



# Working with Client Matter Codes and Forced Authorization Codes

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Forced Authorization Codes (FAC) and Client Matter Codes (CMC) allow you to manage call access and accounting. CMC assists with call accounting and billing for billable clients, while Forced Authorization Codes regulate the types of calls that certain users can place.

Client Matter Codes force the user to enter a code to specify that the call relates to a specific client matter. You can assign client matter codes to customers, students, or other populations for call accounting and billing purposes. The Forced Authorization Codes feature forces the user to enter a valid authorization code before the call completes.

The CMC and FAC features require that you make changes to route patterns and update your dial plan documents to reflect that you enabled or disabled FAC and/or CMC for each route pattern.

This chapter contains information on the following topics:

- [CMC and FAC Configuration Checklist, page 7-2](#)
- [Important BAT Considerations, page 7-3](#)
- [Creating a CSV File by Using BAT.xlt, page 7-4](#)
- [Creating a Custom Text-Based CSV File, page 7-5](#)
- [Editing an Existing CMC or FAC CSV File, page 7-7](#)
- [Deleting Code Settings, page 7-8](#)
- [CMC and FAC CSV File Settings, page 7-12](#)
- [Using BAT to Update the Cisco CallManager Database, page 7-14](#)

# CMC and FAC Configuration Checklist

Table 7-1 provides steps in the order in which you should use BAT to implement CMC and FAC.

**Table 7-1 Cisco CMC and FAC Configuration Checklist**

Configuration Steps		Related Procedures and Topics
<b>Step 1</b>	Review important BAT information and general information about the CMC and FAC features.	<ul style="list-style-type: none"> <li>• <a href="#">Important BAT Considerations, page 7-3</a></li> <li>• <i>Cisco CallManager Features and Services Guide</i></li> </ul>
<b>Step 2</b>	Create a CSV file for CMC or FAC and enter the CMC and FAC configuration information.	<ul style="list-style-type: none"> <li>• <a href="#">Creating a CSV File by Using BAT.xlt, page 7-4</a></li> <li>• <a href="#">Creating a Custom Text-Based CSV File, page 7-5</a></li> <li>• <a href="#">CMC and FAC CSV File Settings, page 7-12</a></li> </ul>
<b>Step 3</b>	To update the Cisco CallManager database, insert the CSV file in BAT.	<ul style="list-style-type: none"> <li>• <a href="#">Using BAT to Update the Cisco CallManager Database, page 7-14</a></li> <li>• <a href="#">BAT Settings for Updating the Cisco CallManager Database, page 7-16</a></li> </ul>
<b>Step 4</b>	Enable FAC or CMC by adding or updating route patterns in Cisco CallManager Administration.	<ul style="list-style-type: none"> <li>• <i>Cisco CallManager Administration Guide</i></li> <li>• <i>Cisco CallManager Features and Services Guide</i></li> </ul>
<b>Step 5</b>	Update your dial plan documents or keep a printout of the BAT CSV file with your dial plan documents.	Refer to your dial plan documents.
<b>Step 6</b>	Provide all necessary information, for example, codes, to users and explain how the features works.	<i>Cisco CallManager Features and Services Guide</i>

# Important BAT Considerations

Before you use BAT to configure CMC or FAC, review the following information:

- Create separate CSV files for CMC and FAC. Do not mix the two features in a single CSV file.
- When you add CMC or FAC settings for the first time, you can create a CSV file through BAT.xlt or create a custom text-based CSV file.
- To update, delete, or add more CMC or FAC settings (not first time), you can edit an existing CSV file or create a custom text-based CSV file.
- In the file/spreadsheet, do not enter two or more codes (and corresponding settings) on a single line. Designate a single line for each code (and corresponding setting). For example, use the following format when you enter codes for Forced Authorization Codes:

```
1234,John Smith,20  
1235,Lisa Mendez,10  
5551,Debbie Dunn,30
```



## Caution

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When you use BAT.xlt or a custom Notepad file, be aware that BAT treats blank rows in the file/spreadsheet as "End of File" and discards subsequent records.

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- To add new codes at the same time that you update codes in an existing CSV file, you must enter all required information. When you add new codes, you must complete all required fields; for example, forced authorization code, authorization code name, authorization level, or client matter code. If the procedure specifies an entry as mandatory, you must provide the information in file.
- Deleting information from a file and leaving the information blank does not remove the information from the Cisco CallManager database; in other words, a blank value does not overwrite an existing value in the database. Updating the values overwrites the existing value in the database.
- On the publisher database server, BAT provides separate directories for CMC and FAC; for example, C:\BATFiles\CMC\Insert or C:\BATFiles\FAC\Insert. Make sure that you copy the appropriate CSV files to the correct directory.

- You must save CSV files to the directory that BAT designates for the specific operation; for example, if you want to delete authorization code settings, you must copy the CSV file to C:\BATFiles\FAC>Delete on the publisher database server.
- Any time that you create or change a CSV file, you must insert the CSV file in BAT, as described in [“Using BAT to Update the Cisco CallManager Database” section on page 7-14.](#)

## Creating a CSV File by Using BAT.xlt

To create a CSV file for CMC or FAC by using BAT.xlt, perform the following procedure:

### Procedure

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- Step 1** The BAT.xlt file exists on the publisher database server; however, you normally do not have Microsoft Excel installed on the publisher database server. In that case, you must copy the file from the publisher database server and move it to the local machine, which must have Microsoft Excel installed.
- Step 2** Browse to **C:\CiscoWebs\BAT\ExcelTemplate** on the publisher database server.
- Step 3** Copy **BAT.xlt** to a local machine where Microsoft Excel is installed.
- Step 4** In Microsoft Excel, open **BAT.xlt**.




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**Tip** Remember that you must create two separate CSV files, one for CMC and one for FAC.

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- Step 5** Click one of the following tabs:
- **Insert CMC**—If you are creating a CMC CSV file
  - **Insert FAC**—If you are creating a FAC CSV file
- Step 6** Use [Table 2](#) to enter CMC or FAC settings in the columns.
- Step 7** Repeat [Step 6](#) until you enter all codes.
- Step 8** To transfer the Excel spreadsheet format to a CSV file, click **Export to BAT Format**.

The system automatically saves CSV files to C:\XlsDatafiles on the local machine.

- Step 9** Copy the CSV file to the following directory on the publisher database server.
- For CMC—C:\BATFiles\CMC\Insert\
  - For FAC—C:\BATFiles\FAC\Insert\
- Step 10** You must add the CSV file to BAT. To insert the CSV file in BAT, see the [“Deleting Code Settings” section on page 7-8](#).
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## Creating a Custom Text-Based CSV File

To create a custom text-based CSV file, perform the following procedure:

### Procedure

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- 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 code, create a custom CMC CSV file or a FAC CSV file, as described in the following steps:
- For CMC—[Step 3](#), [Step 5](#) and [Step 6](#)
  - For FAC—[Step 4](#), [Step 5](#) and [Step 6](#)



**Tip** Remember that you must create two separate CSV files, one for CMC and one for FAC.

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- Step 3** To create a CMC CSV file, enter the corresponding information, where x,y represent the following fields:



**Tip** For a detailed description of the following fields, see [Table 2](#).

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- x—The client matter code (mandatory entry for all additions, updates, and deletions)
- y—The description (optional if you update the entry)

For example, you may enter 5555,Acme Toys, where 5555 equals the mandatory client matter code, and Acme Toys equals the description.

**Step 4** To create a FAC CSV file, enter the corresponding information, where x,y,z represent the following fields:

- x—The forced authorization code (mandatory entry for all additions, updates, and deletions)
- y—The authorization code name (optional if you update the entry)
- z—The authorization level (optional if you update the entry)

For example, you may enter 1234,John Smith,20, where 1234 equals the forced authorization code, John Smith equals the authorization code name, and 20 equals the authorization level.



**Caution**

If you add new codes at the same time that you update them, make sure that you enter all required information. You can change any part of an existing record, but you must include the code; for example, the forced authorization code or client matter code. Deleting information and leaving it blank does not remove the information from the database; a blank value does not overwrite an existing value in the database, but, updating the value, for example, to Acme Toys, Inc. or John L. Smith from the preceding examples, overwrites the existing value in the database.

**Step 5** Save the CSV file to the following directory on the publisher database server, depending on what you want to accomplish:

- For CMC additions/updates—**C:\BATFiles\CMC\Insert**
- For FAC additions/updates—**C:\BATFiles\FAC\Insert**

- Step 6** Perform one of the following tasks:
- If you made additions or updates, insert the file in BAT, as described in [“Using BAT to Update the Cisco CallManager Database”](#) section on page 7-14.
  - If you plan to delete code settings, see the [“Deleting Code Settings”](#) section on page 7-8.
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## Editing an Existing CMC or FAC CSV File

You update existing codes by manually updating an existing CSV file in Notepad or by creating a new file in Notepad.

Perform the following procedure:

### Procedure

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- Step 1** To edit an existing CSV file where you previously inserted codes, browse to the following directory on the publisher database server:
- For CMC—**C:\BATFiles\CMC\Insert**
  - For FAC—**C:\BATFiles\FAC\Insert**
- Step 2** In Notepad, open and edit the existing CSV file; delete existing settings, add new codes, or update existing settings by using the text-based representation in [Table 2](#).
- If you are updating a CMC CSV file, for example, you may enter 5555,Acme Toys, where 5555 equals the mandatory client matter code, and Acme Toys equals the description.
- If you are updating a FAC CSV file, for example, you may enter 1234,John Smith,20, where 1234 equals the forced authorization code, John Smith equals the authorization code name, and 20 equals the authorization level.

**Caution**

If you add new codes at the same time that you update them, make sure that you enter all required information. You can change any part of an existing record, but you must include the code; for example, the forced authorization code or client matter code. Deleting information and leaving it blank does not remove the information from the database; a blank value does not overwrite an existing value in the database, but, updating the value, for example, to Acme Toys, Inc. or John L. Smith from the preceding examples, overwrites the existing value in the database.

**Step 3**

Copy the CSV file to the following directory on the publisher database server:

- For CMC additions/updates—**C:\BATFiles\CMC\Insert**
- For CMC deletions—**C:\BATFiles\CMC\Delete**
- For FAC additions/updates—**C:\BATFiles\FAC\Insert**
- For FAC deletions—**C:\BATFiles\FAC\Delete**

**Step 4**

You must add the CSV file to BAT. To insert the CSV file in BAT, see the [“Using BAT to Update the Cisco CallManager Database”](#) section on page 7-14.

## Deleting Code Settings

You can delete codes from the system by using a custom file that contains the codes that you want to delete. You can edit a custom file where you previously inserted or updated authorization codes, or you can create a new CSV file where you manually enter the codes that you want to delete.

If you plan to edit an existing CSV file, you must update the file, so only the lines that contain the codes that you want to delete remain in the file.

**Example for CMC (Existing CSV File)**

You obtain a file that contains the following information, and you decide to delete the client matter codes, 5550, 5551, and 5555:

- 5550,Phil Jones DDS
- 5551,Southwest Shades
- 5552,Happy Pharmaceuticals
- 5553,Weddings by Joyce
- 5554,Peterson Plumbing
- 5555,Acme Toys
- 5556,Chicago Paralegals

Before you delete the entries, the file must contain only the following entries:

- 5550,Phil Jones DDS
- 5551,Southwest Shades
- 5555,Acme Toys

**Example for CMC (New CSV File)**

If you create a new file to delete the codes, list only the codes, separated by lines, as shown in the following example:

5550

5551

5555

**Example for FAC (Existing CSV File)**

You obtain a file that contains the following information, and you decide to delete the authorization codes that are assigned to John, Dave, and Bill:

- 1233,Sandy Brown,30
- 1234,John Smith,20
- 1235,Dave Green,30
- 1236,John David,20

- 1237,Alex Anderson,30
- 1238,Bill Jones,20
- 1239,Jennifer Summers,20

Before the you can delete the entries for John, Dave, and Bill, the file must contain only the following entries:

- 1234,John Smith,20
- 1235,Dave Green,30
- 1238,Bill Jones,20

#### **Example for FAC (New File)**

If you create a new file to delete the codes, list only the codes, separated by lines, as shown in the following example:

1234

1235

1238

To delete batches of codes, perform the following procedure:

#### **Procedure**

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- Step 1** Perform one of the following tasks:
- Create a new file for codes that you want to delete, as described in the “[Example for CMC \(New CSV File\)](#)” section on page 7-9 and “[Example for FAC \(Existing CSV File\)](#)” section on page 7-9; after you insert the CSV file into BAT, see [Step 4](#) through [Step 13](#).
  - To delete existing codes from existing CSV file, see [Step 2](#) through [Step 13](#).
- Step 2** On the publisher database server, browse to the following directory:
- For CMC—**C:\BATFiles\CMC\Insert**
  - For FAC—**C:\BATFiles\FAC\Insert**
- Step 3** In Notepad, open and edit the existing CSV file to delete the entries.

- Step 4** Save the CSV file and copy it to the following directory on the publisher database server:
- For CMC—**C:\BATFiles\CMC\Delete\**
  - For FAC—**C:\BATFiles\FAC\Delete\**
- Step 5** In Cisco CallManager Administration, choose **Application > BAT**.
- Step 6** In BAT, choose one of the following options, depending on whether you plan to delete client matter codes or forced authorization codes:
- For CMC—**Configure > Client Matter Codes**
  - For FAC—**Configure > Forced Authorization Codes**
- Step 7** From the drop-down list box, choose the file that contains the codes that you want to delete.
- Step 8** In the upper, right corner of the window, click one of the following links, depending on whether you plan to delete client matter codes or forced authorization codes:
- For CMC—**Delete Client Matter Codes**
  - For FAC—**Delete Forced Authorization Codes**
- Step 9** Choose a custom file from the drop-down list box and click **Add to Query**.
- Step 10** To view which records the system will delete, click **View Query Result**. If the file does not contain the expected records, click **Clear Query** and return to [Step 1](#).
- Step 11** If the file contains the records that you want to delete, click **Delete**.
- Step 12** A confirmation dialog box indicates the time that it takes to complete the operation. Click **OK**.

**Tip**

To see the progression of the operation, click the **Show Latest Status** button.

- Step 13** After the transaction completes, click **View Latest Log File** to view a log file that indicates whether the system added all files successfully.

# CMC and FAC CSV File Settings

Use [Table 2](#) in conjunction with the following sections:

- [Creating a CSV File by Using BAT.xlt, page 7-4](#)
- [Creating a Custom Text-Based CSV File, page 7-5](#)
- [Editing an Existing CMC or FAC CSV File, page 7-7](#)
- [Deleting Code Settings, page 7-8](#)

**Table 2 Configuration Settings for CMC**

Setting/Column	Description
<b>For CMC CSV file</b>	
Client Matter Code	Enter a unique code of no more than 16 digits that the user will enter when placing a call. The client matter code displays in the CDRs for calls that use this code.
Description	Enter a name of no more than 50 characters. This optional field helps you associate a client code with a client.
<b>For FAC CSV File</b>	
Authorization Code	Enter a unique authorization code that is no more than 16 digits. The user enters this code when the user places a call through a FAC-enabled route pattern.

**Table 2** Configuration Settings for CMC (continued)

Setting/Column	Description
Authorization Code Name	<p>Enter a unique name that is no more than 50 characters. The authorization code name ties the authorization code to a specific user or group of users; this name displays in the CDRs for calls that use this code.</p> <p><b>Tip</b> If you plan to assign an authorization code to every user in the system, make sure that the code name includes an identifier for the user, such as the user name or another unique, non-sensitive identifier; for example, an email alias or employee/student number. Do not use identifiers such as a social security number because the authorization code name writes to CDRs, which are not secure.</p>
Authorization Level	<p>Enter a three-digit authorization level that exists within the range of 0 to 255; the default equals 0. The level that you assign to the authorization code determines whether the user can route calls through FAC-enabled route patterns. To successfully route a call, the user authorization level must equal or be greater than the authorization level that is specified for the route pattern for the call.</p>


# Using BAT to Update the Cisco CallManager Database

To update the Cisco CallManager database, you must insert the CMC or FAC CSV file in BAT. To update the database, perform the following procedure:

## Before You Begin

Before you can update Cisco CallManager, you must create or edit a CMC or FAC CSV file.

## Procedure

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- Step 1** In Cisco CallManager Administration, choose **Application > BAT**.
- Step 2** Choose one of the following options, depending on whether you used a CMC or FAC CSV file:
- For CMC—**Configure > Client Matter Codes**
  - For FAC—**Configure > Forced Authorization Codes**
- Step 3** In the **File Name** drop-down list box, choose the CSV file that contains the updated codes.
-  **Tip** To view the contents of the file that you want to insert, click **View File**.
- 
- Step 4** If you updated an existing list of codes, check the **Override the existing configuration** check box, as described in [Table 3](#).
- Step 5** Click **Insert**.

**Step 6** A confirmation dialog box indicates the that time it takes to complete the operation. Click **OK**.



**Tip** To see the progression of the operation, click the **Show Latest Status** button.

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**Step 7** After the transaction completes, click **View Latest Log File** to view a log file that indicates whether the system added all files successfully.

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# BAT Settings for Updating the Cisco CallManager Database

Use [Table 3](#) in conjunction with the “Using BAT to Update the Cisco CallManager Database” section on page 7-14.

**Table 3** Settings in BAT for Inserting CSV Files

Setting in BAT	Description
Field Name	From the drop-down list box, choose the CMC or FAC file that you want to insert.
Override the existing configuration	<p>This check box applies if you are updating code for existing settings.</p> <p>Checking this check box overwrites the existing authorization code name (FAC), authorization level (FAC), or description (CMC) with the information that is contained in the file that you want to insert (existing authorization and client matter codes do not change). If you do not check the check box, an error, which writes to the log file, indicates that the authorization or client matter code already exists; therefore, no updates occur.</p> <p><b>Note</b> The system inserts new codes that are included in the updated file, even if you do not check the Override the existing configuration check box.</p>