menu.
Hardware group is very important and defines a set of hardware devices, including PBXs, Transit Switches, and so forth. Through selection of an appropriate Hardware Group you are controlling the set of hardware resources that is assigned to the new location. Obtain this information from your service provider.
- Step 6** Click **Next**.
- Step 7** Select the site code for the location from the pull-down selection list.
The service provider configures the entries on the Site Code pull-down selection list.
- Step 8** Select the local area code (prefix to dial this area) for the location.
The service provider configures the entries on the Area Code pull-down selection list.
- Step 9** Set the extension number length and outside line prefix.
The service provider configures the options available.
- Step 10** Select the IP subnet.
The service provider configures the subnets before creating the location.
- Step 11** Select the branding for the location from the Default branding of User Interface pull-down selection list.
- Step 12** Click **Add**.
The system begins automatically configuring the new location.
-

Managing Location Resources

Refer [Managing Location Resources, page B-10](#), Hosted Unified Communication Services Division Administration, Appendix B.

Feature Groups

Feature Groups are the primary means for managing user services. Feature groups are customized by the customer administrator. There are two types of feature groups:

- Feature groups for user accounts
- Feature groups for phones

User-based feature groups define the features, services and usage rights that are assigned to every user mobility profile assigned to the feature group. Phone-based feature groups define the features, services and usage rights that are assigned to each phone in the group.

Feature groups define a set of services, including Class of Service (CoS) to be allocated to a user or a phone. Understanding feature groups and refining their use can significantly improve user experience of IP telephony. Poor feature group definition may result in poor service definition to users and phones.

Configure your feature groups during initial set-up of the Hosted UCS system. Once established, you must add new feature groups when changes to your business occur, such as new services are added, or a new class of service is added.

Feature groups are attached to many user accounts and phones. A change to a feature group may not be relevant to every user account or phone.

Feature groups are created at the Customer level and are common among locations for the customer. Each customer or tenant must create their own feature groups. You must be a customer administrator, or higher, to create or delete a feature group.

To manage feature groups, complete the following steps:

Procedure

-
- Step 1** Select **Feature Groups** on the Location Administration menu.
A Feature Group Management page containing a list of the feature groups in the Hosted UCS system, is displayed. You can use this page to search for feature groups in the database, to manage a specific feature group, or add a feature group.
- Step 2** To manage an existing feature group, click the blue link in the Name column.
- Step 3** To add a feature group, click **Add**.
- Step 4** To enable or disable a feature in the feature group for the customer, check or uncheck the associated checkbox.
- Step 5** After selecting the correct set of features, click **Modify**.



Note You can modify a feature group, but use caution because this changes the feature group settings for all the phones and users using that feature group and might impact other locations.

Location Administration

**Note**

The options available on the Location Administration menu may vary depending on your Hosted UCS implementation.

This section describes the following options on the Location Administration menu.

- [Switchboards, page C-17](#)
- [Telephony, page C-18](#)
- [Hunt Groups, page C-18](#)
- [Number Groups, page C-19](#)
- [Pickup Groups, page C-20](#)
- [Users, page C-20](#)
- [Phone Inventory, page C-21](#)
- [Phone Registration, page C-21](#)
- [Phone Management, page C-22](#)
- [Analogue Line Mgt., page C-22](#)
- [MoH Track Mgt Option, page C-22](#)
- [Internal Numbers, page C-23](#)
- [External Numbers, page C-24](#)

Switchboards

Use the **Switchboards** option on the Location Administration menu to manage existing switchboards or to create a new switchboard.

To manage switchboards, complete the following steps:

Procedure

-
- Step 1** Select **Switchboards** on the Location Administration Menu.
A SwitchBoard Management page containing a list of the switchboards in the current location, is displayed. You can use this page to search for switchboards in the database, to manage a specific switchboard, or add a switchboard.
 - Step 2** To manage an existing switchboard, click the blue link in the Name column.
 - Step 3** To add a switchboard, click **Add**.
 - Step 4** Enter the information required for the switchboard in the current location
 - Step 5** Select the options required to configure the switchboard from the pull-down selection lists.
 - Step 6** Click Add.
-

Telephony

The **Telephony** option on the Location Administration menu lets you manage phones in the current location.

To manage telephony services for the location, complete the following steps:

Procedure

- Step 1** Click the **Telephony** option on the Location Administration menu.
 - Step 2** A Telephony Management page appears on the screen.
 - Step 3** To manage the telephony services click **Telephony**.
 - Step 4** To connect the telephony service, click **Connect**.
 - Step 5** To add a Call Park service, click **Add**.
 - Step 6** Click **Submit**.
-

Hunt Groups

A hunt group is a set phones to which rules can be applied so that calls can be answered more efficiently. Depending on the rules, a call to any phone in the group causes all the phones to ring at the same time, or each phone rings in turn and the call is forwarded to the next phone in the group until it is answered.

Hunt groups are created by the customer administrator, but you can use the Hunt Groups option to add or remove lines an existing hunt group.



Note

Before you can add lines to a hunt group, you must first create the Number group, as described in the [“Number Groups” section on page C-19](#). A single Number group can be used with multiple hunt groups, and multiple line groups can be used with a single hunt group.

This section describes how to add a hunt group to a location. For information about managing hunt groups, including adding lines to a hunt group, see Appendix A, “Location Administration.”

To create a hunt group, complete the following steps:

Procedure

- Step 1** Select **Hunt Groups** on the Location Administration menu.
- Step 2** To search for a hunt group, select Hunt group name or description from the Search by pull-down selection list, and type as many characters as you know in the field provided and click **Search**. The search string is case-sensitive.
- Step 3** Click **Add**.
- Step 4** Click **Add** to add a new hunt group.
- Step 5** Enter a unique name for the hunt group.
- Step 6** Enter a description for the hunt group. (optional)


- Step 7** Select the pilot number from the Pilot Number pull-down selection list. The pilot number, when called, directs the call to the hunt group.
- Step 8** Enter a number to which the call should be directed when it is not answered in the Call Forward Destination field.
Each Number group contains a group of numbers that ring when a call is placed to the specified pilot number. More than one line group can be associated with a hunt group, which allows the call to roll over to the second line group if no member of the first line group answers the call. If none of the lines associated with any line group answers the call within the time limit specified by the Maximum Hunt Timer pull-down selection list, the call is forwarded to the number specified in the Call Forward Destination field.
- Step 9** Select the maximum ring time from the Maximum Hunt Timer pull-down selection list.
Each line group has rules regarding how the call rolls over to the next line or line group, and how long it should ring before rolling over. The Maximum Hunt Timer specifies the total maximum length of time the call can ring on every line in each line group. Therefore this value should either be set high enough, or the RNA Reversion Timeout on the line group should be configured short enough to allow each line to be called before the Maximum Hunt Timer expires. The maximum length of time that can be set for this timer is 180 seconds (3 minutes).
- Step 10** Click **Add** at the bottom of the Add Hunt Group page.
-

Using a Hunt Group with Multiple Line Groups

You can use a hunt group with a ordered list of Number groups that can be used in sequence.

To add a Number group to an existing hunt group, complete the following steps:

Procedure

- Step 1** On the Hunt Group Management page, select the name of the hunt group to which you wish to add a Number group.
- Step 2** Click **Select Number Group**.
The Select Line Group page appears.
- Step 3** Select a Number group to add to the Hunt Group from the pull-down selection list.
-  **Note** The same number group can be added to more than one hunt group.
-
- Step 4** Select the order in which the Number group should be used.
- Step 5** Click **Add**.
-

Number Groups

A Number group is a set of phones that can be used by one or more hunt groups to determine the way that incoming calls are handled when a call is received by the pilot number assigned to the hunt group.

For instructions about creating a number group, see Appendix A, “Location Administration.”

**Note**

Number groups in the location administrator level are called Line Groups.

Pickup Groups

A pickup group is a set of phone numbers that allows a user of any phone in the group to answer an incoming call by pressing a soft key button. Pickup groups are created by customer administrators, but location administrators can add or remove numbers from a pickup group or associate and unassociate pickup groups. When two pickup groups are associated, they function as a single pickup group for as long as they remain associated.

Group pickup allows the user of a phone that is not in the pickup group to also pick up a call. This is achieved by the use of the Group pickup extension number.

This section describes how to add a pickup group to a location. For information about managing pickup groups, including adding lines to the pickup group, see Appendix A, “Location Administration.”

To create a pickup group, complete the following steps:

Procedure

- Step 1** On the Location Administration menu, select **Pickup Groups**. A Pickup Group Management page appears on the screen.
To search for a pickup group, select Pickup Group Name or Description from the Search by pull-down selection list, and type as many characters as you know in the field provided and click **Search**. The search string is case-sensitive.
 - Step 2** Click **Add** on the Pickup Group Management page.
 - Step 3** Enter a unique name for the pickup group.
 - Step 4** Enter a description for the pickup group (Optional).
 - Step 5** Select a number that is not within the pick-up group that should pick up a call.
 - Step 6** Click **Add**.
-

Users

This section describes how to change permissions for users within a location. For information about creating and managing user accounts, refer to Appendix A, “Location Administration.”

To change the permissions for a user, complete the following steps:

Procedure

- Step 1** Click **User** on the Location Administration menu.
- Step 2** Click the blue link in the Username column for the user account you want to manage, in the User Management page.
- Step 3** Click **Permissions**.

- Step 4** Click the checkbox to enable or disable the type of permissions the selected user account should have for the operation listed on each line.
- Step 5** Click **Modify**.
-

Phone Inventory

Use the **Phone Inventory** option on the Location Administration menu to manage the phone inventory in the current location.

To manage the phone inventory, complete the following steps:

Procedure

- Step 1** Select **Phone Inventory** on the General Administration Menu.
A Phone Inventory page containing a list of the phone inventory in the current location, is displayed. You can use this page to search for phones in the database and to manage a specific phone.
- Step 2** To manage a phone, click the blue link in the Name column.
- Step 3** To add a voicemail account, click **Add**.
- Step 4** This page displays information about the selected phone.
-

Phone Registration

Use the **Phone Registration** option on the Location Administration menu to register phones in the current location.

After a phone is assigned to a location it is assigned its IP address and appears in the USM database in the Unregistered state. However, the phone is registered with Unified CM and can be used to make calls to internal extensions and to make emergency calls. When a call is placed to an emergency number from a phone in this state, the dialing number used is the emergency number assigned to the location.

When the phone is registered, it is assigned a feature group and an external (DDI) number. After registration, the phone can be used for logging in to a Mobility profile, and can be used to make calls to external numbers.

To register a phone, complete the following steps:

Procedure

- Step 1** Select **Phone Registration** on the Location Administration Menu.
A Phone Registration page containing a list of the unregistered phones in the current location, is displayed. You can use this page to search for unregistered phones in the database, to register a specific phone, unregister a phone, or display phone status.
- Step 2** To register a phone, click the blue link in the Name column.
For further information about registering phones, see Appendix A, “Location Administration.”

Phone Management

Use the **Phone Management** option on the Location Administration menu to manage the phones within a location. For information about managing phones within a location, see Appendix A, “Location Administration.”

Analogue Line Mgt.

Use the **Analogue Line Mgt.** option on the Location Administration menu to register an analog line (for example, for a fax machine) and associate a phone number with the line. To register an analog line, you need the following information:

- Analogue gateway address: for example, 12.34.56.78.AB.90
- Feature group for the Analogue Line
- Telephone number allocated for the line: for example, 86644000

When registering an analog line, note the following:

- You must register an analog line from the Location level.
- The analog gateway must be provisioned for the location.

To register an analog line, complete the following steps:

Procedure

- Step 1** Select **Analogue Line Mgt.** on the Location Administration menu.
An Analogue Port Management page containing a list of the analogue ports in the current location, is displayed. You can use this page to search for switchboards in the database, to manage a specific switchboard, or add a switchboard.
 - Step 2** To manage an existing analogue port, click the blue link in the Name column.
 - Step 3** On the page that appears, click **Gateway name**.
 - Step 4** On the page that appears, select the port that you wish to register from the pull-down selection list.
 - Step 5** Click **Next**.
 - Step 6** Enter the relevant phone numbers (E.164, DDI, and local extensions).
 - Step 7** Click **Register**.
-

MoH Track Mgt Option

Use the Unified CM Administration pages to add music on hold (MoH) tracks to the Hosted UCS system.

Use the **MoH Track Mgt** option on the Location Administration menu to manage MoH tracks.

To manage MoH tracks, complete the following steps:

Procedure

- Step 1** Select **MoH Track Mgt** on the Location Administration Menu.
A MoH Track Management page containing a list of the MoH tracks in the current location, is displayed. You can use this page to search for MoH tracks in the database, to manage a specific MoH track, or add a MoH track.
- Step 2** To manage an existing MoH track, click the blue link in the Name column.
- Step 3** To add a MoH track, click **Add**.
- Step 4** Enter the following details:
- MoH Track Name
 - Track ID
 - Description of Track
 - MoH Server Name.
- Step 5** Click **Submit**.
The Hosted UCS system adds the MoH Track to the database.
-

Internal Numbers

DDI numbers must be associated with an internal number before allocation. The service provider. If DDI numbers are not present, or you have used all your numbers, request additional numbers from the service provider.

Range association allows a set of external numbers to be linked together with a range of internal numbers. Number association is required to ensure that all DDI numbers assigned to a phone or Mobility profile always have an internal number for internal calls. It is also possible to bulk load the DDI numbers and range association.

Use the **Internal Numbers** option on the Location Administration menu to manage internal numbers.

To manage internal numbers, complete the following steps:

Procedure

- Step 1** Select **Internal Numbers** on the Location Administration Menu.
A Manage available internal numbers page containing a list of internal numbers, their associated PSTN numbers, their associated phone users, switchboard pilot, and type of phone, is displayed. You can use this page to search for internal numbers in the database, or to manage the internal number range.



Note You cannot reserve a number if it has already been associated.

- Step 2** To manage the internal number range, click **Internal Number Range Mgt**.
- Step 3** Enter the starting range for the internal numbers in the Start Internal Number field.
- Step 4** Select the number of internal numbers from the Range Size pull-down selection list.
- Step 5** Click one of the following buttons, depending on how you want to manage:

- **Enable**—Enable the selected range of internal numbers.
 - **Disable**—Disable the selected range of internal numbers.
 - **Reserve**—Reserve the selected range of internal numbers.
 - **Unreserve**—Unreserve the selected range of internal numbers.
-

External Numbers

Use the **External Numbers** option on the Location Administration menu to manage external numbers. To manage external numbers, complete the following steps:

Procedure

- Step 1** Select **External Numbers** on the Location Administration Menu. A Manage External Numbers Usage page is displayed. The Manage External Numbers usage page allows you to review the association between DDI and Internal numbers for you location, as well as removing the association for certain numbers. To disassociate numbers click **DisAssoc** next to the relevant DDI number. You can use this page to search for external numbers in the database, to disassociate a specific number, to disassociate a range, or to associate a range.
 - Step 2** To associate a range, click **Range Assoc**.
 - Step 3** Select the national Code from the pull-down selection list.
 - Step 4** Select the start of the range, end of range, and extension numbers to associate from the pull-down selection lists.
 - Step 5** Click **Submit**.
-