

Bulk Configure Changes with Import/Export Feature

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Introduction

This document describes how to use the Import/Export menu in Cisco Unified Communications Manager (CUCM) Bulk Administration Tool (BAT) in to export or import parts of the CUCM database to another server, or to the same server with modifications.

Prerequisites

Requirements

Cisco recommends that you have knowledge of CUCM.

Components Used

The information in this document is based on CUCM 10.5.2.12900-14.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Background Information

Sometimes it is not possible to make changes to the phone and device profile or other components configuration in single job task with BAT update/validate menu if changes are meant to be for multiple phones and device profiles with different device pools or partitions. With this

menu you can make changes to any random phones, device profiles and route patterns etc. in a single job task. This reduces the configuration time that is required by importing a preconfigured database to the installed CUCM server. These topics provide procedures to carry out these tasks:

- [Exporting Configuration](#)
- [Editing the .tar File](#)
- [Importing Configuration](#)

Configure

Export Configuration

In order to export configuration data from CUCM, use this procedure.

Step 1. Select Bulk Administration > Import/Export> Export.

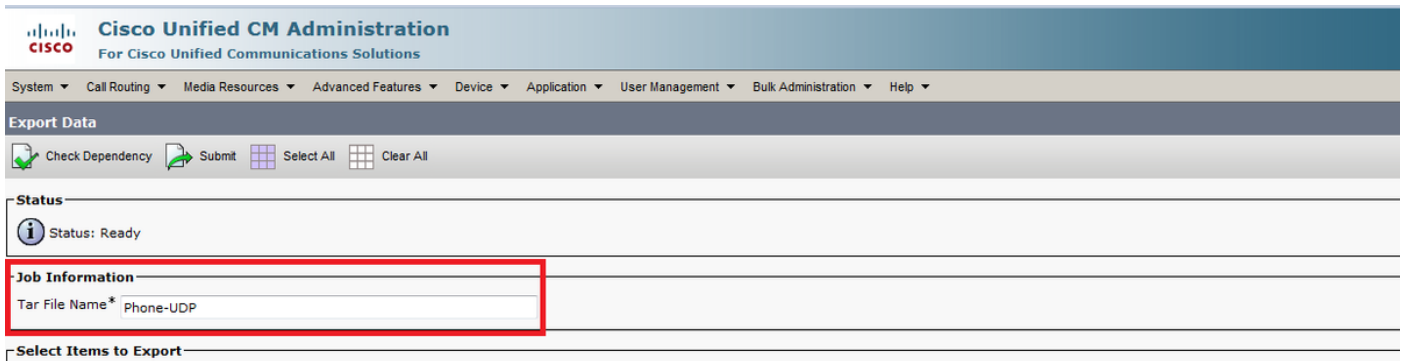
The Export Data window displays this:

The screenshot shows the Cisco Unified CM Administration interface. The top navigation bar includes: System, Call Routing, Media Resources, Advanced Features, Device, Application, User Management, Bulk Administration, and Help. The main content area is titled 'Export Data' and contains the following sections:

- Export Data:** Check Dependency, Submit, Select All, Clear All.
- Status:** Status: Ready.
- Job Information:** Tar File Name* (input field).
- Select Items to Export:**
 - System Data:**
 - Cisco Unified Communications Manager
 - Enterprise Parameters
 - Server
 - Physical Location
 - Device Mobility Info
 - LDAP Directory
 - Resource Priority Namespace List
 - Enterprise Phone Configuration
 - Audio Codec Preference Lists
 - Cisco Unified Communications Manager Group
 - Location
 - Service Parameters
 - Device Mobility Group
 - DHCP Server
 - LDAP Authentication
 - CUMA Server Security Profile
 - Certificate
 - Date/Time Group
 - Phone NTP Reference
 - SRST
 - Presence Group
 - DHCP Subnet
 - MLPP Domain
 - Geo Location Configuration
 - LDAP Custom Filter
 - Device Pool
 - Region
 - Security Profile (Phone & SIP Trunk)
 - LDAP System
 - Application Server
 - Resource Priority Namespace Network Domain
 - Geo Location Filter
 - Location Bandwidth Manager Group
 - Call Routing Data:**
 - Application Dial Rules
 - Time Period
 - Forced Authorization Codes
 - Call Pickup Group
 - SIP Dial Rules
 - Calling Search Space
 - Time Schedule
 - Directory Lookup Dial Rules
 - Directory Number (Unassigned)
 - Line Group
 - Partition (Class of Control)
 - Translation Pattern
 - Client Matter Codes
 - Meet-Me Number / Pattern
 - Route Group
 - Route Filter
 - AAR Group
 - Call Park
 - Directed Call Park
 - Hunt List

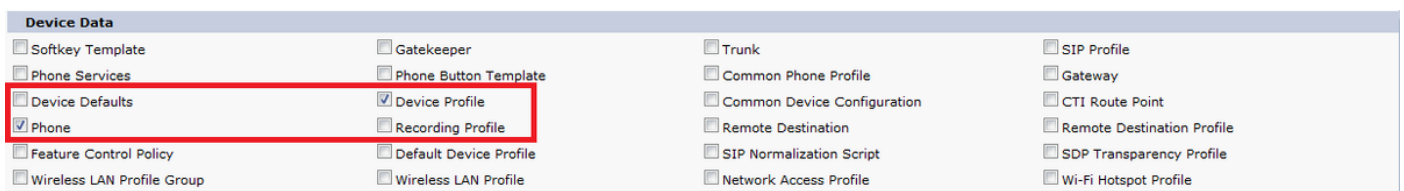
Step 2. In the Job Information section, enter the **.tar** file name, without the extension, in the Tar File Name field. BPS uses this filename to export the configuration details.

All files that are exported at the same time get bundled together (**.tar**) and can be downloaded from the server.



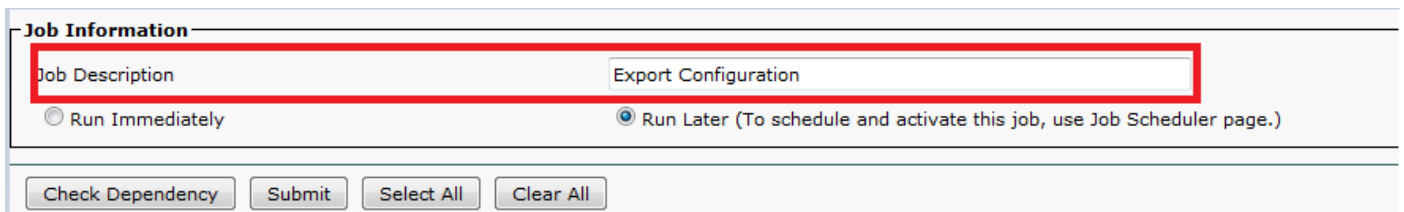
Step 3. In the Select items to Export section, check the appropriate check boxes under System Data from these options:

Phone and device profiles are used as an example in this document. You can choose any option based on the requirement.

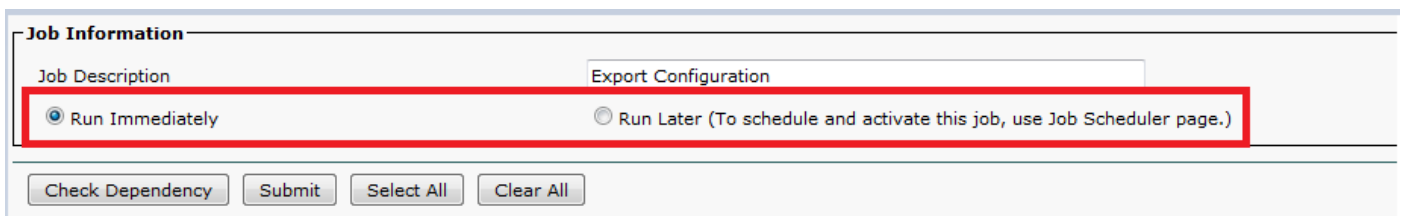


Step 4. You can use the **Select All** button to check all the check boxes at once and the **Clear All** button to clear all the check boxes.

Step 5. In the Job Description field, enter the description that you want to provide for the job. Export Configuration is the default description.



Step 6. You can choose to run the job immediately or later and select the corresponding radio button.



Step 7. In order to check for interdependency of tables to ensure that the related records are also exported, click **Check Dependency**.

Note: You can de-select any of the check boxes after you check the dependency. You also have the option to skip **Checking Dependency**.

Check Dependency selects dependent items up to one level of dependency. For example, if an item depends on CSS, then only CSS is selected and the items that CSS depends on are not

selected.

Step 8. In order to create a job in order to create the selected data, click **Submit**.

A message in the Status section lets you know that the job was submitted successfully.

Job Information

Job Description: Export Configuration

Run Immediately Run Later (To schedule and activate this job, use Job Scheduler page.)

Check Dependency **Submit** Select All Clear All

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System Call Routing Media Resources Advanced Features Device Application User Management Bulk Administration Help

Export Data

Check Dependency Submit Select All Clear All

Status

i Add successful

i Job request submitted. Use the Job Scheduler to see the status of your job.

Job Information

Tar File Name* Phone-UDP

Step 9. Use the Job Scheduler option in the Bulk Administration main menu to schedule and/or activate this job.

Choose **Bulk Administration > Job Scheduler > Click on Find** and search for the last Job Id.

<input type="checkbox"/>	1458283845	March 18, 2016 12:20:45 PM IST	March 18, 2016 12:20:45 PM IST	1	Insert Phones - Specific Details	Completed
<input type="checkbox"/>	1458284211	March 18, 2016 12:26:51 PM IST	March 18, 2016 12:26:51 PM IST	1	Export Phones - Specific Details	Completed
<input type="checkbox"/>	1463140285	May 13, 2016 5:21:25 PM IST	May 13, 2016 5:21:25 PM IST	10	Update Phones - Query	Completed
<input type="checkbox"/>	1468478842	July 14, 2016 12:17:29 PM IST	July 14, 2016 12:17:29 PM IST	1	Export Configuration	Completed

Select All Clear All Delete Selected Activate Selected Stop Processing

Since you select the option **run** immediately, the job gets completed automatically. If you check option **run later**, then you need to select the Job Id and activate it manually to process it.

Edit the .tar File

The tar file comprises a list of CSV files and a header file. Header file can be used to refer to the details of the server from where the export was carried out and the time when it was carried out. The header file also has details of the files in the package.

If you want to make any changes to the configuration after you have exported the required data, you can do so by editing the exported **.tar** file with this procedure:

Step 10. Now select **Bulk Administration > Upload/Download files**

From the Upload/Download window select the tar file and click on **Download Selected**.

The screenshot shows the Cisco Unified CM Administration interface. At the top, there are navigation menus for System, Call Routing, Media Resources, Advanced Features, Device, Application, User Management, Bulk Administration, and Help. Below this is a 'Find and List Files' section with various action buttons: Add New, Select All, Clear All, Delete Selected, and Download Selected. A 'Status' bar indicates '16 records found'. The main area is a table titled 'File (1 - 16 of 16)'. The table has columns for 'File Name' and 'Function Type'. The file 'Phone-UDP_07142016121904.tar' is selected and highlighted with a red box. Below the table, the 'Download Selected' button is also highlighted with a red box.

File Name	Function Type
EMexport.tar	Import Configuration
LOAD_11252015185004.tar	Export Configuration
<input checked="" type="checkbox"/> Phone-UDP_07142016121904.tar	Export Configuration
Phones-03182016122736.txt	Insert Phones - Specific Details
UDP-7821_11252015174308.txt	Export UDP - All Details
UDP.csv	Update UDP - Custom File
UDP.txt	Update UDP - Custom File
UDP1.csv	Update UDP - Custom File
UDP2_11252015182500.tar	Export Configuration
bat.xls	BAT Excel CSV Tool
deviceprofile.tar	Import Configuration
hari_03182016073115.tar	Export Configuration
krishna_03182016122654.txt	Export Phones - Specific Details
qwqw_03012016190544.txt	Export Phones - Specific Details
test.phone_10302015175747.txt	Export Phones - All Details
testphones1_10302015180037.txt	Export Phones - All Details

Step11. Un-tar the **.tar** file to some location on your machine with the **tar -xvf** command.

The **.csv** file gets extracted to the location that you specified.

Note: The **tar -xvf** command might not work on a Windows server, TAR and UNTAR operations are possible in Windows with 7-Zip, which is a freeware available on the World Wide Web (WWW).

The name of the **.csv** file is always the same as the item name. Use MS Excel to edit the **.csv** file and save your changes. You can edit the **.csv** file with Notepad/WordPad also, but Cisco recommends to make use of MS Excel to edit the **.csv** file.

If you decide to use notepad or WordPad for the edit, ensure that you add a comma for every new entry in the file format.

Always maintain the same filename and file format for the **.csv** file. If you add a new file to the tar package, ensure that the file has the same name and file format as it would have if it is exported from CUCM. Also, ensure that the new filename is added to the Header file.

The screenshot shows a Windows File Explorer window. The top bar has 'Organize', 'Include in library', 'Share with', and 'New folder' options. The left sidebar shows 'Favorites' with 'Desktop', 'Downloads', and 'Dropbox'. The main area displays a table of files:

Name	Date modified	Type	Size
deviceprofile.csv	14-Jul-16 12:19 PM	Microsoft Excel C...	6 KB
header.txt	14-Jul-16 12:19 PM	Text Document	1 KB
phone.csv	14-Jul-16 12:19 PM	Microsoft Excel C...	151 KB

This is the original configuration of all the phones in my lab call manager. Changes have been made to the phone description field of 2 phones.

	A	B	C	D	E	F	G	H
1	Services Provisioning	Device Name	Description	Device Pool	Phone Button Template	CSS	AAR CSS	Location
2	Default	Sample Device Template with TAG usage examples	#FirstName# #LastName# (#Product# #Protocol#)	Default	Universal Device Template Button Layout			Hub_Nonf
3	Default	Auto-registration Template	#FirstName# #LastName# (#Product# #Protocol#)	Default	Universal Device Template Button Layout			Hub_Nonf
4	Default	SEPB8386156E7BA	Auto 1000	Default	Standard 7821 SIP			Hub_Nonf
5	Default	navneet		Default	Standard CIPC SCCP			Hub_Nonf
6	Default	SEPB000B4BA07D3	Auto 1002	Default	Standard 8851 SIP TEST	CallingX_CSS		Hub_Nonf
7	Default	SEPB16F51668F6	Auto 1004	Default	Universal Device Template Button Layout			Hub_Nonf
8	Default	SEP54781AE169BB	Auto 1018	Default	SEP54781AE169BB-SIP-Individual Template			Hub_Nonf

The description field has been changed here:

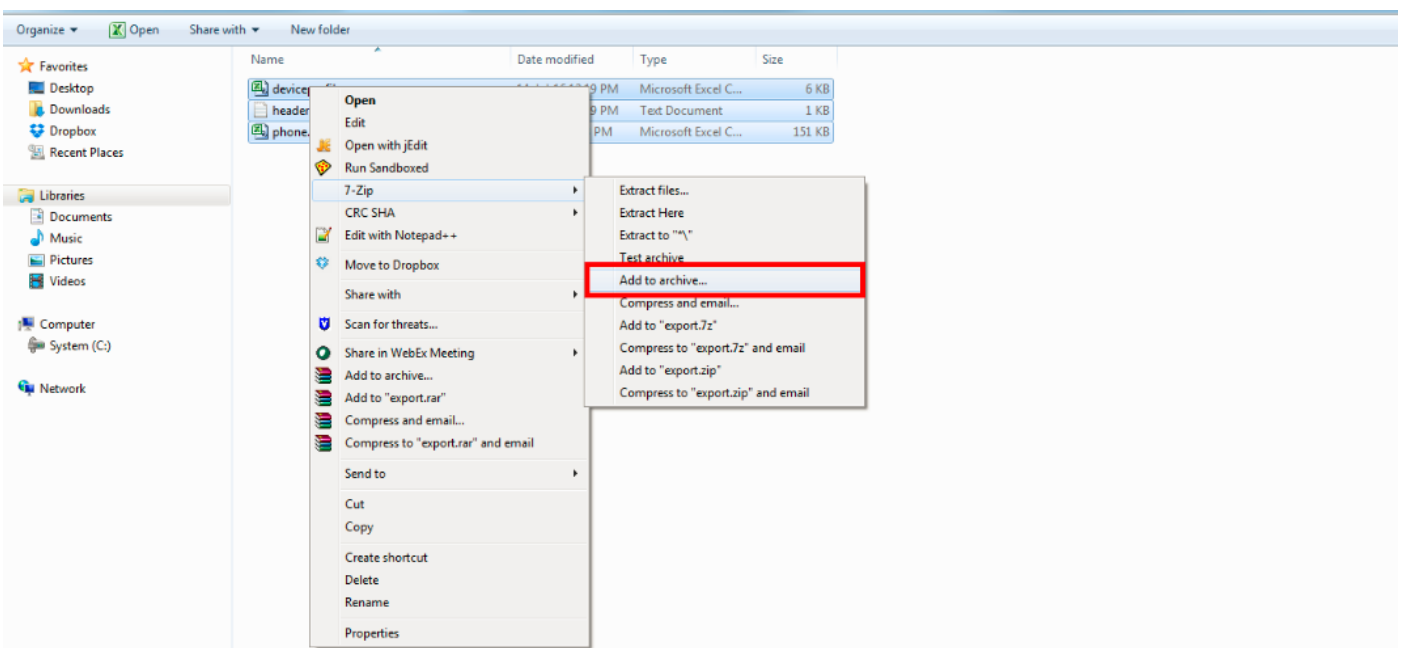
	A	B	C	D	E	F	G	H
1	Services Provisioning	Device Name	Description	Device Po	Phone Bu	CSS	AAR CSS	Location
2	Default	Sample Device Template with TAG usage examples	#FirstName# #LastName# (#Product# #Protocol#)	Default	Universal Device Template But			Hub_Nonf
3	Default	Auto-registration Template	#FirstName# #LastName# (#Product# #Protocol#)	Default	Universal Device Template But			Hub_Nonf
4	Default	SEPB8386156E7BA	Cisco 7821	Default	Standard 7821 SIP			Hub_Nonf
5	Default	navneet		Default	Standard CIPC SCCP			Hub_Nonf
6	Default	SEPB000B4BA07D3	testtt	Default	Standard (CallingX_CSS			Hub_Nonf
7	Default	SEPB16F51668F6	Auto 1004	Default	Universal Device Template But			Hub_Nonf
8	Default	SEP54781AE169BB	Cisco 3905	Default	SEP54781AE169BB-SIP			Individu
9	Default	TEST-Template	#FirstName##LastName#	Default	Universal Device Template But			Hub_Nonf
10	Default	ATAD0C282437561	ATAD0C282437561	Default	Standard ATA 187 SIP			Hub_Nonf

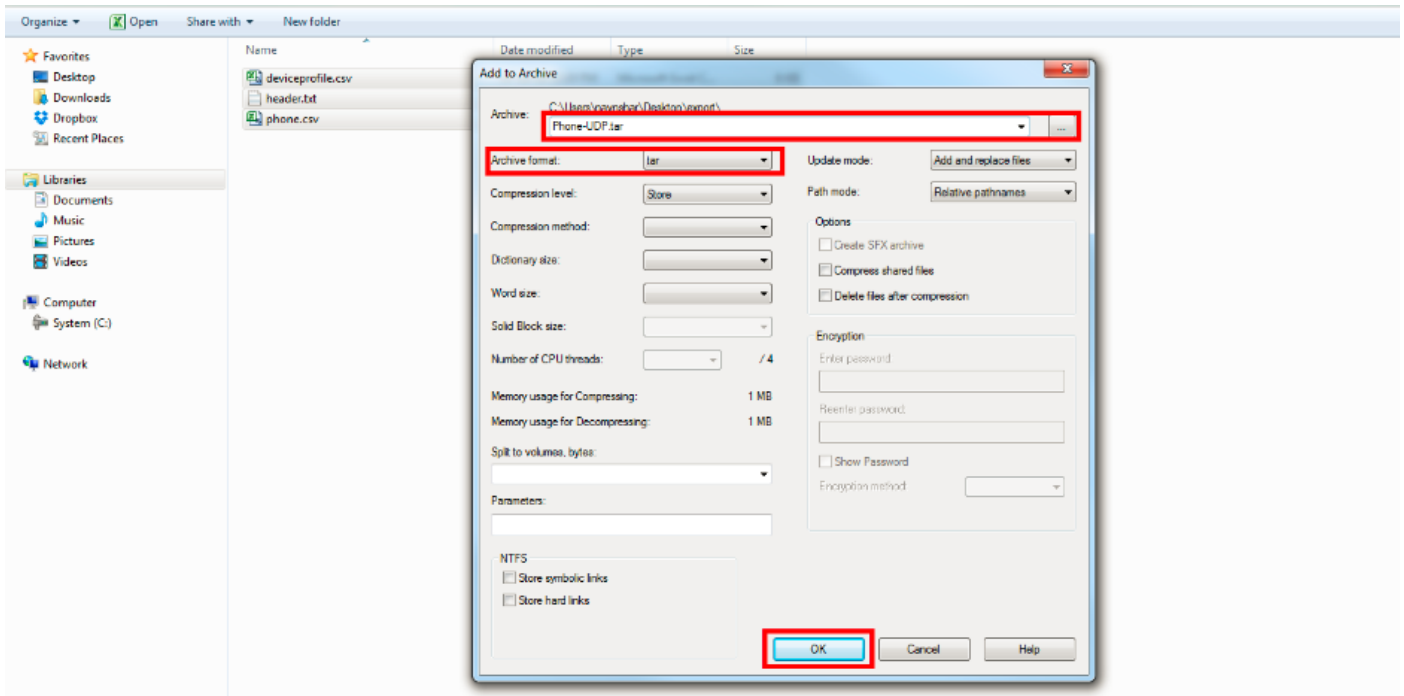
Note: Import/Export tool does not support update the password and pin attributes. They are exported in encrypted form in the exported file and hence it cannot be changed to plain text. Entities which have credentials are - Common Phone Profile, SIP Realm, Application User, LDAP Authentication, LDAP Directory, Cisco Attendant Console, and Enduser. Know that you must not modify the User ID, User Pkid, Password, and Pin fields in the **enduser.csv** in the exported file.

Step 12. Once you are done with the changes; Re-tar the files with the **tar -cvf** command while you ensure that the new **.tar** file is saved in the default common location.

Note: The **tar -cvf** command might not work on a Windows server, TAR and UNTAR operations are possible in Windows with 7-Zip, which is a freeware available on the WWW.

The **.tar** files must maintain the original directory structure when you re-tar the files, because BPS looks for **.tar** files at the default location only (club the header file, phone.csv and deviceprofile.csv file into .tar file).





Import Configuration

Use this procedure to upload a file to the CUCM server:

Step 13. Select **Bulk Administration > Upload/Download Files**. The Find and List Files window displays.

Click **Add New**. The File Upload Configuration window displays. In the File text box, enter the full path of the file that you want to upload or click Browse and locate the file.

From the Select the Target drop-down list box, select the target for which you want to use the file.

From the Transaction Type drop-down list box, select the transaction type that the file defines.

If you want to overwrite a file that already exists with the same name, check the Overwrite File if it exists check box.

Click **Save**. The status displays that the upload is successful.



File Upload Configuration

Save

Status

Status: Ready

Upload the CSV file

File: * Phone-UDP.tar

Select The Target *

Select Transaction Type *

Overwrite File if it exists.**

* - indicates required item.

** If you are trying to upload a file which is already present for a particular transaction, it will be overwritten.

Import File Validation Item

The Validate Import File page in BAT validates these items in the import **.tar** file:

The **.tar** file includes a header file.

All files listed in the header file are actually present in the **.tar** file.

All files in the **.tar** file are listed in header file.

File names are correct (as per the Import/Export convention).

File format for the CSV files in the **.tar** file is correct.

Now select **Bulk Administration > Import/Export > Validate Import File**.

Note: This feature does not include field level validation for valid characters, string length, etc.

In this example, changes are made to the configuration that already existed, therefore Validate Import file option was chosen.

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Job Scheduler

✖ Delete

Status

ℹ Status: Ready
ℹ Server Date and Time: **July 14, 2016 1:52:50 PM IST**

Job Details

Job id* 1468484431
Job Status* Completed
Scheduled Date Time 07/14/2016 13:50:31
Submit Date Time 07/14/2016 13:50:31
Sequence* 1
Job Description Validate Configuration Items
Frequency* Once
Job End Time
Last Modified By admin

Transaction Details

CSV File Name [Phone-UDP.tar](#)

Job Results

Job Launched Date Time	Job Result Status	Number Of Records Processed	Records Failed	Total Number

Upload/Download Files
Phones
Users
Phones & Users
Managers/Assistants
User Device Profiles
Gateways
Forced Authorization Codes
Client Matter Codes
Call Pickup Group
Mobility
Region Matrix
Import/Export ▾
 Export
 Import
 Validate Import File
Phone Migration
EMCC
Intercompany Media Services
Confidential Access Level
TAPS
Directory URIs and Patterns
Job Scheduler

Select Tar File name and hit **Submit**.

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Validate Import File

Submit

Status

ℹ Status: Ready

Select File to Validate

Tar File Name* Phone-UDP.tar ▾

Job Information

Job Description Validate Configuration Items

Submit

ℹ *- indicates required item.

In order to see whether the Job completed successfully or not, navigate to **Bulk Administration > Job Scheduler > Click on the latest job scheduler with Job description as Validate Configuration Items**.

Ensure that Job result status is displayed as success, if not, then it means the job wasn't completed successfully (in failure scenario you will see Job result status as error).

If there are any problems encountered at the time of validation, these are listed in the log files.

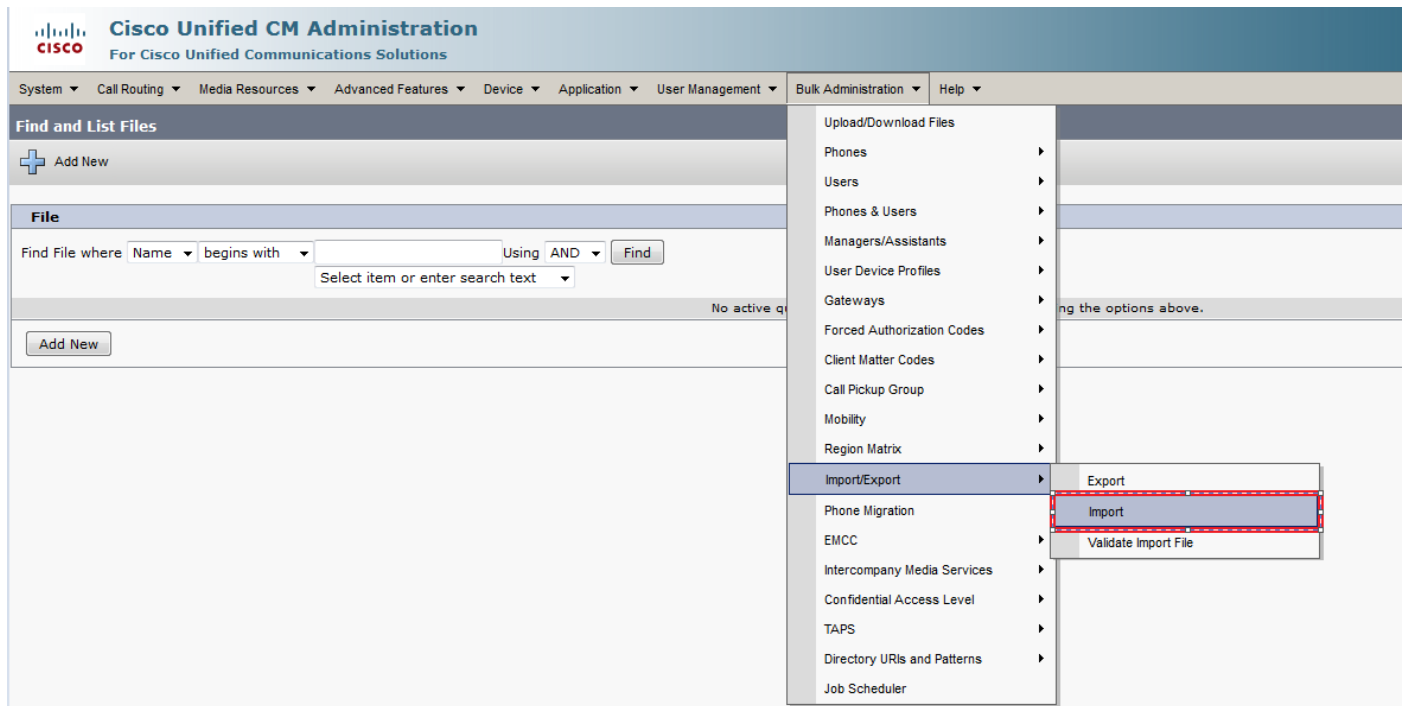
Import Configuration to the Server

In case you want to use import option, follow this procedure:

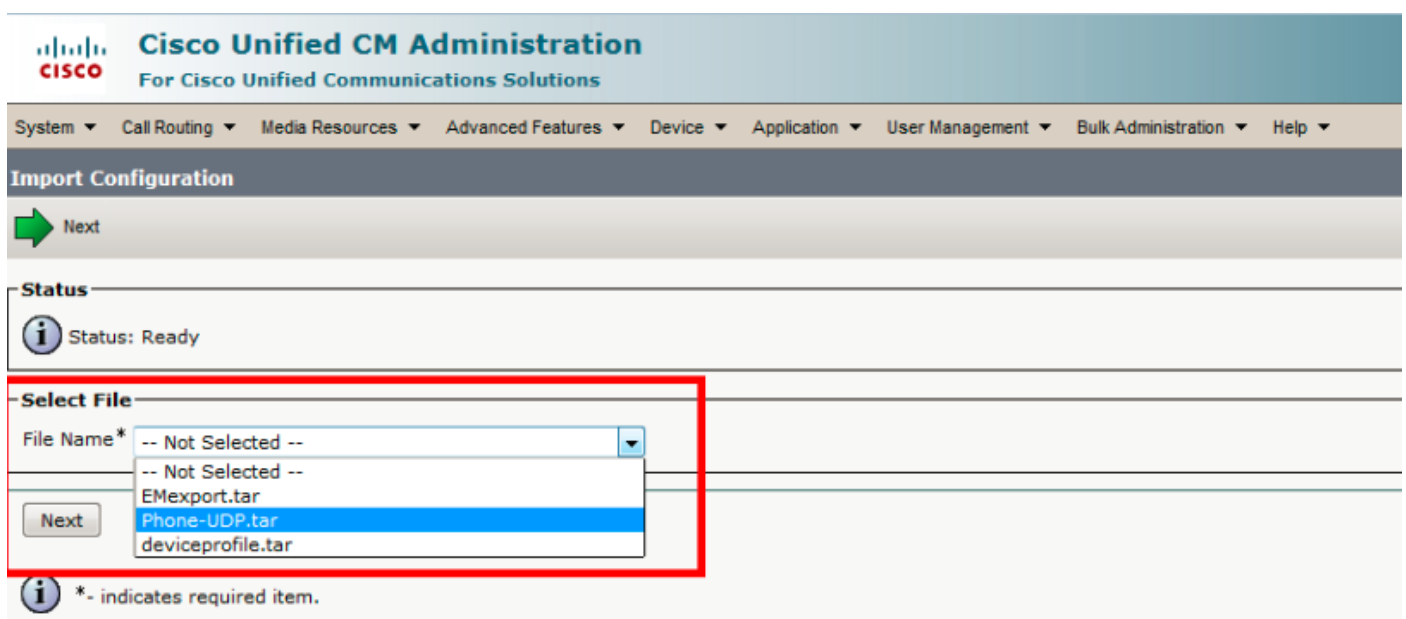
Select **Bulk Administration > Import/Export > Import**

Note: You can only update the existing enterprise or service parameters with the use of import/export. If some of the parameters are missing in the database, when you import the parameter, it fails.

You can use the **Override the existing configuration** option to make BPS update an item if it already exists on the server or insert the item if it does not. When you import phones or User Device Profiles with the use of the override option, the IP phone services do not get updated but only get appended to the existing set of entities.



Select the File name:



Select the Device Data accordingly and click on **RunImmediately** radio button and submit the Job.

The screenshot displays the Cisco Unified CM Administration interface. At the top, the Cisco logo and 'Cisco Unified CM Administration' are visible, along with the tagline 'For Cisco Unified Communications Solutions'. A navigation menu includes System, Call Routing, Media Resources, Advanced Features, Device, Application, User Management, Bulk Administration, and Help. The main heading is 'Import Configuration', with buttons for Submit, Select All, and Clear All. Below this, the 'Status' section shows 'Status: Ready'. The 'Archive Information' section is highlighted with a red box and contains 'File Name: Phone-UDP.tar'. The 'Import Configuration' section, also highlighted with a red box, includes a 'Device Data' sub-section with checkboxes for 'Device Profile', 'Phone', and 'Override the existing configuration'. The 'Job Information' section, highlighted with a red box, shows 'Job Description' as 'Import Configuration' and 'Run Immediately' selected. At the bottom, there are buttons for Submit, Select All, and Clear All.

In order to see whether the Job completed successfully or not, navigate to **Bulk Administration > Job Scheduler > Click on the latest job scheduler with Job description as Import Configuration.**

Verify

There is currently no verification procedure available for this configuration.

Troubleshoot

This section provides information you can use in order to troubleshoot your configuration.

Navigate to Job Scheduler and click on the respective Job Id and check the log files in the Job results section and see the error description and make modifications accordingly. Also, you can collect bulk provisioning service logs from RTMT and check for the errors.