



# Batch Provisioning, Infrastructure Configuration, and Business Rules

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## Batch Provisioning



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**Note** For Cisco prime Collaboration Provisioning 12.3 and later, only Administrator group can access the Batch functions.

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To create users and provision their services automatically use batch provisioning. Batch provisioning enables you to easily roll out a new office, or transition from legacy systems.

You can order user services on an individual basis for a single user. But when deploying a large number of services, you should combine them into a single batch. Batch provisioning enables you to create a single batch that contains multiple types of orders.

You can use batch provisioning to add, update, or cancel a Domain (with or without LDAP settings). You can also add, update, or delete user roles using batch provisioning.

Unlike BAT files that run only on the Cisco Unified Communication application they are deployed, Provisioning batches can run on one or many applications managed by Provisioning.

Batches can be run immediately upon uploading to Cisco Prime Collaboration Provisioning, or they can be scheduled to run at a later time. For more information on Batch Projects, see [Managing Batch Projects, on page 25](#).

You can also combine multiple types of services into a single batch operation. For example, a batch can contain a combination of phone and voicemail additions or changes.

You can add, change, or cancel the following infrastructure objects through batch provisioning:

- App User

- Call Search Space
- Cisco IOS Conference Bridge
- Class of Service
- Conference Now
- CTI Route Point
- Date Time Group
- Device Mobility Group
- Device Pool
- Emergency Location (ELIN) Group
- External Service
- Gateway Settings
- Interactive Voice Response (IVR)
- LDAP Authentication
- LDAP Directory
- Location
- Media Resource Group
- Media Resource Group List
- Message Waiting On/Off
- Phone NTP Reference
- Physical Location
- Port Group
- Proxy Configuration Setting
- Restriction Table
- Route Partition
- Route Pattern
- Service Parameter
- Service Profile
- SIP Profile
- SIP Route Pattern
- SIP Trunk
- SIP Trunk Security Profile
- SRST

- Subscriber Template
- TFTP Server
- Transfer Rule
- Translation Pattern
- Trunk
- UC Service - CTI
- UC Service - IM and Presence
- UC Service - Voicemail
- Unified CM Group
- Universal Device Template
- Universal Line Template
- User Profile Provision
- Voice Region
- Voicemail Pilot
- Voicemail Profile
- Called Party Transformation Pattern
- Calling Party Transformation Pattern
- Intercom Directory Number
- Intercom Translation Pattern
- Intercom Calling Search Space
- Intercom Route Partition
- Recording Profile
- SIP Realm
- Directed Call Park
- Feature Control Policy



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**Note** You can only add the Directed Call Park and Feature Control Policy infrastructure objects using batch. You cannot change or cancel using batch. These infrastructure objects are not supported through Configuration Templates (Infrastructure Configuration and the Infrastructure Templates User Interface).

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- SoftKey Template
- Feature Group Template




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**Note** You can add, change and cancel SoftKey Template, Feature Group Template, and Phone Button Template. You cannot update or delete a standard template. Only user-defined templates can be updated and deleted.

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**Note** In case of EM Access batch provisioning (AddEMAccessServiceTemplate), you need to use the Unified Communications Manager Processor name as 'cucm', instead of 'cucm-CiscoUnifiedCM'.

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### For Cisco Prime Collaboration Provisioning release 12.5 and later

#### Enabling Spark Hybrid Services

To enable Spark Hybrid Services, perform the following steps:

1. Add Expressway Core or Expressway Edge devices to Cisco Prime Collaboration Provisioning by navigating to **Device Setup > Add**.
2. Navigate to **Advanced Provisioning > Batch Provisioning**, and add a new batch project by clicking on the **ADD** button.
3. Click **Add BatchAction** and search for the following files:
  - ChangeSIP\_CertificateRevocationChecking.txt
  - ChangeSIP\_Configuration.txt
  - ChangeSIP\_RegistrationControls.txt
  - ChangeSIP\_Advanced.txt




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**Note** If you want to add all the above files together, search for the ExpresswaySparkHybridCombinedBatch.txt file that contains all the four files.

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4. Select the files that you want to add.
5. Go to **Keywords** and configure processor and User ID.
6. Click **Run Now**.




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**Note** The procedure for batch provisioning to enable Spark Hybrid Services is similar for both Expressway Core and Expressway Edge.

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### For Cisco Prime Collaboration Provisioning release 12.5 and later

#### Configuring Disk Usage using Batch Template

To configure disk usage:

1. Navigate to **Advanced Provisioning > Batch Provisioning**, and add a new batch project by clicking on the **ADD** button.
2. Click **Add BatchAction** and search for the following file:  
*ConfigureDiskUsage.txt*
3. Select the file and click on **Add to Project**.
4. Click **Edit** and configure the following parameters by clicking on them:
  - DiskUsage: Input any value between 50 to 95
  - OrderType: Do not change the default order type configdiskusage
  - ProductName: (The inputs for this field are not mandatory)
  - ServiceArea: (The inputs for this field are not mandatory)
  - UserID: Some inputs need to be present in this field.
5. Click **Save**.

## Creating Batch Action Files

To complete batch provisioning, you must:

1. Create a spreadsheet of users and services to be provisioned (including phones and lines).
2. Convert the spreadsheet to a tab-delimited text file called a batch action file.



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**Note**

When you edit the batch file (.txt) using Excel and save the updated spreadsheet as a tab-delimited text file, Excel may add double quotes for the values that contain special characters, especially comma. Remove the double quotes from the tab-delimited text file before running the batch project to avoid errors.

You can use the BulkAddMobility.txt and BulkCancelMobility.txt batch files to enable and disable mobility support for all the users in the selected Domain.

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3. Upload the batch action file into a Provisioning batch project.
4. Run the batch project or schedule it to run later. Provisioning creates the users and provisions the lines and the phones based on the file data.

You can also view a list of scheduled projects and the details of the projects that are in progress.

While provisioning the orders, you can see the status as Completed. Click the Completed link to view the device-related updates.

Batch action files must contain a single row of column headers. The data columns can be in any order in the tab-delimited text file. You can compile the data in any text editor if the resulting file conforms to these guidelines.

## Batch Action File Fields

### Batch Action File Required Columns

The table below describes the columns that are required for every batch action file.

**Table 1: Batch Action File Required Columns**

Column	Description
Order Type	<p>The order type. Valid options are (they are case sensitive):</p> <ul style="list-style-type: none"> <li>• add</li> <li>• cancel</li> <li>• change—Cannot be used for Voicemail, Email, or Unified Messaging.</li> <li>• addUser—Add multiple users at one time. If you are adding one user and the product for the user, you can use the Add order type. If you are adding multiple users at one time, you can use the addUser order type.</li> <li>• changeUser—Change multiple users' information at one time.</li> <li>• deleteUser—Delete multiple users at one time.</li> <li>• addServiceArea—Add multiple Service Areas at one time.</li> <li>• changeServiceArea—Change multiple Service Areas at one time.</li> <li>• deleteServiceArea—Delete multiple Service Areas at one time.</li> <li>• addServiceTemplate—Add multiple Service Templates at one time.</li> <li>• changeServiceTemplate—Change multiple Service Templates at one time.</li> <li>• addDomain—Add multiple Domains at one time.</li> <li>• changeDomain—Change multiple Domains at one time.</li> <li>• deleteDomain—Delete multiple Domains at one time.</li> </ul>

Column	Description
	<ul style="list-style-type: none"> <li>• The following are specific to Distribution List batch provisioning:                             <ul style="list-style-type: none"> <li>• Add-New-Members—Add new members to the Distribution List.</li> <li>• Remove-Members—Removes members from the Distribution List.</li> </ul> </li> <li>• addDevice—Add multiple devices at one time.</li> <li>• updateDevice—Change multiple devices at one time.</li> <li>• deleteDevice—Delete multiple devices at one time.</li> <li>• The following are specific to Analog Phone batch provisioning:                             <ul style="list-style-type: none"> <li>• add—To add an Analog phone or an Analog phone and the line. Adds an Analog phone where the analog voice gateway configurator will be loaded and Voice port IOS template and Dial peer IOS template are provisioned.</li> <li>• change—To change or replace an Analog phone.</li> <li>• cancel— To cancel an Analog phone. The phone is cancelled in the Unified Communications Manager and the voice port and dial peer configurations are removed from the device.</li> </ul> </li> </ul>
User ID	Provisioning user ID for which to provision the order. For addServiceArea, changeServiceArea, and deleteServiceArea, the field can be left empty. For all infrastructure products, the user ID is <i>icadmin</i> .

Column	Description
Product Name	<p>The product name. Note that the input varies depending on the order type:</p> <ul style="list-style-type: none"> <li>• Add orders—Must be an orderable product (including bundles), but cannot be a subtype (for example, you must use “Endpoint” instead of “Cisco 7960”). If you are ordering an Analog Phone, update the <code>dfc.ipt.cisco.callmanager.analog_phone_support</code> to Y in the <code>ipt.properties</code> file.</li> <li>• Cancel—Can be any product name that appears in the user’s record. Note that this does not include bundles. Dependent objects are automatically deleted when their parent is deleted.</li> <li>• Change—Must be an orderable product.</li> <li>• <code>addUser</code> and <code>deleteUser</code>—Leave empty (even if something is entered, it will be ignored).</li> <li>• <code>addServiceArea</code>, <code>changeServiceArea</code>, <code>deleteServiceArea</code>, <code>addServiceTemplate</code>, <code>changeServiceTemplate</code>—Leave empty.</li> </ul>
Service Area	<p>Name of the Service Area to order against.</p> <p>For <code>addUser</code> and <code>deleteUser</code>, leave empty (even if something is entered, it will be ignored).</p> <p>For all infrastructure products, the Service Area is not required if the processor name is provided. If the processor name is not provided, Service Area and Domain name are required.</p>
Domain	Name of the Domain associated with the users or services.
Endpoint Type	Type of the Endpoint. If you have chosen endpoint type as phone, select a supported phone model (for example, Cisco 7960).
MAC Address	<p>MAC address of the endpoint.</p> <p><code>moveService</code>—For Cisco IP Communicator, Call Processor versions less than 5, use the MAC address. If the version is 5 or greater, use the device name.</p>

### Batch Action File Columns for New User

The following table lists the additional columns that are used when new users are being created (lists the required columns for all batch action files).



**Table 2: Batch Action File Columns for New User**

Column	Description
User ID	The Provisioning user ID to be created. <b>Note</b> For Cisco Prime Collaboration Provisioning 12.3 and later, the admin and globaladmin users cannot be created using the Batch Provisioning page.
First Name	(Optional) User's first name.
Last Name	User's last name.
Domain	Domain to place the new user in.
Phone Number	(Optional) Phone number for the new user.
Email	(Optional) Email address for the new user.
Department	(Optional) Department for the new user.
User Role	(Optional) User role for the new user. Multiple user roles can be added for a user (use a semicolon to separate the user roles). <b>Note</b> User roles which are not supported by the Domain will be ignored. If there are no valid user roles assigned to the user, the user will not be created and the batch order will fail.
PMPassword	(Optional) User password for Provisioning.

**Batch Action File Columns for Deleting Users**

The table below lists the additional columns that are used when deleting users (lists the required columns for all batch action files).

**Table 3: Batch Action File Columns for Deleting Users**

Column	Description
Domain	(Optional) Domain where the user exists.

Column	Description
OnlyFromCUPM	<p>(Optional) If this column is enabled (set to Y), any services on the user record for the user will be moved to the Global Resources namespace, and their services on the actual device will not be removed. If this column is not enabled (set to N), the user will be removed from both Provisioning and the device.</p> <p>Existing batch file for 'DeleteUser' is used for both delete user with no services(existing functionality) and with services.</p> <p>Tip: When a user is deleted with OnlyFromCUPM enabled, a subsequent Domain synchronization creates the user (provided it matches the Domain synchronization rules), and the matched services appear in its user record. Alternatively, the user can be manually created in the correct Domain followed by a Domain synchronization to match the services. This provides you with a way to move users between Domains or move user services across Service Areas.</p>

#### Batch Action File Columns for Adding, Modifying, or Deleting Devices

The table below lists the additional columns that are used while adding, updating, or deleting the devices.



**Note** Before running the batch project for deleting the devices, you must ensure that Cisco Prime Collaboration Provisioning is in Maintenance mode (see [Maintenance Mode](#)).

**Table 4: Batch Action File Columns for Adding, Modifying, or Deleting Devices**

Column	Description
DeviceType	Type of the device.
IPAddress	IP Address of the device.
DeviceName	Name of the device.
NewDevicename	To change the name of the device and give a new name.
Capability <number>	Number assigned to the capability.
If Capability<number> is Unified Communications Manager, following are the valid headers:	
• Capability<number> Version	Version of the Unified Communications Manager device.
• Capability<number>IPAddress	IP Address of the Unified Communications Manager device.

Column	Description
• Capability<number> Action	Action to access the Unified Communications Manager device.
• Capability<number> UserName	Username to access the Unified Communications Manager device.
• Capability<number> Password	Password to access the Unified Communications Manager device.
• Capability<number> ConfirmPassword	Confirmation of the password to access the Unified Communications Manager device.
• Capability<number> Protocol	Protocol of the Unified Communications Manager device.
• Capability<number> LDAPDirectoryIntegration	Specifies whether LDAP integration is needed or not.
• Capability<number> EMServiceName	Name of the Extension Mobility service.
• Capability<number> EMServiceURL	URL of the extension mobility service.
If Capability<number> is Unity Connection, following are the valid headers:	
• Capability<number> Version	Version of the Unity Connection device.
• Capability<number> IPAddress	IP Address of the Unity Connection device.
• Capability<number> Action	Action associated with Unity Connection device.
• Capability<number> UserName	Username to log into Unity Connection device.
• Capability<number> Password	Password to access the Unity Connection device.
• Capability<number> ConfirmPassword	Confirmation of the password to access the Unity Connection device.
If Capability<number> is Unity Express, following are the valid headers:	
• Capability<number> Version	Version of the Unity Express device.
• Capability<number> CUELineUserName	Username to log into the Unity Express device.
• Capability<number> CUE Line Password	Line password associated with the username.
• Capability<number> ConfirmCUELinePassword	Confirmation of the password to access Unity Express device.

Column	Description
<ul style="list-style-type: none"> <li>• Capability&lt;number&gt; Service EngineInterfaceNumber</li> </ul>	Service engine interface number.
The following columns apply if the Unity columns are defined:	
<ul style="list-style-type: none"> <li>• IP Address</li> </ul>	IP Address of Unity device.
<ul style="list-style-type: none"> <li>• Version</li> </ul>	Version of Unity device.
<ul style="list-style-type: none"> <li>• Username</li> </ul>	Username for accessing the Unity device.
<ul style="list-style-type: none"> <li>• Password</li> </ul>	Password associated with the username.
<ul style="list-style-type: none"> <li>• Capability&lt;number&gt; createbyImport</li> </ul>	Creating the device by importing the details.
<ul style="list-style-type: none"> <li>• Capability&lt;number&gt; UMPPORT</li> </ul>	Port of the Unity.
The following columns apply if the Unified Presence columns are defined:	
<ul style="list-style-type: none"> <li>• Capability&lt;number&gt; Version</li> </ul>	Version of the Unified Presence device.
<ul style="list-style-type: none"> <li>• Capability&lt;number&gt; IPAddress</li> </ul>	IP Address of the Unified Presence device.
<ul style="list-style-type: none"> <li>• Capability&lt;number&gt; Action</li> </ul>	Action associated with Unified Presence device.
<ul style="list-style-type: none"> <li>• Capability&lt;number&gt; UserName</li> </ul>	Username for accessing the Unified Presence device.
<ul style="list-style-type: none"> <li>• Capability&lt;number&gt; Password</li> </ul>	Password associated with the username.
<ul style="list-style-type: none"> <li>• Capability&lt;number&gt; ConfirmPassword</li> </ul>	Confirmation of the password.
<ul style="list-style-type: none"> <li>• Capability&lt;number&gt; Protocol</li> </ul>	Protocol of the Unified Presence device.
The following columns apply if the Call Manager Express columns are defined:	
<ul style="list-style-type: none"> <li>• Capability&lt;number&gt; Version</li> </ul>	Version of the Call Manager Express device.
The following columns apply if the Router with IOS columns are defined:	
<ul style="list-style-type: none"> <li>• DeviceProtocol</li> </ul>	Protocol of the Cisco IOS Router device.
<ul style="list-style-type: none"> <li>• DeviceUserName</li> </ul>	Username associated with the Cisco IOS Router device.
<ul style="list-style-type: none"> <li>• DevicePassword</li> </ul>	Password associated with the username.

Column	Description
• DeviceConfirmPassword	Confirmation of the password.
• DeviceEnablePassword	Enables the password for the Cisco IOS Router device.
• ConfirmDeviceEnablePassword	Confirmation of the password for enabling the device.



**Note** You can also add an LDAP server through batch provisioning using IP address. Adding an LDAP server using hostname is not supported.

### Batch Action File Columns for Adding and Changing Multiple Service Areas

The table below lists the additional columns that are used when deleting users (lists the required columns for all batch action files).

**Table 5: Batch Action File Columns for Adding and Changing Multiple Service Areas**

Column	Description
Domain	The name of the Domain to which the Service Area belongs.
User role	Used only for addServiceArea. It can be left empty. If used, enter a semicolon separated list of user roles.
Call Processor Name	Name of the Call Processor in the listed Service Area.
The following columns apply only if the Call Processor Name column is defined:	
• Endpoint Protocol	The value can be either SCCP or SIP. If no value is specified, the default is SCCP.
• Endpoint Call Search Space	The Calling Search Space for the Endpoint.
• Line Call Search Space	Calling Search Space for the Line.
• Common Device Config	Common Device Configuration for the Endpoint.
• Location	Location for the Endpoint.
• Route Partition	Route Partition for the Line.
• Device Pool	Device Pool for the Endpoint.
Unified Message Processor Name	Name of the Unified Message Processor in the listed Service Area.

Column	Description
The following columns apply only if the Unified Message Processor Name column is defined:	
<ul style="list-style-type: none"> <li>Subscriber Template Without TTS Subscriber Template</li> </ul>	<p>One of the TT-disabled Subscriber Templates without TTS enabled, that is defined on the listed Unified Message Processor.</p> <p>One of the TTS enabled or disabled subscriber templates, that is defined on the listed Unified Message Processor.</p>
<ul style="list-style-type: none"> <li>Subscriber COS With TTS</li> </ul>	One of the TTS-enabled Subscriber COS that is defined on the listed Unified Message Processor
<ul style="list-style-type: none"> <li>Subscriber COS Without TTS</li> </ul>	One of the TTS-disabled Subscriber COS that is defined on the listed Unified Message Processor.
Directory Number Blocks	<p>Adding Directory Number Blocks in Service Area is an enhancement of Service Area batch provisioning.</p> <p>The data format will be &lt;Prefix&gt; :&lt; First Number&gt; :&lt; Last Number&gt; :&lt;Minimum Length&gt;; &lt;Prefix&gt; :&lt; First Number&gt; :&lt; Last Number&gt; :&lt; Minimum Length&gt;</p> <p>Delimiter “;” is used to configure multiple Directory Number Blocks.</p> <p>User can remove all existing Directory Number Blocks using CUPM_BLANK keyword during changeServiceArea operation. CUPM_SKIP keyword can be used to retain the previous value during changeServiceArea operation.</p>

### Batch Action File Columns for Adding Analog Phone or Analog Phone Service

*Table 6: Batch Action File Columns for Adding Analog Phone or Analog Phone Service*

Column	Description
Analog Voice Gateway Reference	Analog Voice Gateway Reference field associated with the selected Analog phone.
VoicePort	Voiceport associated with the Analog Voice Gateway Reference.
Directory Number	Directory number associated with the Analog phone.



**Note** To order Analog Phones for VG450, VG310, VG320, and VG350 Analog Voice Gateway models, you must include Slot and Subunit columns in the batch file.

### Batch Action File Columns for Replacing Analog Phones

*Table 7: Batch Action File Columns for Replacing Analog Phones*

Column	Description
Analog Voice Gateway Reference	New Analog Voice Gateway Reference field that will replace the existing Analog Voice Gateway Reference.
VoicePort	New Voiceport field that will replace the existing Voiceport.



**Note** To replace Analog Phones for VG450, VG310, VG320, and VG350 Analog Voice Gateway models, you must include Slot and Subunit columns in the batch file.

### Batch Action File Columns for Changing Analog Phones

*Table 8: Batch Action File Columns for Changing Analog Phones*

Column	Description
AAR Calling Search Space	Specifies the collection of route partitions that are searched to determine how to route a collected (originating) number that is otherwise blocked due to insufficient bandwidth.



**Note** To change Analog Phones for VG450, VG310, VG320, and VG350 Analog Voice Gateway models, you must include Analog Voice Gateway Reference, Slot, Subunit and Voice Port columns in the batch file.

### Batch Action File Columns for Adding, Modifying, or Deleting an ELIN group

The table below lists the additional columns that are used while adding, updating, or deleting the ELIN group.

*Table 9: Batch Action File Columns for Adding, Modifying, or Deleting an ELIN group*

Column	Description
Processor Name	Name of the Unity Connection server.
Name	ELIN group name.
Description	ELIN group description.
ELIN Number Configuration	Specify the ELIN number in the format ELIN number : Partition, while adding an ELIN group.
Add ELIN Number Configuration	For editing the ELIN group specify the ELIN number to be added, in the format ELIN number : Partition.

Remove ELIN Number Configuration	For editing the ELIN group specify the ELIN number to be removed, in the format ELIN number : Partition.
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Table 10: Batch Action File Columns for Adding, Changing, or Removing SMTP Notification Device

Column	Description
SMTP Display Name	Name of the SMTP device that an administrator creates for the user. Used for <b>Display Name</b> field in the SMTP notification device. <b>Note</b> <ul style="list-style-type: none"> <li>• If SMTP display name is not available in the device, SMTP is created in Cisco Unity Connection.</li> <li>• If SMTP display name already exists, existing details are overridden with configured attributes.</li> </ul>
New SMTP Display Name	Renames the SMTP display name.
SMTP Enabled	Allows the SMTP device to be enabled.
SMTP To Address	Email address of the user to whom email is sent. Used for <b>To</b> field in the SMTP device .
Remove Notification Devices	Removes multiple SMTP(s) for the user, using semicolon as a separator. Used only in change voice mail batch operation.

## Batch Action File Columns for Write Back to LDAP

### Batch Action File Columns to Write Back Primary DN to LDAP in Add Domain

The following table lists additional columns to write back Primary DN while adding a domain using batch.

Table 11: Batch Action Columns to Write Back Primary DN to LDAP in Add Domain

Column	Description
LDAP Attribute	Name of attributes that you can write back to the LDAP. Valid values are telephoneNumber, ipPhone, and Mobile (they are case-sensitive). If you want to write back more than one attribute, mention the required attribute names separated by a semicolon (;). LDAP attribute is not a mandatory field in the <b>Add Domain</b> batch file.
Apply Mask	Use this field to mask the LDAP attribute. If you want to mask more than one LDAP attribute, enter mask values separated by a semicolon (;). The system applies mask values to LDAP attributes in a sequential order. Apply Mask is not a mandatory field in the <b>Add Domain</b> batch file.



### Batch Action File Columns to Write Back Directory URI to LDAP

The following table lists additional columns to write back Directory URI to LDAP while adding a domain using batch.

**Table 12: Batch Action Columns to Write Back Directory URI to LDAP in Add Domain**

Column	Description
Synchronization Policy Mode	Set the value of this field to <b>Authentication and Synchronization</b> to enable <b>Write back Directory URI to LDAP</b> section in the domain.
Writeback Directory URI to LDAP	Set the value of this field to <b>TRUE</b> to check the <b>msRTCSIP-primaryuseraddress</b> check box that allows write back of Directory URI to LDAP in the domain.

### Batch Action File Columns for System Call Handler

The following table lists the additional columns that are used for adding System Call Handler through batch provisioning ([Batch Action File Fields, on page 6](#) lists the required columns for all batch action files).

**Table 13: Batch Action File Columns for Adding System Call Handler**

Column	Description
Processor Name	Name of the Unity Connection server.
Display Name	Enter a descriptive name for the call handler.
Call Handler Template	Specify the call handler template on which to base the new call handler.
Search Scope	Specify the search scope that is applied to match extensions that callers dial from the call handler to objects in a particular search space.
Language	Specify the language in which Unity Connection plays the handler system prompts to the caller.

The following table lists the additional columns that are used for updating System Call Handler attributes through batch provisioning ([Batch Action File Fields, on page 6](#) lists the required columns for all batch action files).

**Table 14: Batch Action File Columns for Updating System Call Handler Attributes**

Column	Description
Processor Name	Name of the Unity Connection server.
Display Name	Enter a descriptive name for the call handler.
Phone System	Specify the phone system that the call handler uses.
Active Schedule	Specify a schedule from the list to specify the days and times that the standard and closed greetings play, as well as the action that Unity Connection takes after the greeting.
Time Zone	Specify the desired time zone for the call handler.
Language	Specify the language in which Unity Connection plays the handler system prompts to the caller.

Column	Description
Extension	Enter the extension that the phone system uses to connect to the call handler.
Partition	Specify the partition to which the object belongs.
Search Scope	Specify the search scope that is applied to match extensions that callers dial from the call handler to objects in a particular search space.

The following table lists the additional columns that are used for canceling System Call Handler through batch provisioning ([Batch Action File Fields, on page 6](#) lists the required columns for all batch action files).

**Table 15: Batch Action File Columns for Canceling System Call Handler**

Column	Description
Processor Name	Name of the Unity Connection server.
Display Name	Enter the Display Name of the call handler.

You can change the Greetings and Caller Input attributes through batch provisioning. Note the following points while creating the batch file for changing Greetings and Caller Input attributes:

- The following attributes have three headers (columns) in batch file, where the first column represents the call management element (for example, call handler, interview handler, directory handler, and so on), the second column represents the destination to which calls are sent, and the third column represents the value for Handler Conversation (Attempt Transfer or Go Directly to Greetings).
  - After Greeting
  - Action
- For the Greeting Status attribute, if you have selected "Enabled Until" option, you must provide the value for Time Expires attribute in the following format: mm-dd-yyyy hh:mm AM (or PM).

## Batch Action File Columns for Directory Handler

The table below lists the additional columns that are used for adding and updating Directory Handler through batch provisioning ([Batch Action File Fields, on page 6](#) lists the required columns for all batch action files).

**Table 16: Batch Action File Columns for Adding and Updating Directory Handler Attributes**

Column	Description
Processor Name	Name of the Unity Connection server.
Display Name	Enter a descriptive name for the directory handler.
Language	Specify the language in which Unity Connection plays the handler system prompts to the caller.
Extension	Enter the extension that the phone system uses to connect to the directory handler.
Partition	Specify the partition to which the object belongs.

Column	Description
Voice Enabled	For Unity Connection systems with the voice-recognition option, enable this option to create a voice directory handler.
Speech Confidence Threshold	Use this setting to adjust the likelihood that Unity Connection recognizes user utterances as voice commands and recipient names.
Play All Names	Use this setting to play the names of users in the directory for caller selection, rather than requiring the caller to search by spelled name.
Search Scope	Specify the scope for directory handler searches
Class of Service	Restricts directory handler searches to users who are assigned to the selected class of service on the local Unity Connection server.
System Distribution List	Restricts directory handler searches to members of the selected system distribution list.
Search Space	Restricts directory handler searches to users and contacts who are associated with a partition that is a member of the selected search space.
Search Criteria Order	Specify the method that callers use to spell a username
Search Results Behavior	<p>Use this setting to specify the search results behavior.</p> <p>If Voice Enabled option is set to true, you have to specify the value for the following attributes:</p> <ul style="list-style-type: none"> <li>• Route Automatically on a Unique Match</li> <li>• Announce Extension with Each Name</li> <li>• Announce City with Each Name</li> <li>• Announce Department with Each Name</li> </ul> <p>If Voice Enabled option is set to false, you can specify the value for the following attributes in the Search Results Behavior column:</p> <ul style="list-style-type: none"> <li>• Route Automatically on a Unique Match</li> <li>• Always Request Caller Input</li> </ul> <p>If you want to provide the value for Announce Matched Names Using Extension Format or Announce Matched Names Using Menu Format attribute, you must use the Announce Matched Names Using column.</p>
Route Automatically on a Unique Match	When this option is selected, Unity Connection routes a call to the extension assigned to the user without prompting the caller to verify the match.

Column	Description
Announce Extension with Each Name	If this option is enabled, Unity Connection provides a menu of users that includes user extensions.
Announce City with Each Name	Enable this option to have Unity Connection announce the city of each matching user when there are multiple matches.
Announce Department with Each Name	Enable this option to have Unity Connection announce the department of each matching user when there are multiple matches.
Always request caller input	When this option is selected, Unity Connection prompts a caller to verify the match before sending the caller to the specified user extension.
Announce Matched Names Using	<p>If Announce Matched Names Using Extension Format option is enabled, Unity Connection announces to callers the names and extensions of matching users.</p> <p>If Announce Matched Names Using Menu Format option is enabled, Unity Connection provides a menu of users to callers. If this option is enabled, you can provide the value for the following attribute:</p> <ul style="list-style-type: none"> <li>• Announce Extension with Each Name</li> </ul>
Maximum Number of Matches	Indicate the maximum number of matching names that are presented to a caller when more than one user matches the key presses entered by the caller.

The following table lists the additional columns that are used for canceling Directory Handler through batch provisioning ([Table 1: Batch Action File Required Columns, on page 6](#) lists the required columns for all batch action files).

**Table 17: Batch Action File Columns for Canceling Directory Handler**

Column	Description
Processor Name	Name of the Unity Connection server.
Display Name	Enter the Display Name of the Directory Handler.

You can change the Caller Input attributes using the batch project. Note the following while creating the batch file for changing Caller Input attributes:

The following attributes have three headers (columns) in batch file, where the first column represents the call management element (for example, call handler, interview handler, directory handler, and so on), the second column represents the destination to which calls are sent, and the third column represents the value for Handler Conversation (Attempt Transfer or Go Directly to Greetings).

- If Caller Exits
- If no input

- If No Selection
- If Caller Presses Zero

For more detailed information on the attributes that are required in a batch action file based on different services, refer [http://docwiki.cisco.com/wiki/Cisco\\_Prime\\_Collaboration\\_Provisioning\\_Batch\\_File\\_Attributes](http://docwiki.cisco.com/wiki/Cisco_Prime_Collaboration_Provisioning_Batch_File_Attributes).

## Guidelines for Creating Batch Action Files

Download sample batch files from [Cisco.com](http://Cisco.com). You can add additional columns to the sample batch files as required.

When creating batch action files, follow these guidelines:

- While creating batch action values, colon delimiter must be used to enter multiples values. For example, while creating a new CallingSearchSpace that contains multiple Route Partitions, use RP1:RP2:RP3.
- To add comments to a batch action file, insert # (pound symbol) followed by the comment. You can add any information regarding that batch. These comments are ignored at the time of importing the batch action file.

For example:

- # This is to deploy a new site.
- To include multiple product types without adding multiple columns to a batch action file, insert >> (greater than symbol twice). You must insert >> at the beginning of the header row in a batch action file.

For example:

```
>>OrderType UserID ProductName ServiceArea Domain ProcessorName Name
add icadmin Route SampleServiceArea Alberta cucm10.176 kpart-1
Partition

>>OrderType UserID ProductName ServiceArea DeviceType DeviceName
deleteDevice UserID MediaServer cucm10.177 10.0.0

#Device Pool

>>OrderType UserID ProductName ServiceArea Domain ProcessorName Name
cancel icadmin Device Pool SampleSA Alberta cucm10.176 DP_Alberta
```




---

**Note** You must insert greater than symbol twice (>>). If there is a single greater than symbol (>) instead of two, then the batch action file gets imported, but the order fails.

---

- If you want the users that will be created to have self-care accounts, you must enable the CreateSelfCareAccounts rule for all applicable Domains.
- MAC Address is required when ProductName is Phone (or a bundle containing a Phone) and Phone Type is not a virtual phone (for example, CTI Port).

- New MAC Address is required when changing phones.
- Object Name is required when canceling products, except for the Line and Extension Mobility Line products.
- Name is required when canceling Remote Destination Profile and Extension Mobility Access products.
- Mac Address is required when ProductName is Phone.
- Voicemail Alias is required when ProductName is Voicemail.
- When canceling a Line or an Extension Mobility Line product, the directory number and route partition are required.
- If you delete VG202, VG 204 and VG 224 products, all the phones in the Device and Provisioning will be deleted. You will get a warning message regarding this and only after the confirmation, the phones are deleted. Domain synchronization must be done to clean the customer records associated with the phones.
- Cisco Unity devices ( Cisco Unity Connection, and Cisco Unity Express) do not support all products and services. If the batch action file is configured for a product which is not supported by the device in the specified Service Area, batch provisioning will fail.
- Product attributes that require user input during the manual order entry process are required to successfully complete the equivalent order in a batch project. Examples include:
  - Phone Type—Type of phone (for example, Cisco 7960, Cisco 7912) if ordered product is a Phone or a bundle that contains a Phone.
  - Line Type—Type of line (for example, Auto-Assigned Line or Chosen Line) if ordered product is a Line or a bundle that contains a Line.
  - Directory Number—Required when ProductName is *Line* and Type is *Chosen Line*. Additionally, ordering a product with a dependency that is not met by the order itself (for example, ordering a single Line) requires a column specifying the dependent object.
  - Route Partition—Required when ProductName is *Line* and Order Type is *Change*.
- If the product being ordered has a dependency that is not met by the order itself (for example, a single Line), a column specifying the dependent object is required. Examples include:
  - SelectedPhone—MAC address of the phone to add the line to.
  - SelectedLine—The SelectedLine value should be provided based on the product name:
    - If the Voicemail is added to Remote Destination Profile Line, you must provide the value in the following format: {RDP profile Name}Directory Number.
    - If the Voicemail is added to Line product, you must provide the value in the following format: {Phone Type : MAC Address}Directory Number.
    - If the Voicemail is added to EM Line product, you must provide the value in the following format: {Phone Type : profile name}Directory Number.
    - If the Voicemail is added to Line without endpoint, you must provide the Directory Number alone.




---

**Note** If the Line product has route partition, you must provide the route partition along with the Directory Number (for example, for adding Voicemail to Remote Destination Profile Line, you must provide: {RDP profile Name} Directory Number/Route Partition).

---

- SelectedVoicemail—Directory number of the voicemail to add unified messaging to.
- SelectedEM\_Access—Name of the EM\_Access (device profile) to add the EM\_Line to.

Bundles that contain more than one instance of a base product require their attributes to be specified with a (1), (2), and so on, at the end of the column name. For example, Line Type(1), Directory Number(1).

- For bundled products, if the product attribute name is the same for different base products, append the product name in the attribute to differentiate them.  
For example, Calling Search Space is an attribute in both Phone and Line. For the product Phone Service, you can specify Phone Calling Search Space and Line Calling Search Space.
- Speed dial information can be provided in the following ways:
  - Directly—Used where there is one column. The column header is Speed Dial Info. The expected format is index:number:label, repeated for each speed dial, semicolon delimited, where index is the position of the speed dial (for example; 1, 4, 5, and so on), number is the phone number, and label is the speed dial name (for example, 1:8675306:Joe;4:888:Voicemail).

If you use this format to add an additional line, you must reenter all the speed dial information previously entered in the column and add the new speed dial information.

This format is recommend for initial setup of speed dials. To add speed dials to an existing list of speed dials, you must use the format described in the next sub-bullet.

- As matching sets of columns—One set of columns can be called Speed Dial *n* (where *n* is the speed dial position), and the other can be called Speed Dial *n* Name. This format appends new speed dials to the existing speed dial list.

For example:

Speed Dial 1	Speed Dial 1 Name	Speed Dial 4	Speed Dial 4 Name
8675306	Joe	888	Voicemail

You can pause the speed dial number by introducing a comma. A comma introduces a delay of 2 seconds. You can introduce any number of commas in a speed dial directory number.

- Line Group information can be provided in the format LineGroupName:position. This is repeated for each Line Group, semicolon delimited. LineGroupName is the name of the line group. Position is the position of the directory number within the selected Line Group, and it can have values of last (or LAST), or numbers from 1 through 100; for example, LG1:1;LG2:5;LG3:last.

To add an additional line, you must enter all of the Line Group information. The Line Group column headings must be listed as Line Groups(1) and Line Groups(2).

- If there are multiple instances of a column (for example, multiple directory numbers), each instance must be specified with a (1), (2), and so on, at the end of the column name; for example, Directory Number(1), Directory Number(2).
- In the provisioning attribute for the Cisco Unified Communications Manager Express Phone and Line configuration template, you must use a tilde (~) as a separator; for example, username AAAAA password BBBBBBBB~pin 676771. The column header for this attribute is CME Phone Configuration Template.
- To unset the value of a provisioning attribute that has a numeric value in Cisco Unified Communications Manager, you must enter a zero for the value. If you just enter an empty value, the provisioning attribute does not get unset in Cisco Unified Communications Manager.
- While placing an order for voicemail account, if you use the Chosen Line option and select E.164 format directory number, Provisioning will set the extension number by removing the + symbol from the directory number. But the Alternate Extension field will not be auto populated. You have to enter the directory number (along with the + symbol) in the Alternate Extension field in the batch file.
- You can provide the details in UTF-8 format, but the file encoding should be UTF-8 or UTF-8 Without BOM. UTF-8 Without BOM encoding will be available in advanced text editor like Notepad++. UTF-8 encoding will be available in Notepad editor. UTF-8 characters will be converted to junk characters if the file encoding is not specified as UTF-8 or UTF-8 Without BOM.

## Keyword Usage in Batch Action Files

To perform specific functions, use the following keywords in batch action files:

- **CUPM\_BLANK**—For the Add order type, no value will be provisioned for the attribute. For the Change order type, the current attribute value will be either cleared (if applicable), or set to the default value required by the processor.




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**Note** When using the Change order type for the set-only attributes that are an enumerated type that supports a static list of valid values (for example, Calling Search Space Activation Policy), CUPM\_BLANK has no effect and the old values are retained.

---

- **CUPM\_SKIP**—Skips the provisioning attribute when processing the action file. The attribute is not set during the order. The previous configured value is retained.

When using CUPM\_SKIP with the Add order type, not all attributes can be skipped. The following attributes are not skipped:

- Mandatory attributes (for example, Device Pool and Location) are not skipped. They use the provisioning attribute settings configured at the Service Area level.
  - Device Description and Display (Internal Caller ID). These settings have rules, so they use the values based on their rules.
- **VL7DL**—Used to separate values of a set-only attribute (For example: On,VL7DL,Call Recording Enabled,VL7DL,None).



## Keyword Support to Batch File

### For Cisco Prime Collaboration Release 11.6 and later

This feature enables you to use keywords while editing a batch action, and uploading a batch file. You can define a keyword list to assign values for the attributes while creating the batch actions. You can also copy the list of keywords from an existing list of another batch project. The user interface suggests the keyword based on the input you provide. You can add, edit, copy, and delete the keywords. On the **Batch Provisioning** page, select a batch project and click **Keywords** button to view the list of keywords. The list includes the name of keyword, its value, and occurrence in the batch project. Keywords are replaced with the value in all the batch actions where it has occurred in a batch project. Occurrence is the count of the number of times a keyword has been used in the entire batch project (could be in multiple batch actions of the same project).

- You can add a maximum of 500 keywords per batch project. You cannot add system keywords such as FIRSTNAME, LASTNAME, USERID, MIDNAME, DEPT, EMAIL, MANAGER, TITLE, COMPANY, COUNTRY, CITY, STATE, ZIP, EMPID, CONTACTEMAIL, and CORPEMAIL.
- Keywords from one batch project can be copied to another batch project.
- In the Keywords dialog box, when you click **Copy from Project** button, a new dialog box lists all the batch projects, whose keyword list has been defined and contains at least one keyword.
- When you select any batch project from the list, all the keywords from that project are copied to the current batch project. However, if the selected batch project contains any keyword which exists in current keyword list, the current value is overwritten.
- Batch project quick view lists keywords and value details of the project. Replaced keywords are highlighted in blue color, while non-replaced keywords are highlighted in yellow color.

### Auto-suggesting Keywords

While editing a batch action, you get an auto-suggestion for all the available keywords in the project. The auto-suggestion is filtered based on the input you provide. You can select the keyword by clicking over the auto-suggestion list. Any text enclosure within ``${text}`` is considered as keyword. For example, ``${SERVER_PORT}``, `SERVER_PORT` is a keyword. You can also enter a keyword which does not exist in the keyword list (does not exist in the auto-suggestion box). When you save a batch action, all such keywords are automatically added to the keyword list of the batch project. These keywords are added with empty values. If a keyword does not have a value assigned, the keyword appears itself in the attribute value.



---

**Note** Nesting of keywords such as ``${SERVER_PORT} ${KEYNAME}`` is not supported.

---

## Managing Batch Projects

Batch Provisioning support is provided for all the devices of Unified Communications Manager, Unity Connection, Unity, Presence Processor, Unity Express, Call Manager Express, and Generic IOS Router. Users with the Administration role can provision devices using batch provisioning.

Sample batch files for all devices are available in the `opt/cupm/sep/ipt/config/sample/batchProvisioning` directory.

After you create a batch action file, you must create the batch project that it belongs to. When you upload a batch action file, its contents are converted to batch actions, and the columns that are common to all batch actions in the batch action file are displayed.

You must upload batch action files in the correct order according to any dependencies that exist between the batch actions. For more information about these dependencies, see [Guidelines for Creating Batch Action Files, on page 21](#).

To create a batch project:

### Procedure

- 
- Step 1** Choose **Advanced Provisioning > Batch Provisioning**.
- Step 2** Click **Add** to create a new project.
- Step 3** In the **New Batch Project** window, enter the name and description and click **Add**.
- Step 4** In the **Configure a Batch Project** screen that appears after you choose the batch project, click **Add Batch Actions** to add batch action.
- Step 5** In the Add Batch Actions page, select the appropriate File Name and Click **Add to Project**.
- Step 6** You can do one or more of the following:
- Run the batch project immediately, or schedule it to run later. See the table below for editing, copying, deleting, canceling, exporting and other operations on Batch Projects.
  - Schedule the batch project to be run later.

---

You can delete the batch projects or batch actions that you no longer require. To delete a batch project or a batch action, select the project or batch action and click **Delete**.

You can resume operation of a batch project which is in Paused state. Click the Resume icon to do so.

Click the **Batch Help** icon at the top right corner of the Batch Provisioning page. The Batch Action Help link opened in a new tab displays a table of all the batch actions along with the attributes and description for different services.

**Table 18: Managing Batch Projects**

Batch Operation	Procedure
To run a batch project immediately	<ol style="list-style-type: none"> <li>1. Choose a batch project in <b>All Projects</b> pane.</li> <li>2. In the Configure a Batch Project page, click <b>Run Now</b>.</li> </ol>

To schedule or reschedule a batch project	<ol style="list-style-type: none"> <li>1. Choose a batch project in <b>All Projects</b> pane.</li> <li>2. In the Configure a Batch Project page, click the Calendar icon. Specify a date and time in the calendar dialog box that appears and click <b>OK</b>.</li> <li>3. Click <b>Yes</b> in the confirmation message box to schedule or reschedule the batch project as appropriate.  <b>Note</b> Batch projects created for infrastructure configuration cannot be restarted if there is a failure.</li> <li>4. Click <b>Run Now</b> to execute the batch project.</li> </ol>
To cancel a scheduled batch project	<ol style="list-style-type: none"> <li>1. Choose a batch project in <b>All Projects</b> pane.</li> <li>2. In the Configure a Batch Project page, click the <b>Clear</b> button next to the Calendar icon.</li> <li>3. Click <b>Yes</b> to confirm.</li> </ol> <p>You can cancel a scheduled batch project provided that it has not started processing.</p>
To stop a batch project	<p>You can stop a batch project which is in Paused state and In Progress state. To do this:</p> <ol style="list-style-type: none"> <li>1. Choose the suitable batch project in <b>All Projects</b> pane and check its status.</li> <li>2. In the Configure a Batch Project page, click <b>Stop</b> to stop the batch project.</li> </ol>
To view the batch action details	<ol style="list-style-type: none"> <li>1. Choose a batch project in <b>All Projects</b> pane.</li> <li>2. In the Configure a Batch Project page, hover over <b>Quick View</b> of a batch action to view the details.</li> </ol> <p>The Batch Action Details pane displays all the configured information for the batch project action, including the status and log.</p> <p>In Batch Provisioning, during endpoint order, users with any user role can add a new endpoint. Even a pseudo user can add an endpoint.</p>

To edit a batch project and a batch action file	<p>To edit a batch project:</p> <ol style="list-style-type: none"> <li>1. Click <b>All Projects</b>.</li> <li>2. Select the batch project from the list displayed on the right side of the screen and click <b>Edit</b>.</li> <li>3. In the <b>Configure a Batch Project</b> window, click <b>Add Batch Actions</b>. Select a batch action file and click <b>Add to Project</b>. The new batch action file is added to the selected batch projects.</li> </ol> <p>To edit a batch action file:</p> <ol style="list-style-type: none"> <li>1. Select the suitable batch project in <b>All Projects</b> pane.</li> <li>2. In the <b>Configure a Batch Project</b> window, select the Action required and click <b>Edit</b>.</li> <li>3. In the <b>Edit Batch Action</b> window, click <b>Add New Attribute</b> to add a new attribute to the action file or click the <b>Edit</b> icon to edit the value of any existing attribute. Click <b>Save</b>.</li> </ol> <p><b>Note</b> Only one batch action can be edited at a time.</p>
To copy a batch project along with the batch actions	<p>To copy a batch project:</p> <ol style="list-style-type: none"> <li>1. Select the batch project and click <b>Copy</b> to copy a batch project along with the batch action.</li> <li>2. In the <b>Copy Batch Project</b> window, enter the description and rename the auto-populated batch project name, if required, and click <b>Add</b>. A copy of an existing batch project along with the batch action files is created with the status showing "Not Scheduled" for batch project and "Not Started" for batch action.</li> </ol> <p>To copy a batch action:</p> <ol style="list-style-type: none"> <li>1. Select the batch actions and click the expand icon in the right pane .</li> <li>2. Click <b>Copy Action(s)</b>.</li> </ol>
To export a batch project	<ol style="list-style-type: none"> <li>1. Click <b>All Projects</b> and choose a batch project in the right pane.</li> <li>2. Click the expand icon in the right pane and click <b>Export</b>. All the batch actions of the selected project is copied to a text file.</li> </ol> <p><b>Note</b> Only one project can be exported at a time.</p>

To view the current status of a batch project	<p>In the Configure a Batch Project page, the Batch Project Actions pane displays the status of each batch action project.</p> <p>To view the orders that are in a specific state (for example, In Progress or Completed state), choose the batch project and select the filter in the Batch Project Actions pane.</p> <p>After a batch project has completed, you can also check the user records of the users to verify that orders have been processed.</p> <p>To see details of a single running order within a batch project, administrators can also use My Activities (Choose <b>Activities</b> &gt; <b>My Activities</b>) to view each order as it is executed in the workflow.</p>
---	---

### Troubleshooting

**Issue:** If all the buttons are disabled in the **Configure a Batch Project** page, the Batch Project might be in one of the following states:

- In Progress
- Stopped
- Paused

**Recommended Action:** If the Batch Project is

- In Progress: Wait till the project gets completed.
- Stopped: Create a new Batch Project or copy the stopped batch project to proceed.
- Paused: Either stop or resume the paused batch project.

**Issue:** You will not be able to edit a batch action if it is completed or failed.

**Recommended Action:** You can copy and then edit the batch action.

## Migrating Prebuilt IOS Templates as Batch

**For Cisco Prime Collaboration Release 11.6 and later**

- Existing **Configuration Templates** are created as batch projects in **Batch Provisioning** on migration to batch. The configurations in each template is created as respective batch actions.
- Post migration, you have the privilege for **Batch Provisioning** if you had access to **Configuration Templates** privilege before migration.
- You must use the Batch Provisioning user interface (**Advanced Provisioning** > **Batch Provisioning**) to configure IOS Infra Objects.
- You can configure Unified Communications Manager, Unified Communications Manager Express, Unity Express, Unity, Unity Connection, and Generic IOS Router using the batch. You can add, edit, or delete the configuration settings of a device using the Infrastructure Configuration page.
- You can create generic Cisco IOS Prebuilt batch to auto-configure specific functionality on any device supported by the Provisioning that has the Cisco IOS generic router capability configured.

- Refer [Prebuilt IOS Templates](#) for more details.

## Infrastructure Configuration Products for Devices

The following tables list the infrastructure configuration products that are available in Provisioning.

### Infrastructure Configuration Products for Unified Communications Manager Release



**Note** From 11.0 release, support for 8.x devices is dropped.

Infrastructure Configuration Product	Cisco Unified Communications Manager	
	10.x and 11.x	12.0 and 12.5(1)
Analog Voice Gateway Reference	Y	NA
Cisco Fax Relay	Y	NA
Cisco Unified Communication Manager Group	Y	Y
CTI Route Point	Y	Y
Call Park	Y	Y
Call Pickup Group	Y	Y
Call Queuing	Y	NA
Call Search Space	Y	Y
Common Device Config	Y	Y
Common Phone Profile	N	Y
Client Matter Code	Y	Y
Date/Time Group	Y	Y
Description	Y	Y
Device Pool	Y	Y
Device Mobility Group	Supported for Cisco Unified Communications Manager 10.5 and above	N
Device Mobility Info	Y	Y
Enable Telnet	Y	NA
Forced Authorization Codes	Y	Y

Infrastructure Configuration Product	Cisco Unified Communications Manager	
	10.x and 11.x	12.0 and 12.5(1)
Geo Location Filter	Y	Y
Geo Location Configuration	Y	Y
H323 Gateway	Y	Y
Hunt List	Y	Y
Hunt Pilot	Y	Y
IOS Enhanced Conference Bridge	Supported for Cisco Unified IP Phone Services Communications Manager 10.5 and above	N
IP Phone Services	Supported for Cisco Unified IP Phone Services Communications Manager 10.5 and above	N
Line Group	Y	Y
Location	Y	Y
MAC Address (Last 10 Characters)	Y	N
Media Resource Group	Y	Y
Media Resource Group List	Y	Y
Meet-Me Conference	Y	NA
Meet-Me Number/Pattern	Y	Y
Modem Passthrough	Y	NA
MLPP Domain	Y	Y
Module in Slot 0	Y	NA
MT Package Capability	Y	NA
Partition	Y	Y
Physical Location	Y	Y
Resource Priority Namespace List	Y	Y
Resource Priority Namespace Network Domain	Y	Y
Remote Destination Profile	Y	Y

Infrastructure Configuration Product	Cisco Unified Communications Manager	
	10.x and 11.x	12.0 and 12.5(1)
Remote Destination Profile Line	Y	Y
RES Package Capability	Y	NA
RTP Package Capability	Y	NA
RTP Report Interval (secs)	Y	NA
RTP Unreachable OnOff	Y	NA
RTP Unreachable timeout (ms)	Y	NA
Route Group	Y	Y
Route List	Y	Y
Route Partition	Y	Y
Route Pattern	Y	Y
Service Parameter	Supported for Cisco Unified Service Parameter Communications Manager 10.5 and above	N
Service Profile	N	Y
Simple SDP	Y	NA
SIP Trunk	Y	Y
SIP Profile	Y	Y
SST Package Capability	Y	NA
T38 Fax Relay	Y	NA
Translation Pattern	Y	Y
UC Service	N	Y
Unified CM Group	Y	Y
VG202	Y	Y
VG204	Y	Y
VG224	Y	Y
VG350	N	N
Voice Region (Region)	Y	Y
Voiceport (Voicemail Port)	Y	Y



Infrastructure Configuration Product	Cisco Unified Communications Manager	
	10.x and 11.x	12.0 and 12.5(1)
Voicemail Pilot	Y	Y
Voicemail Profile	Y	Y

Infrastructure Configuration Products for Cisco Unified Communications Manager - Session Management Edition



**Note** From 11.0 release, support for 8.x devices is dropped.

Infrastructure Configuration Product	Cisco Session Management Edition	
	10.x and 11.x	12.0 and 12.5(1)
SIP Trunk	Y	Y
SIP Profile	Y	Y

#### Infrastructure Configuration Products for Cisco Unified Message Processor

Infrastructure Configuration Product	Cisco Unified Message Processor	
	10.x and 11.x	12.0 and 12.5(1)
Distribution List (Cisco Unity Connection)	Y	Y
Call Handlers	Y	Y
Class Of Service	Y	Y
Distribution List	Y	Y
Directory Handlers	Y	Y
Interview Handlers	Y	Y
Subscriber Template (User Template)	Y	Y

**Note** From 11.0 release, support for 8.x devices is dropped.

**Table 19: Infrastructure Configuration Products (Cisco Unified Presence Processor)**

Infrastructure Configuration Product	Cisco Unified Presence Processor	
	10.x and 11.x	12.0 and 12.5(1)
Audio Profile	Y	NA

Infrastructure Configuration Product	Cisco Unified Presence Processor	
	10.x and 11.x	12.0 and 12.5(1)
CIP Profile	Y	Y
Conferencing Profile	Y	NA
CTI Gateway Profile	Y	NA
LDAP Profile	Y	Y
Voicemail Profile	Y	Y

## Customer Domain Template

If your implementation has more than one Domain, you can configure the Customer Domain Template according to the default business rules and user types that you require for your implementation.

When you create new Domains, they inherit the standard set of business rules and user types from the Customer Domain Template. You can then change the business rules and user types as required for each new Domain. Changes made to the Customer Domain Template affect only new Domains created after that point.

The Customer Domain Template is created by default when you install Provisioning. You configure it by specifying business rules and user roles for it the same way that business rules and user roles are specified for new Domains.

If you want to use these new Provisioning features, you must edit the Customer Domain templates.

## Overview of Infrastructure Configuration

The Infrastructure Configuration page of Provisioning enables you to browse the infrastructure configuration settings of a Call Processor and Unified Message Processor. Through this page, you can add, edit, or delete the configuration settings of a Call Processor and Unified Message Processor. Also, you can view pending operations and schedule operations (see [Scheduling an Infrastructure Configuration Task, on page 36](#)).

To work with infrastructure configuration, you must be assigned the Infrastructure Configuration Management authorization role and be assigned permissions to the corresponding infrastructure products (see [Managing Infrastructure Configuration Permissions](#)).

The Infrastructure Configuration feature applies to Call Processors that are based on Cisco Unified Communications Manager devices and Unified Message Processors that are based on Cisco Unity Connection only.

## Cross-launching Devices from Infrastructure Configuration

Cisco Prime Collaboration Provisioning allows an administrator to cross launch configured devices such as Unified Communications Manager, Unity Connection, and IM and Presence Services, from the Infrastructure Configuration page. When you cross-launch a specific device, you can access the device UI and perform any operation directly on the server of the specific device that you have cross launched.

Rest your mouse pointer over a device in the object selector widget, and click the Quick View icon to view the version and IP address of the device being used. Refer to [Adding Devices](#) to know the list of actions that can be performed through device Quick View.

**Note**

- Cross launch to Cisco TMS requires HTTPS to be enabled on the TMS server. If HTTPS is not enabled, you must change the URL to HTTP in the cross launch window.

- When you cross launch Unified Communications Manager, the Find and List page appears. To learn how to perform specific operations on Unified Communications Manager, refer the [Cisco Unified Communications Manager Administration Guide, Release 12.0](#).

To learn how to perform specific operations on Unity Connection, refer the [System Administration Guide for Cisco Unity Connection, Release 12.x](#).

To learn how to perform specific operations on IM and Presence Service, refer the [Monitoring Cisco Unified Communications Manager IM and Presence, Release 12.0](#).

## Adding an Infrastructure Configuration Instance

To add an Infrastructure Configuration Instance:

### Procedure

- Step 1** Choose **Infrastructure Setup > Infrastructure Configuration**. All available devices are listed in the left pane.
- Step 2** Expand each device to view the infrastructure product of that device.
- Step 3** Click the desired infrastructure product to cross launch ([Cross-launching Devices from Infrastructure Configuration](#)) or launch it natively:
- When you cross-launch, the Find and List page of the device appears. Click Add New, enter the necessary information, and click Save.
  - Some of the infrastructure products (whose versions are earlier than 10.0) are launched natively, where you can add a product instance and configure it within Provisioning. Perform the following:
    - a. Click **Add** and enter the necessary information in the Infrastructure Configuration - configure Product Instance page. An asterisk next to a field indicates a required field. For descriptions of the infrastructure configuration product fields, see [Infrastructure Data Object Fields](#).
    - b. Click **Apply** or **Save as Draft**.

Apply sends the configuration immediately to the device. **Save as Draft** saves the configuration locally only. At a later time, the service can be pushed to the device either by clicking Apply or by using infrastructure configuration scheduling (see [Scheduling an Infrastructure Configuration Task, on page 36](#)).

Also, when you choose Save as Draft, the provisioning state of the object becomes Uncommitted Add (for details on provisioning states, see [Infrastructure Provisioning States, on page 37](#)). The operational status is inactive, meaning the object has not been pushed to the device.

**Note** Clicking **Apply** may cause the devices to restart, and end calls in progress unexpectedly.

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To copy an Infrastructure Configuration instance for a native launch, click **Copy**. In the Infrastructure Configuration - Configure Product Instance page, click the **Draft Configuration** tab and enter the necessary information. An asterisk next to a field indicates a required field. **Applied Configuration** tab shows the already configured instance. Click **Apply** or **Save as Draft**. The infrastructure configuration instance is saved with a “copy of” prefix.

To delete an Infrastructure Configuration instance for a native launch, you can do one of the following:

- To immediately delete the configured instance from the device, click **Delete**.
- If you want to push the order at a later time, click **Schedule Delete**.
- If your configured instance is still saved locally, click **Delete Draft**.

The provisioning state of the object becomes Uncommitted Delete (for details on provisioning states, see [Infrastructure Provisioning States, on page 37](#)). The operational status is active.

Delete Draft does not make that instance unavailable for selection in other infrastructure products or user services. For example, if a route partition is marked for deletion, it is still available for selection in a Line or Phone product, as well as Calling Search Space.

To edit an Infrastructure Configuration Instance for a native launch, click the instance for which you want to make changes. In the Draft configuration tab, make the desired changes. An asterisk next to a field indicates a required field. Enter the required information.

You can click **Apply** or **Save as Draft** to save your changes.




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**Note** To clear the value of a setting that has a numeric value in Cisco Unified Communications Manager, you must enter a zero for the value. If you just clear the value, the setting does not get unset in Cisco Unified Communications Manager.

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## Scheduling an Infrastructure Configuration Task

The infrastructure configuration scheduling feature enables you to group and schedule instances with pending operations to be provisioned.

Infrastructure configuration scheduling requires you to create tasks. In a task you can add pending configurations and they can be either add, modify or delete operations. You can have pending items from more than one Processor in the same task, and you can schedule this task to run at a fixed time or schedule it to run after successful completion of another task.

To view the infrastructure configuration scheduled tasks, click **Schedule Configuration** tab (Choose **Infrastructure Setup > Infrastructure Configuration** ).

You can narrow your results by using the search function. To access the search function, in the results page, click **Show Filter**, and the search criteria appears.

The infrastructure configuration task is based on its initiation type.

If the task's initiation type is date/time, the execution of the task begins at the scheduled date/time. An order is created with all items in the task. The task status changes to in progress and it can no longer be modified or deleted. If all items in the task are completed successfully, the task's status changes to complete. If any one detail fails, then the entire task is aborted. An aborted or failed task cannot be rerun. You will need to create a new task.

If the initiation type is another task, then the task begins after the successful completion of the initiating task. If the initiating task fails, this task will never begin, which will be indicated in the List of Tasks page.



**Note** After a task is created, it cannot be updated if it is in progress, completed, or failed. Before the task begins, you can change the schedule date or time and add or remove pending items that should be pushed as part of the task.

### Procedure

- Step 1** Choose **Infrastructure Setup > Infrastructure Configuration**.
- Step 2** In the Infrastructure Configuration page, click **Schedule Configuration** tab.
- Step 3** Click **Add New**.
- Step 4** In the Schedule Pending Configuration - Configure Task page, enter the necessary information such as name description and so on. For operation type, you can add, modify, or delete infrastructure configuration instances. A task cannot perform more than one operation. You can select only one operation type.
- Step 5** Select the task details (click the triangle icon), desired values and click **Select**.
- Step 6** In the Schedule Pending Configuration - Configure Task page, click **Save**.

To delete a scheduled infrastructure configuration task, in the Schedule Pending Configuration - Configure Task page, click **Delete**.

To purge an infrastructure configuration task you must put provisioning into maintenance mode. The infrastructure configuration scheduling tasks (Completed, Failed, and Aborted) are stored on your system. You may want to periodically purge them. All data purging activities are performed through the Data Maintenance Configuration page. For more information on data purging, see [Enabling Data Purging for Provisioning](#).

## Infrastructure Provisioning States

An infrastructure configuration request goes through when you perform infrastructure configuration activities.

Following are the infrastructure configuration process states:

- Uncommitted Add—Configuration created locally but does not exist on the device.
- Add in Progress—A pending configuration is in progress and being configured through an order. No changes are allowed in this state.
- Add Failed—An operation on this object failed.
- Add Scheduled—A pending configured object is scheduled in one of the tasks waiting to be executed. No changes are allowed in this state.

- **Uncommitted Update**—An object that exists on the device has been modified locally but has not been submitted to the device.
- **Update in progress**—Modify operation is in progress as part of an order. No changes are allowed in this state.
- **Updated Failed**—Modify operation failed.
- **Update Scheduled**—A pending configuration to change an object on the device is scheduled as part of a task. No changes are allowed in this state.
- **Uncommitted Delete**—An object that exists on the device has been marked for deletion. The request to delete the object has not been made to the device.
- **Delete in progress**—Delete operation is in progress as part of an order. No changes are allowed in this state.
- **Delete Failed**—Delete operation failed.
- **Delete Scheduled**—A pending configuration to delete an object from the device is scheduled as part of a task. No changes are allowed in this state.

## Overview of Business Rules

Cisco Prime Collaboration Provisioning contains a predefined set of business rules that determine how components within Cisco Prime Collaboration Provisioning are used. These business rules control the processing of orders, the behavior of the synchronization processes, and the default values for various objects in the system.

Business rules are applied at a Domain level. When you install Cisco Prime Collaboration Provisioning, you configure the business rules in the Customer Domain Template according to your business processes. When you create a new Domain, it inherits the standard set of business rules from the Customer Domain Template. You can then change the business rules as required for each new Domain. Changes made to the Customer Domain Template affect only new Domains created after that point. For information on Customer Domain Template, see [Customer Domain Template, on page 34](#).

In addition to business rules, new Domains inherit the default User Role information, and folders are automatically created in the Inventory Manager Instance Browser for the users, Service Areas, and Voice Terminals that will be placed into that Domain.

Rules can be data driven (Cisco Prime Collaboration Provisioning uses the Data field), enabled or disabled driven, or both. The descriptions of the rules indicate which applies.




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**Note** For some business rules, the Data or Enabled field is not applicable, which is indicated by *N/A*. All user input in fields marked as *N/A* is disregarded by the system.

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## Business Rule Descriptions

[Table 20: Business Rule Descriptions](#) describes all the standard business rules in alphabetical order, along with their default Data and Enabled settings.

Table 20: Business Rule Descriptions

Rule	Description
AssignSoftPhoneName	<p>Assigns a unique name to a SoftPhone that workflow is provisioning. The Call Processor automatically generates the name using the value in the Data field as the prefix, then adds the CTI port counter number + 1. The Call Processor checks if the combination of prefix + CTI port counter number is in use, and if it is, it adds 1 to the CTI port counter number until a unique combination is found.</p> <p>Data SoftPhone_</p> <p>Enabled true (n/a)</p>
ChangeUnityPasswordOnNextLogin	<p>If enabled, a Cisco Unity Connection user will be forced to change the password after the password is reset in Cisco Prime Collaboration Provisioning. The Data field is not applicable for this rule, and it is disregarded by the system.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>
ChangeCCMPasswordOnNextLogin	<p>If enabled, a Cisco Unified Communication Manager user will be forced to change the password after the password is reset from Cisco Prime Collaboration Provisioning. The 'Data' field is not applicable for this rule, and it is disregarded by the system.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p> <p>ChangeCCMPasswordOnNextLogin rule is enabled by default in Cisco Unified Communications Manager while adding a user. Hence, while provisioning an order for a user in Cisco Prime Collaboration Provisioning, ensure ChangeCCMPasswordOnNextLogin rule is enabled for the user.</p>
ChangeProvisioningPasswordOnNextLogin	<p>If enabled, a Cisco Prime Collaboration Provisioning user will be forced to change the password after the password is reset from Cisco Prime Collaboration Provisioning. The 'Data' field is not applicable for this rule, and it is disregarded by the system.</p> <p>Data &lt;blank&gt;</p> <p>Enabled true</p>

Rule	Description
CreateSelfCareAccounts	<p>If enabled, the system automatically creates login accounts for new users so that they can submit their own orders. When the rule is disabled, the system still creates login accounts, but those accounts cannot place orders for themselves.</p> <p>Data &lt;blank&gt;</p> <p>Enabled true</p>
DefaultCallManagerPassword	<p>Sets the default password for new Cisco Unified Communications Manager and Cisco Unified Communications Manager Express accounts, which are created when a phone or line is ordered for a user for the first time. You can also use this password with a Cisco SoftPhone to gain access to the user-assigned lines. Minimum length is five characters.</p> <p><b>Note</b> This rule has a password that is randomly generated during deployment of the application.</p> <p>Data &lt;Random Password&gt;</p> <p>Enabled true (n/a)</p>
DefaultCallManagerPIN	<p>Sets the default PIN to be used when a user is activated in Cisco Unified Communications Manager. A user is activated in Cisco Unified Communications Manager the first time a line or phone is ordered for the user. Beyond initially setting the PIN, this rule is not used in Provisioning. Minimum length is five characters.</p> <p><b>Note</b> This rule has a password that is randomly generated during deployment of the application.</p> <p>Data &lt;Random Password&gt;</p> <p>Enabled true</p>



Rule	Description
DefaultCallManagerMLPPPassword	<p>Specifies the default credentials for Multilevel Precedence and Preemption Authorization. To specify a default password, you must enter it in the Data field and set Enabled to true.</p> <p><b>Note</b> This rule has a password that is randomly generated during deployment of the application.</p> <p>Data &lt;Random Password&gt; Enabled true</p>
DefaultCUPMPassword	<p>Specifies the default password for self-care accounts. By default, the user password is empty and these users will not be able to log in until an administrator changes their password in the user wizard. If you want to specify a default password, you must specify a default password in the Data field and set Enabled to true.</p> <p><b>Note</b> The new password value should match the password policy.</p> <p>Data &lt;blank&gt; Data true</p>
DefaultDeviceProfile	<p>Used for Extension Mobility-enabled phones. The default setting of NONE (or left empty) causes the rule not to be used.</p> <p>Data NONE Enabled true (n/a)</p>

Rule	Description
DefaultUnitySubscriberPassword	<p>Sets the default password for new voicemail accounts on the Cisco Unified Messaging Systems, such as Cisco Unity Connection. The workflow uses the Data value as the initial password. In Cisco Unity Connection, this value must be an integer. Cisco Unity Connection rejects trivial values (for example, 12345). The Enabled field is not applicable for this rule, and it is disregarded by the system.</p> <p>The DefaultUnitySubscriberPassword rule does not validate the length of the default password entered in the data field. Cisco Unity Connection may have different credential policies configured.</p> <p>Depending upon the policies set on the devices, the Provisioning administrator should enter the default password in these rules. If the default password entered for these rules is not accepted by the devices, the reset credentials to default operation will fail with an error message returned from the device.</p> <p><b>Note</b> This rule has a password that is randomly generated during deployment of the application.</p> <p>Data &lt;Random Password&gt;</p> <p>Enabled true (n/a)</p>
DefaultCallManagerDigestCredentials	<p>Specifies the default password for digest credentials. To specify a default password, you must enter it in the Data field and set Enabled to true.</p> <p><b>Note</b> The new password value should match the password policy.</p> <p>Data &lt;blank&gt;</p> <p>Enabled true</p>

Rule	Description
DefaultUserType	<p>Specifies the user type that new users are assigned by default. The value of the Data field must contain the name of a valid user type.</p> <p><b>Note</b> This rule should be set to the user role that makes up most of the organization. This will ensure that during Domain synchronization most of the users are set up correctly.</p> <p>Data Employee</p> <p>Enabled true (n/a)</p>
DefaultWebAccessPassword	<p>Sets the default password for new voicemail accounts' web access on Cisco Unified Messaging Systems such as Cisco Unity Connection. The workflow uses the Data value as the initial password. The Enabled field is not applicable for this rule, and it is disregarded by the system.</p> <p>The DefaultWebAccessPassword rule does not validate the length of the default password entered in the data field. Cisco Unity Connection may be configured with different credential policies.</p> <p>Depending upon the policies set on the devices, the Provisioning administrator should enter the default password in these rules. If the default password entered for these rules is not accepted by the devices, the reset credentials to default operation will fail with an error message returned from the device.</p> <p><b>Note</b> This rule has a password that is randomly generated during deployment of the application.</p> <p>Data &lt;Random Password&gt;</p> <p>Enabled true (n/a)</p>

Rule	Description
DescriptionString	<p>Default description string used on new phones, new user device profiles (EM_Access), and new users. FIRSTNAME, LASTNAME, USERID, and EXTENSION are keywords that are replaced with the user's first name, last name, user ID, and extension respectively. (This information is the first line added to the user's phone.)</p> <p>For change owner orders, the default value is automatically applied from this rule. The new phone owner's first name, last name, user ID, and extension are used.</p> <p><b>Note</b> If you wish to keep your phone description as previously configured, you should disable this rule.</p> <p>Data FIRSTNAME LASTNAME USERID EXTENSION</p> <p>Enabled true (n/a)</p>
DNAutoReservation	<p>If enabled, when a line is canceled, the directory number associated with the line will be automatically reserved for the original owner.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>
DNAutoReservationTimeout	<p>Specifies the period of time (days:hours) that the directory number remains in the Reserved state.</p> <p>Data 7:0</p> <p>Enabled true</p>
DirectoryNumberBlockValidation	<p>If enabled, Ordering line will be blocked when the directory number is not within the range of the directory number block. The Data field is not applicable for this rule and it is disregarded by the system.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>

Rule	Description
IsAuthorizationRequiredForAddOrder	<p>If enabled, an Approver must approve Add orders before provisioning can occur. If disabled, the system automatically approves Add orders.</p> <p><b>Note</b> This rule does not take effect when you place orders using Auto Provisioning, Quick Provisioning, Batch Provisioning or the Provisioning NBI.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>
IsAuthorizationRequiredForOrder	<p>If enabled, an Approver must approve orders before provisioning can occur. If disabled, the system automatically approves orders.</p> <p><b>Note</b> This rule does not take effect when you place orders using Auto Provisioning, Quick Provisioning, Batch Provisioning or the Provisioning NBI.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>
IsAuthorizationRequired ForChangeOrder	<p>If enabled, an Approver must approve Change orders before provisioning can occur. If disabled, the system automatically approves Change orders.</p> <p><b>Note</b> This rule does not take effect when you place orders using batch provisioning or the Provisioning NBI.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>

Rule	Description
LineDisplayString	<p>Template string used to construct the Internal Caller ID display format for the phone line. If disabled, the system defaults to FIRSTNAME LASTNAME. This rule does not apply if the Service Area has a Cisco Unified Communications Manager Express as a Call Processor.</p> <p>The default value for the Display (Internal Caller ID) provisioning attribute is applied from this rule. If you specify CUPM_BLANK or an empty value in batch provisioning or through the Cisco Prime Collaboration Provisioning user interface, the value for the Display (Internal Caller ID) provisioning attribute comes from this rule.</p> <p>Therefore, if you want to set an empty value for the Display (Internal Caller ID) provisioning attribute, you must enable this rule and make sure its value is empty.</p> <p><b>Note</b> For Call Processors, the combination of characters for First Name and Last Name cannot exceed 30 characters. If this limit is exceeded, when you place an order, the Call Processor sends an error.</p> <pre>Data FIRSTNAME LASTNAME Enabled true</pre>
Match Department	<p>If enabled, Call Processor user accounts are associated to this Provisioning Domain based on their department code value matching one in the specified list of values. The list of department code values must be enclosed in double quotes (") and separated by a semicolon (;) delimiter. Department code values may contain wildcard characters (* or %).</p> <p>For example, if you specify the following in the Data field:</p> <pre>"Dept 1";";"Dept 2"</pre> <p>The Call Processor user accounts that belong to Dept 1 or Dept 2, or have no department code set, are associated to the Domain.</p>

Rule	Description
Match Device Pool	<p>If enabled, Call Processor user accounts are associated to this Provisioning Domain only if they have a phone which has the device pool value specified in the data field. The device pool value can contain wildcard characters (* or %) and should be prefixed with the Cisco Unified Communications Manager name value (this is the Call Processor name in Cisco Prime Collaboration Provisioning). The value must be in double quotes (") and separated by a semicolon (;) delimiter.</p> <p>For example:</p> <pre>"CUCM1:DevicePool1";"CUCM2:Device*2"</pre> <p>Users who have a phone or Remote Destination Profile in Call Processor CUCM1 with the device pool DevicePool1 and users who have a phone or Remote Destination Profile in Call Processor CUCM2 with the device pool DevicePool2 are associated to the Domain.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>
Match Location	<p>If enabled, Call Processor user accounts are associated to this Provisioning Domain only if they have a phone that has the location value specified in the data field. The location value can contain wildcard characters (* or %) and should be prefixed with the Cisco Unified Communications Manager name value (this is the Call Processor name in Cisco Prime Collaboration Provisioning). The value must be in double quotes and separated by a semicolon (;) delimiter.</p> <p>For example:</p> <pre>"CUCM1:Location1";"CUCM2:Loc*2"</pre> <p>Users who have a phone in Call Processor CUCM1 with the location Location1 and users who have a phone in Call Processor CUCM2 with the location Location2 are associated to the Domain.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>

Rule	Description
MonitorPhoneReturnEnabled	<p>If enabled, tracks whether phones have been returned by implementing an additional workflow activity that is assigned to the user group specified in the Data field.</p> <p>Data Shipping</p> <p>Enabled false</p>
NameDialingInfo	<p>This string is used to construct the auto-attendant name dialing string. FIRSTNAME LASTNAME are replaced, but not the extension.</p> <p><b>Note</b> This feature is available for Cisco Unified Communications Manager version 3.3.3 only.</p> <p>Data FIRSTNAME LASTNAME</p> <p>Enabled true</p>
PhoneAssignmentDoneBy	<p><b>(For Cisco Prime Collaboration Release 11.5 and later )</b> If you check the <b>Enabled</b> check box, the Assignment step for a Phone order workflow is assigned to the users who have access to the Activities menu or belong to any Full Access group. Otherwise, the workflow automatically assigns the phone and MAC address. The Data field is not applicable for this rule, and it is disregarded by the system.</p> <p><b>Note</b> This rule is available in Cisco Prime Collaboration Provisioning Advanced only. Cisco Prime Collaboration Provisioning Standard does not support PhoneAssignmentDoneBy rule.</p>
PhoneReceiptDoneBy	<p><b>(For Cisco Prime Collaboration Release 11.5 and later )</b> If you check the <b>Enabled</b> check box, the Receiving step for a Phone order workflow is assigned to the users who have access to the Activities menu or belong to any Full Access group. The Data field is not applicable for this rule, and it is disregarded by the system.</p> <p><b>Note</b> This rule is available in Cisco Prime Collaboration Provisioning Advanced only. Cisco Prime Collaboration Provisioning Standard does not support PhoneReceiptDoneBy rule.</p>



Rule	Description
PhoneReservationTimeout	<p>Specifies the period (in days) that a phone remains reserved in the system. If disabled, then the phone is reserved indefinitely.</p> <p>Data 10</p> <p>Enabled true (n/a)</p>
PhoneShippingDoneBy	<p><b>(For Cisco Prime Collaboration Release 11.5 and later )</b> If you check the <b>Enabled</b> check box, the Shipping step for a Phone order workflow is assigned to the users who have access to the Activities menu or belong to any Full Access group. The Data field is not applicable for this rule, and it is disregarded by the system.</p> <p><b>Note</b> This rule is available in Cisco Prime Collaboration Provisioning Advanced only. Cisco Prime Collaboration Provisioning Standard does not support PhoneShippingDoneBy rule.</p>
PseudoUserID	<p>Used to construct the NewUserID field in the exported data file generated by the Export Phones without the Associated Users feature. The following keywords are supported:</p> <ul style="list-style-type: none"> <li>• DIRECTORYNUMBER—Replaced with the value of Directory Number-Route Partition for the first line of the phone.</li> <li>• MACADDRESS—Replaced with the MAC address or device name (for soft phone).</li> <li>• RANDOMNUMBER—Replaced with an automatically generated six-digit, random number.</li> </ul> <p>If this rule is disabled, you cannot use Export Phones without Associated Users feature.</p> <p>Data pseudo-DIRECTORYNUMBER</p> <p>Enabled true (n/a)</p>

Rule	Description
PurgeUponUmRemoval	<p>If enabled, a user's e-mail and voicemail are purged from the system when their Cisco Unity account is removed.</p> <p><b>Note</b> You enable or disable this rule by specifying true or false in the Data field.</p> <p>Data false</p> <p>Enabled true (n/a)</p>
DirectoryNumberBlockListing	<p>The data can be <b>Single</b> or <b>All</b>. When <b>Single</b>, it displays directory number blocks assigned to the selected service area. When <b>All</b>, it displays directory number blocks assigned to all service areas within a domain.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>
Sync All Users (Call Processor)	<p>If enabled, during a Domain synchronization, all of the user accounts in all of the Call Processors in the Domain are assigned to the Domain being synchronized. If disabled, only users whose department is the same as the Domain are assigned to the Domain.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>
Sync All Users (Unity Connection)	<p>If this rule is enabled, all user accounts in a given Unified Message Processor are assigned to a Provisioning Domain. Otherwise, only user accounts in the given Unified Message Processor with a matching Call Processor user account are assigned.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>
Sync Only Existing Users	<p>If enabled, then during a Domain synchronization, no new users are created. Only services of existing users in the Domain are synchronized.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>

Rule	Description
Sync Primary User From Unity Connection	<p>If enabled, user information is updated from the associated Unified Message Processor account; otherwise it is updated from the Call Processor. When the rule is enabled, you can also specify the Unified Message Processor ID, which takes precedence if a user has accounts on multiple Unified Message Processors. This value can also be left blank to indicate no preference.</p> <p>Data &lt;blank&gt;</p> <p>Enabled false</p>

## Configuring Business Rules

When you change business rules, you must first select the Domain. You can change the values for the rules and whether they are enabled. You cannot change the rule names or descriptions.

All business rules have the following properties. You can modify the Data and Enabled fields.

Property	Description
Rule Name	Name of the rule
Description	Detailed description of the rule
Data	Value to be specified for the rule
Enabled	Specifies if the rule is applied. Valid values are true or false.



**Note** You must carefully review the documentation for each business rule to ensure that you set the Data and Enabled properties appropriately.



**Note** Provisioning does not have a default reset capability for business rules. If you change a business rule's settings and later want to return to the default settings, you will have to manually change the settings.

The following procedure uses the AssignSoftPhoneNumber rule as an example of how to change rule properties.

### Procedure

- Step 1** Choose **Administration > Rules**.
- Step 2** In the Rule Configuration page, select the Domain that you want to change the rule for.

**Step 3** Select the rule under Configure Rule.

**Step 4** Click the Edit icon. The Data and Enabled fields become active.

**Step 5** Make the required changes and click **Save**. The changes are added to the AssignSoftPhoneNumber rule.

To configure the Domain Synchronization Rules, select **Configure Domain Sync Rules** and select the synchronization rules. See [Configuring Business Rules for Domain Synchronization](#) for details.

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When you configure Provisioning, it is critical that you plan how you will use your business rules and how you want the Provisioning components to work. At a minimum, you must consider the following rules:

- AssociateAllUsersInCallProcessor
- CreateSelfCareAccounts
- EmailSender
- IsAuthorizationRequiredForAddOrder
- IsAuthorizationRequiredForOrder
- IsAuthorizationRequiredForChangeOrder
- MailHost
- OrderProvisionedEmailTemplate
- OrderRejectedEmailTemplate
- PhoneAssignmentDoneBy
- PhoneReceiptDoneBy
- PhoneShippingDoneBy
- DirectoryNumberBlockValidation
- DirectoryNumberBlockListing

## Usage Scenarios for Configuring Business Rules

Some examples on how you could configure user access, configure products, and orders are listed in the following table:

**Table 21: Usage Scenarios for configuring Business Rules**

Usage Scenario	Business Rule
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To configure user access	<p>You can set the following Business Rule:</p> <ul style="list-style-type: none"> <li>• If a user is using a line, to automatically reserve that number for the specific user <ul style="list-style-type: none"> <li>• DNAutoReservation—Toggles the reservation</li> <li>• DNReservationTimeout—How long to reserve the numbers</li> </ul> </li> <li>• To configure self-care accounts for users <ul style="list-style-type: none"> <li>• CreateSelfCareAccounts</li> <li>• DefaultCUPMPassword</li> </ul> </li> <li>• To assign the default user type for a new user <ul style="list-style-type: none"> <li>• DefaultUserType</li> </ul> </li> <li>• To assign users of a specific Domain to manage phone inventory <ul style="list-style-type: none"> <li>• DomainPhoneManagement</li> <li>• PhoneReservationTimeout</li> </ul> </li> <li>• To assign users to manage user types <ul style="list-style-type: none"> <li>• DomainUserTypeConfiguration</li> </ul> </li> </ul>
To configure products	<ul style="list-style-type: none"> <li>• To assign a name to CTI ports in Cisco Unified Communications Manager <ul style="list-style-type: none"> <li>• AssignSoftPhoneName—See rule for default value</li> </ul> </li> <li>• To reserve directory numbers <ul style="list-style-type: none"> <li>• DNReservationTimeout</li> </ul> </li> <li>• To track whether phones have been returned after having been canceled <ul style="list-style-type: none"> <li>• MonitorPhoneReturnEnabled</li> </ul> </li> </ul>

To configure services	<ul style="list-style-type: none"> <li>• To use default passwords for Cisco Unified Communications Manager accounts <ul style="list-style-type: none"> <li>• DefaultCallManagerPassword</li> <li>• DefaultCallManagerPIN</li> <li>• DefaultUnitySubscriberPassword</li> </ul> </li> <li>• To send e-mails when an order is rejected or completed (You have the option of not sending any e-mails) <p><b>Note</b> You must enable both EmailSender and MailHost for e-mail features to work in Provisioning.</p> <ul style="list-style-type: none"> <li>• EmailSender</li> <li>• MailHost</li> <li>• OrderProvisionedEmailTemplate</li> <li>• OrderRejectedEmailTemplate</li> </ul> </li> <li>• To check if authorization is required for any type of order <ul style="list-style-type: none"> <li>• IsAuthorizationRequiredForAddOrder</li> <li>• IsAuthorizationRequiredForOrder</li> <li>• IsAuthorizationRequiredForChangeOrder</li> </ul> </li> <li>• To validate manually entered DNs against the DN range for a service area or for all service areas within the same domain <ul style="list-style-type: none"> <li>• DirectoryNumberBlockValidation</li> <li>• DirectoryNumberBlockListing</li> </ul> </li> <li>• To handle phone assignment, shipping, and receiving <ul style="list-style-type: none"> <li>• PhoneAssignmentDoneBy</li> <li>• PhoneReceiptDoneBy</li> <li>• PhoneShippingDoneBy</li> </ul> </li> <li>• When a voicemail and/or e-mail account is canceled, to remove messages in the canceled voicemail and/or e-mail accounts <ul style="list-style-type: none"> <li>• PurgeUponUmRemoval</li> </ul> </li> </ul>
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