



Manage Directory URIs and Patterns

This chapter describes how to import and export directory URIs, +E.164 patterns and PSTN failover rules to and from Cisco Unified Communications Manager.

- [Export Local Directory URIs and +E.164 Patterns, on page 1](#)
- [Import Directory URIs and Patterns From a Non-ILS System, on page 2](#)
- [Directory URI Format, on page 3](#)

Export Local Directory URIs and +E.164 Patterns

This procedure describes how to export all locally configured directory URIs, +E.164 number patterns, and their associated PSTN failover rules, to a CSV file that you can import into the other call control system.



Note Cisco Unified Communications Manager writes to the CSV file only those directory URIs and +E.164 number patterns that were configured in the local cluster. Cisco Unified Communications Manager includes directory URIs and +E.164 patterns that were imported from an LDAP directory into the local cluster, but does not include directory URIs or patterns that were learned via ILS or that were imported from a third party URI catalog.

Procedure

- Step 1** In Cisco Unified CM Administration, choose **Bulk Administration > Directory URIs and Patterns > Export Local Directory URIs and Patterns**.
- Step 2** Click one of the following radio buttons to define the domain name that you want to attach to the export file:
- **Organizational Top Level Domain**—Click this radio button to use the value of the Organizational Top Level Domain enterprise parameter for the export file domain name.
 - **Route String Domain**—Click this radio button to use the value of the Route String field, as configured in ILS Configuration, for the export file domain name.
 - **User Defined Domain**—Click this radio button to create a customized domain name to attach to the export file.
- Step 3** If you chose a User Defined Domain, enter the domain name in the Domain Name text box.
- Step 4** Click the **Export Local Directory URIs and Patterns** button.

Step 5 Save the CSV file to a local drive.

Import Directory URIs and Patterns From a Non-ILS System

Follow this procedure if you are running the Intercluster Lookup Service (ILS) on your local cluster and you want to import a global dial plan catalog, including directory URIs, +E.164 number patterns, or PSTN failover rules from a CSV file for a call control system that is not running ILS, such as a Cisco TelePresence Video Communication Server (VCS) or a third-party call control system.

To perform this procedure, the Cisco Bulk Provisioning Service must be running on the local cluster, which must be configured as a hub cluster in an ILS network. After you import the catalog into Cisco Unified Communications Manager, ILS replicates the imported catalog to the other clusters in the ILS network.



Note Make sure that the CSV file that you use for the import is compatible with your version of Cisco Unified Communications Manager. For example, a CSV file that is compatible to import into Version 9.0(1) is not compatible with Version 10.0(1). To view a sample CSV file for your release, in Cisco Unified CM Administration, choose **Bulk Administration > Directory URIs and Patterns > Insert Directory URIs and Patterns** and click **View Sample File**.



Note Within Cisco Unified CM Administration, you can enter directory URIs with embedded double quotation marks or commas. However, when you use Bulk Administration to import a CSV file that contains directory URIs with embedded double quotation marks and commas, you must enclose the entire directory URI in double quotation marks and escape the embedded double quotation marks with a double quotation mark. For example, a directory URI of Jared, “Jerry”,Smith@test.com must be input as “Jared”, ““Jerry””, “Smith@test.com” in the CSV file.

Procedure

- Step 1** In Cisco Unified CM Administration, choose **Call Routing > Global Dial Plan Replication > Imported Global Dial Plan Catalogs**.
- Step 2** In the **Name** field, enter a name for the catalog.
- Step 3** In the **Description** field, enter a description of the catalog.
- Step 4** In the **Route String** field, create a route string for the system from which you are importing the catalog.
- Step 5** Click **Save**.
- Step 6** In Cisco Unified CM Administration, choose **Bulk Administration > Upload/Download Files**.
- Step 7** Click **Add New**.
- Step 8** Click **Browse** and select the CSV file for the catalog that you want to import.
- Step 9** In the **Select the Target** drop-down list box, choose **Imported Directory URIs and Patterns**.
- Step 10** In the **Select Transaction Type** drop-down list box, choose **Insert Imported Directory URIs and Patterns**.
- Step 11** Click **Save**.

- Step 12** In Cisco Unified CM Administration, choose **Bulk Administration > Directory URIs and Patterns > Insert Imported Directory URIs and Patterns**.
- Step 13** In the **File Name** drop-down list box, choose the CSV file that contains the catalog that you want to import.
- Step 14** In the **Imported Directory URI Catalog** drop-down list box, choose the catalog that you named in the Imported Global Dial Plan Catalog window.
- Step 15** In the **Job Description** text box, enter a name for the job that you are about to run.
- Step 16** Select when you want to run the job.
- If you want to run the job now, click the **Run Immediately** radio button, and click **Submit**.
 - If you want to schedule the job to run at a specified time, check the **Run Later** radio button and click **Submit**. If you choose this option, you must use the Bulk Administration Job Scheduler to schedule when the job runs.
- Note** Cisco Unified Communications Manager saves all imported +E.164 patterns to the Global Learned +E.164 Patterns partition.
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Directory URI Format

Directory URIs are alphanumeric strings consisting of a user and a host address separated by the @ symbol. Cisco Unified Communications Manager supports the following formats for directory URIs:

- user@domain (for example, joe@cisco.com)
- user@ip_address (for example, joe@10.10.10.1)

Cisco Unified Communications Manager supports the following formats in the user portion of a directory URI (the portion before the @ symbol):

- Accepted characters are a-z, A-Z, 0-9, !, \$, %, &, *, _, +, ~, -, =, \, ?, \, \, ' , ,, , /.
- The user portion has a maximum length of 47 characters.
- The user portion accepts percent encoding from %2[0-9A-F] through %7[0-9A-F]. For some accepted characters, Unified CM automatically applies percent encoding. See below for more information on percent encoding.
- The user portion is case-sensitive or case-insensitive depending on the value of the URI Lookup Policy enterprise parameter. The default value is case-sensitive.

Cisco Unified Communications Manager supports the following formats in the host portion of a directory URI (the portion after the @ symbol):

- Supports IPv4 addresses or fully qualified domain names.
- Accepted characters are a-z, A-Z ,0-9, hyphens, and dots.
- The host portion cannot start or end with a hyphen.
- The host portion cannot have two dots in a row.
- Minimum of two characters.

- The host portion is not case sensitive.

Due to database restrictions, the Directory URI field has a maximum length of 254 characters.



Note You can also enter a directory number in the user portion of a directory URI. However, Cisco Unified Communications Manager may treat the directory URI as a directory number depending on which Dial String Interpretation option you choose for the SIP Profile.



Note For compatibility with third party call control systems, Cisco recommends setting the value of the URI Lookup Policy enterprise parameter to case insensitive.

Percent Encoding of Directory URIs

In the user portion of a directory URI, Unified CM automatically applies percent encoding to the following characters when the directory URI is saved in the database:

% ^ ` { } | \ : " ' < > [] \ ' and spaces

When percent encoding is applied, the digit length of the directory URI increases. For example, if you input joe smith#@cisco.com (20 characters) as a directory URI, Cisco Unified Communications Manager stores the directory URI in the database as joe%20smith%23@cisco.com (24 characters). Due to database restrictions, Cisco Unified Communications Manager rejects any attempt to save a directory URI of greater than 254 characters.

Directory URI Format Exception for Bulk Administration

Within Cisco Unified CM Administration, you can enter directory URIs with embedded double quotes or commas. However, when you use Bulk Administration to import a CSV file that contains directory URIs with embedded double quotes and commas, you must use enclose the entire directory URI in double quotes and escape the embedded double quotes with a double quote. For example, the Jared, "Jerry",Smith@test.com directory URI must be input as "Jared, ""Jerry"",Smith@test.com" in the CSV file.