Working with Phones

BAT helps you add, update, or delete large numbers of phones.

Related Topics

- Adding Phones or CTI Ports, page 3-13
- Creating a Phone Template, page 3-14
- Creating CSV Files for Phones and CTI Ports, page 3-20
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Adding Phones or CTI Ports

You can use BAT to add Cisco IP Phones to the Cisco CallManager database in batches, rather than individually.

BAT can also associate the phones to existing users. BAT also allows you to "Enable CTI Application Use" while associating CTI ports to existing users. This ability proves useful if you are adding users who will have applications that requires a CTI port, such as Cisco IP SoftPhone.

To add phones to Cisco CallManager, you must perform these steps:

1. Create a phone template to define common values for a set of phones.

2. Create a comma separated values (CSV) file to define individual values for each phone you want to add.
3. Insert the BAT/CSV files.
4. Plug in the phones.
5. (Optional) Update the phones using TAPS if you created dummy MAC addresses in the CSV file.

Related Topics

- Chapter 6, "Working with TAPS"
- Creating a Phone Template, page 3-14
- Creating CSV Files for Phones and CTI Ports, page 3-20
- Adding Phones to Cisco CallManager, page 3-24
- Adding User Combinations to Cisco CallManager, page 4-39

Creating a Phone Template

The phone template and comma separated values (CSV) files work together in bulk transactions. Based on the type of phone you want to add in a batch, you can create a template that has features that are common to all the phones in that batch, such as model, Device Pool, and so on. The system stores these templates, so they are reusable for future bulk transactions. For example, you can configure a template for the Cisco IP Phone 7960 with two lines configured and another Cisco IP Phone 7960 with four lines configured. Then when you need to add a large number of phones with the same configuration, you can reuse the existing template.

The CSV file stores the details for each individual phone, such as its MAC address, description, and so on. See "Creating CSV Files for Phones and CTI Ports" section on page 3-20 for more details about CSV files. Because you customize CSV files for each bulk transaction, you are less likely to reuse them than you might reuse BAT templates.

To create a phone template, first, enter the required phone settings. Second, add the appropriate number of lines to each phone. You must complete both steps to successfully create a phone template.

Related Topics

- Entering Phone Settings and Adding Lines, page 3-15
- Using the Phone Tab in BAT.xlt, page 3-20
- Creating CSV Files for Phones and CTI Ports, page 3-20

Entering Phone Settings and Adding Lines

The phone settings for the BAT phone template require similar values to those you enter when adding a phone in Cisco CallManager Administration. However, you must use the BAT phone template when performing batch operations in BAT.

Prerequisite

Make sure phone settings such as Device Pool, Location, Calling Search Space, and Button Template have already been configured in Cisco CallManager Administration prior to creating the template. You cannot create new settings in BAT.

To create the phone template and then add lines, perform the following steps. If you have already created the template but did not add lines, skip to Adding Lines to an Existing Phone Template, page 3-19.

Procedure

Step 1 Start BAT. (Refer to Starting BAT, page 1-7 for complete information about how to start BAT.)

Step 2 Click **Configure > Template > Phones**.

Enter the settings for the phone model for which you are creating the template.

Note Values appear in the Model, Device Pool, Location, Calling Search Space, and Button Template fields. Configure these values in the system through Cisco CallManager Administration.

- Phone Template Name—Type a name for this BAT template, up to 50 alphanumeric characters. This name identifies the unique phone template used only in BAT; for example, BAT 7960.

- Model—Select the type of Cisco IP Phone or CTI port.
- Device Pool—Select the Device Pool to which this group of phones/ports should belong.

  A Device Pool defines sets of common characteristics for devices, such as region, date/time group, Cisco CallManager group, and calling search space for auto-registration.
- Location—This is an optional field. Select the Location to which this group of phones/ports should belong.

  A Location indicates the remote location accessed using restricted bandwidth connections.
- Calling Search Space—This is an optional field. Select the calling search space to which this group of phones/ports should belong.

  A calling search space specifies the collection of Route Partitions that are searched to determine how a dialed number should be routed.
- Button Template—Select the button template to be used for all phones in this group. This field does not get used if you selected CTI Ports in the Model field.

  Button templates determine the configuration of buttons on a phone and identify which feature (line, speed dial, and so on) each button designates.
- Load Information—This is an optional field. This field does not apply for CTI ports. Be aware that any value entered in this field overrides the default value for the selected model and specifies the custom software for a Cisco IP Phone. Type the custom phone load, if applicable.
- Information—This is an optional field. Type the help text URL for the information button for Cisco IP Phone models 7960 and 7940 only.
- Directory—This is an optional field and applies only to Cisco IP Phone models 7960 and 7940. Type the URL of the directory server.
- Messages—This is an optional field and applies only to Cisco IP Phone models 7960, 7940, and 7910. Type the voice mail access pilot number.
- Services—This is an optional field and applies only to Cisco IP Phone models 7960 and 7940. Type the URL for the services menu.

Step 3 Click **Insert** to insert the BAT phone template in the Cisco CallManager database.

Step 4 Once the status indicates the insert completed, scroll down the page to the Line Details area.

Step 5 Click **Add Line**.

A popup window displays.

Note The maximum number of lines that appear for a BAT template depends on which model and button template you chose.

Step 6 Type or select the appropriate values for the following settings. Remember that the settings you choose here will be used by all phones in this batch for this line. All fields are optional.

Directory Number

- Partition—Select a partition.

  A partition indicates the route partition to which the directory number belongs.

  Note The directory number can appear in more than one partition; however, make sure the directory number and Partition combination is unique.

Directory Number Settings

- Calling Search Space—This field contains a collection of partitions that are searched for numbers that are called from this directory number.

  Note Changes cause an update of the numbers listed in the Call Pickup Group field. The setting applies to all devices using this directory number.

- Call Waiting—The selection you make in this field applies to all devices using this directory number and specifies whether this directory number uses call waiting when a line is busy (On), responds with a busy signal (Off), or uses the system-wide default setting (Default).

Call Forward and Pickup Settings

- Forward All—This field indicates the directory number to which all calls are forwarded.

  Note Setting applies to any dialable phone number, including an outside destination unless restricted, and to all devices using this directory number.

  - Calling Search Space—This is an optional field. This setting applies to all devices using this directory number and indicates the calling search space to use when forwarding to the specified destination.
- Forward Busy—This field indicates the directory number to which a call is forwarded when the line is in use

  Note This setting applies to any dialable phone number, including an outside destination unless restricted, and to all devices using this directory number.

  - Calling Search Space—This setting applies to all devices using this directory number and indicates the calling search space to use when forwarding to the specified destination.
- Forward No Answer—This field indicates the directory number to which a call is forwarded when the phone is not answered.

  Note Setting applies to any dialable phone number, including an outside destination unless restricted, and to all devices using this directory number.

  - Calling Search Space—This setting applies to all devices using this directory number and indicates the calling search space to use when forwarding to the specified destination. The setting appears only if configured in the system.
- Call Pickup Group—This field indicates a number that can be dialed to answer calls to this directory number (in the specified partition); for example, 3003/Partitionl.

Line Settings for this Phone

- Disable ring on this line—This setting applies only to the current device and stops the phone from ringing to indicate incoming calls.
- External Phone Number Mask—This setting indicates the phone number (or mask) used to send Caller ID information when placing a call from this line. This setting uses a maximum of 30 number and "X" characters; the X characters must appear at the end of the pattern.

Step 7 Click **Insert and Close**.

Step 8 BAT inserts the line settings to the database and the popup window closes.

Step 9 Repeat Steps 4 through 8 to add settings for any additional lines.

If an insert was not successful, you can view details about the insert attempt in the log file.

After setting up the lines for the template, use the template to add phones with CSV files.

Adding Lines to an Existing Phone Template

If you already created the phone template, but did not add the lines, you can use the following steps to complete the template. BAT cannot successfully use phone templates without line attributes.

Step 1 Start BAT. (Refer to Starting BAT, page 1-7, for complete information about how to start BAT.)

Step 2 Click **Configure > Template > Phones**.

Step 3 In the list of existing templates on the left, click the BAT template to which you want to add line attributes.

Step 4 Scroll down to the Line Details area and click the link to Add Line.

Step 5 Refer to Step 6 in the"Entering Phone Settings and Adding Lines" section on page 3-15 for complete instructions.

Step 6 Repeat Steps 4 and 5 until all lines are configured.

Creating CSV Files for Phones and CTI Ports

The CSV file for phones or CTI ports contains information about each phone as a record. Make sure all phones in a CSV file are the same model and have the same number of configured lines. For CTI ports, enter device names instead of MAC addresses. You can also enable CTI applications while associating a new CTI port to an existing user.

You can associate the phones to an existing user. To associate more than one phone to an existing user, you need to write the required information in separate records. For example, to associate two new Cisco IP Phone 7960s to an existing user, you need to write two records in the BAT CSV file, one for each Cisco IP Phone 7960 but each with the same User ID.

The CSV file for phones can contain multiple directory numbers depending on whether the BAT phone template in question supports multiple lines.

Note The number of directory numbers entered in the CSV file must equal the number of lines configured in the phone template.

Two ways exist to create a CVS file. You can use the Microsoft Excel template called BAT.xlt or create the CSV using a sample text file. Cisco recommends you use the BAT.xlt template because the data is validated automatically when you export to CSV format.

The file BAT.xlt provides data file templates with macros, support for multiple phone lines, and error checking and exports the values into CSV files for phones, users, and phone/user combinations.

Using the Phone Tab in BAT.xlt

Follow this procedure for fast bulk input of phones.

Procedure

Step 1 On the Publisher database server, click C:\CiscoWebs\BAT\ExcelTemplate and double-click **BAT.xlt**.

Step 2 When prompted, click **Enable Macros**.

Step 3 Click the **Phones** sheet tab.

Step 4 Complete all mandatory fields and any relevant optional fields. Each column heading specifies the length of the field.
Click **View Sample File** on the BAT interface for the data value requirements and see "CSV String Formats for Phones."

Note The system treats blank rows in the spreadsheet as "End of File" and discards subsequent records.

Step 5 Enter the number of lines in the Number of Phone Lines box equal to the number of directory numbers.

Step 6 (Optional) Check the Create Dummy MAC Address box to use the dummy MAC address option.

You must enter the MAC address or use the dummy MAC address option. If you choose the dummy MAC address option, you can update the phones later with the correct MAC address by manually entering this information into Cisco CallManager Administration for each phone or by using the TAPS tool. See Using TAPS, page 6-65, for more information about TAPS.

Step 7 Click **Export to BAT Format** to transfer the data from the BAT Excel spreadsheet into a CSV file.

The system saves the file to **C:\XLSDataFiles** (or to your choice of another existing folder) as

phones#timestamp.txt

Step 8 Click **View File** to view the CSV file that you created (if the files have been saved to the location C:\Batfiles\ on the Publisher database server).

CSV String Formats for Phones

The following example format shows the required field length and string types followed by an example of a CSV file for phones.

Note If values are set for Location, Forward Busy Destination, or Call Pickup Group in the CSV file, those values override the preset values of these attributes in a selected phone template.

If you leave no values for Location, Forward Busy Destination, or Call Pickup Group for any record on the CSV file, the system uses values from the phone template for these fields.

Example 3-1 If FwdBusy Destination is 3001 on a template, all records in a CSV file that have no value for FwdBusy Destination use 3001.

MAC Address (String[12]MANDATORY),Description (String[50] OPTIONAL),Location (String[50] OPTIONAL),Directory Number (String[50] OPTIONAL),Display (String[30] OPTIONAL),Forward Busy Destination (String[50] OPTIONAL),Call Pickup Group (String[50] OPTIONAL),User ID (String[30] OPTIONAL)

Example

```
1231123245AB,SEP1231123245AB,Dallas,9725557154,9725557154,9725557172,97
25557121/TollByPass,johns
```

The actual file does not contain field names (displayed in the first line). Always include comma separators, even if a field is blank. Specify Call Pickup Group as either a Directory Number or Directory Number/Route Partition Name, if the access to the call pickup group is restricted by a Route Partition. Specify the user ID if the phone is to be associated to a user.

Refer to the following examples and sample CSV records when creating CSV files.

Examples

If the description for a phone is blank

```
1231123245AB,,Dallas,9725557154,9725557154,9725557172,9725557121/TollB
yPass,johns
```

If the selected phone template supports a maximum of six lines and no active line is required

```
1231123245AB,SEP1231123245AB,Dallas,johns
```

If no active line is required and the location is also blank

```
1231123245AB,SEP1231123245AB,,johns
```

If two active lines are required

```
1231123245AB,SEP1231123245AB,Dallas,9728437154,9728437154,9728437172,9
728437121/TollByPass,9728437155,9728437155,9728437133,9728437112/TollB
yPass,johns
```

Note For the MAC Address, enter MAC Address values or check the option for creating dummy MAC addresses.

If the option is checked for a dummy MAC address and you want one line

```
,SEP1231123245AB,,Dallas,9725557154,9725557154,9725557172,9725557121/T
ollByPass,johns
```

Creating an Optional CSV Text File for Phones

If you do not use the BAT.xlt for data input when adding phones, follow this optional procedure to create lines of ASCII text with values separated by commas.

Tips Use the BAT.xlt file to input data because data validation is performed on that file.

The comma separated values (CSV) file provides a common textual way of providing tabular information. You can create a data file using any file format, such as Microsoft Notepad, Microsoft Windows, and so on. Save the CSV file to c:\BATFiles\Phones\ on the server running the Publisher database for Cisco CallManager.

Procedure

To create a CSV text file for phones, perform the following steps:

Step 1 Open a text editor (such as Notepad) or any application that allows you to export or create a CSV file.

Step 2 Using a separate line for each phone, enter the following values for each phone you want to add to Cisco CallManager:

```
MAC Address,Description,Location,Directory Number,Display,Forward Busy
Destination,CallPickup Group,User ID
```

You must enter the MAC address or use the dummy MAC address option on the Insert Phones page (the MAC address updates when a phone is plugged in). You can leave the other fields empty, but you must include the comma separators.

Note An error occurs if there are any blank lines in the CSV file.

Step 3 Save the file to C:\BATFiles\Phones\ on the server running the Publisher database for Cisco CallManager.

Note You cannot use CSV files saved anywhere for BAT inserts.

Adding Phones to Cisco CallManager

Follow this procedure to add several phones to Cisco CallManager.

Before You Begin

You must create a phone template and CSV file before you add phones to Cisco CallManager.

Procedure

Step 1 Start BAT. (Refer to Starting BAT, page 1-7, for complete information about how to start BAT.)

Step 2 Click **Configure > Phones**.

The Insert Phones window displays.

Step 3 Choose the name of the Phone Template you created for this type of bulk transaction.

Step 4 If you do not want to enter individual MAC addresses, check **Create Dummy MAC Address**. If you choose the dummy MAC address option, you can update the phones later with the correct MAC address by manually entering this information into Cisco CallManager Administration for each phone or by using the TAPS tool. See Using TAPS, page 6-65, for more information about TAPS.

Step 5 Enter values for the following fields:

- File Name—This field requires the name of the CSV file that includes the phones to be added. See the "Creating CSV Files for Phones and CTI Ports" section on page 3-20 for tips on creating the CSV file.
- Phone Template Name—This field requires the name of the phone template to be used for this set of phones. See "Creating a Phone Template" section on page 3-14 for information on creating the phone template.

Note If you want to insert phones that require different phone templates, you must create separate CSV files. The Line Details link shows how many lines are configured for the selected template.

- Create Dummy MAC Addresses—This field automatically generates fake MAC addresses in the following format:
  XXXXXXXXXXXX
  where X is any 12-character, hexadecimal (0-9 and A-F) number.
  - Use this option if you do not know the MAC address of the phone that will be assigned to the user.
  - Once the phone is actually plugged in, a MAC address registers for that device.
  - When phones are assigned, remember to update the phone records with the valid MAC address.

  To obtain a list of all phones using a dummy MAC address, in the Update Phones window
  - Click **Device Name**.
  - Click **begins with**.
  - Enter **BAT**.

  Note All phones added with a dummy MAC address have device names that begin with BAT.

  - Click **Add to Query**.
  - Click **View Query Results**.

Step 6 Click **Insert**.

Note If any line information for a phone record fails, BAT does not insert that phone record.

Step 7 Click **View Log File**. The BAT application generates a log file indicating the number of records added and the number of records failed, including an error code.

Note After the phones are added to Cisco CallManager, the application generates a log file indicating the number of records added and the number of records failed, including an error code. For more information on log files, see Chapter 7, "Troubleshooting BAT and TAPS".

Related Topics

- Creating CSV Files for Phones and CTI Ports, page 3-20
- Updating Phones, page 3-27

Updating Phone Records

You can update and delete bulk phone records from the Cisco CallManager database.

Related Topics

- Updating Phones, page 3-27
- Deleting Phones, page 3-29

Updating Phones

You can create a query to update a set of records. Creating a query requires defining a filter. You can also create multiple queries by clicking either the AND or the OR button.

Procedure

To create a query, perform the following steps:

Step 1 Select **Configure > Phones** and click the link to **Update Phones** in upper right corner of screen.

The Update Phones screen displays.

Step 2 To locate the records you want to update, define the filter:

- From the drop-down list box, choose the field to query such as Model, Device Name, and so on.
- From the drop-down list box, choose the search criteria such as begins with, contains, is empty, and so on.
- In the search field, either choose or enter the value that you want to locate, such as a specific phone model.
- Click **Add to Query** to add the defined filter to the query.

Caution If no filter is defined, the BAT tool applies the changes to all phone records.

- Click **AND** or **OR** to add multiple filters.
- Click **View Query Result** to display the records that are going to be affected.
- Specify the setting you want to update.
- Choose a setting from the Set Value list box by clicking the drop-down arrow.
- Enter the new value or click the drop-down arrow to select a value.
- Use the arrows to add the specified field and field values to the update box to indicate the fields that will change.

- Select the **Restart Devices after update** box to reset (power-cycle) the phones as soon as the update completes (if you are updating Device Pool) or select the **Re-Register Devices after update** box if you want to reset phones without power-cycling (for update of fields other than Device Pool).

Note If you want to wait and update the phones at a later time, do not select either Restart Devices or Re-Register Devices after update box.

Step 3 Click **Run** to apply the new updates to the data records.

Related Topics

- Adding Phones or CTI Ports, page 3-13
- Updating Lines, page 3-28
- Deleting Phones, page 3-29

Updating Lines

Procedure

To update lines, perform the following steps:

Step 1 Start BAT. (Refer to Starting BAT, page 1-7, for complete information about how to start BAT.)

Step 2 Click **Configure > Phones** and click the link to **Update Lines** in the upper, right corner of the screen.

The Update Lines screen displays.

Step 3 To locate the records in which to update the lines, define the filter.

- From the drop-down list box, choose the attributes to query such as Device Pool, Calling Search Space, and Line Number. Line Number designates the actual line number on the phone, such as line 1 or line 2. It does not specify the directory number associated with the line.
- From the drop-down list box, choose the search criteria such as begins with, contains, is empty, and so on.

- In the edit box, type or select the value that you want to locate, such as a specific phone model.

Step 4 Click **Add to Query** to add the defined filter to the query. Click **AND** or **OR** to add multiple filters.

Step 5 Click **View Query Result** to display the records that are going to be affected.

Step 6 Specify the setting you want to update.

- Choose a setting from the Set Value list box by clicking the drop-down arrow.
- Enter the new value or select a value from the list box.
- Use the arrows to add the specified field and field values to the update box to indicate that these are the fields that will change.

Step 7 Click **Run** to apply the new updates to the data records.

Related Topics

- Adding Phones or CTI Ports, page 3-13
- Updating Phone Records, page 3-26
- Deleting Phones, page 3-29

Deleting Phones

You can delete multiple phones from the Cisco CallManager database using the following procedure.

Procedure

To delete phones, perform the following procedure:

Step 1 Start BAT. (Refer to Starting BAT, page 1-7, for complete information about how to start BAT.)

Step 2 Click **Configure > Phones** and then click the link to **Delete Phones** in the upper, right corner of the screen.

The Delete Phones screen displays.

Step 3 From the drop-down list box, choose the field you want to search, such as model, device name, description, and so on.

Step 4 From the drop-down list box, choose the search criteria, such as begins with, contains, is empty, and so on.

Step 5 In the edit box, enter the value you want to locate, such as device name or phone model.

Step 6 Click **Add to Query** to add the defined filter to the query.

Caution If no information is entered into the query text box, all phone records are deleted.

Step 7 Click **AND** or **OR** to add multiple filters to the query.

Step 8 Click **View Query Results** to verify the records to be deleted.

Note After the phones are deleted in Cisco CallManager, BAT generates a log file indicating the number of records deleted and the number of records failed, including an error code. For more information on log files, see Chapter 7, "Troubleshooting BAT and TAPS"

Step 9 Click **Run** to delete the records.

Related Topics

- Adding Phones or CTI Ports, page 3-13
- Updating Phone Records, page 3-26
- Updating Lines, page 3-28