



# Route Pattern Configuration

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A route pattern comprises a string of digits (an address) and a set of associated digit manipulations that can be assigned to a route list or a gateway. Route patterns provide flexibility in network design. They work in conjunction with route filters and route lists to direct calls to specific devices and to include, exclude, or modify specific digit patterns.

Refer to [“Understanding Route Plans”](#) in *Cisco CallManager System Guide* for more detailed route pattern information.

Use the following topics to add, update, copy, or delete a route pattern:

- [Finding a Route Pattern, page 19-2](#)
- [Adding a Route Pattern, page 19-4](#)
- [Updating a Route Pattern, page 19-5](#)
- [Copying a Route Pattern, page 19-6](#)
- [Deleting a Route Pattern, page 19-7](#)
- [Route Pattern Configuration Settings, page 19-9](#)

# Finding a Route Pattern

Because you might have several route patterns in your network, Cisco CallManager lets you use specific criteria to locate specific route patterns. To locate route patterns, use the following procedure.



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**Note** During your work in a browser session, Cisco CallManager Administration retains your route pattern search preferences. If you navigate to other menu items and return to this menu item, Cisco CallManager Administration retains your route pattern search preferences until you modify your search or close the browser.

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## Procedure

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**Step 1** Choose **Route Plan > Route Pattern**.

The Find and List Route Patterns window displays. Use the two drop-down selection boxes to search for a route pattern.

**Step 2** From the first Find route patterns where drop-down selection box, choose Pattern, Description, or Partition.



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**Note** The criterion that you choose in this drop-down list box specifies how the list of route patterns that your search generates will be sorted. For example, if you choose Description, the Description column will display as the left column of the results list.

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**Step 3** From the second Find route patterns where drop-down list box, choose one of the following criteria:

- begins with
- contains
- ends with
- is exactly
- is not empty
- is empty

- Step 4** Specify the appropriate search text, if applicable, and click **Find**. You can also specify how many items per page to display.



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**Note** To find all route patterns that are registered in the database, click **Find** without entering any search text.

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A list of discovered route patterns displays by

- Route pattern icon
- Route Pattern
- Partition
- Description
- Route Filter
- Gateway/Route List



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**Note** You can delete multiple route patterns from the Find and List Route Patterns window by checking the check boxes next to the appropriate route patterns and clicking **Delete Selected**. You can delete all route patterns in the window by checking the check box in the matching records title bar and clicking **Delete Selected**.

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- Step 5** Click the route pattern from the list of records that matches your search criteria. The window displays the route pattern that you choose.
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#### Related Topics

- [Adding a Route Pattern, page 19-4](#)
- [Updating a Route Pattern, page 19-5](#)
- [Copying a Route Pattern, page 19-6](#)
- [Deleting a Route Pattern, page 19-7](#)
- [Route Pattern Configuration Settings, page 19-9](#)

# Adding a Route Pattern

This section describes how to add a route pattern.

## Before You Begin

Ensure that the following items are configured in Cisco CallManager:

- Gateway
- Route list
- Partition
- Route filter



### Timesaver

Assigning 8XXX to a gateway routes all directory numbers 8000 to 8999 out the gateway. Similarly, 82XX routes directory numbers 8200 to 8299. See the [“Special Characters and Settings” section on page 22-1](#) for more information about wildcards.

## Procedure

- Step 1 Choose **Route Plan > Route Pattern**.
- Step 2 Click **Add a New Route Pattern**.
- Step 3 Enter the appropriate settings as described in [Table 19-1](#).
- Step 4 Click **Insert**.



**Note** After you click **Insert** and the window refreshes, an **(Edit)** link appears in the window next to the Gateway/Route List field. This link takes you to the Gateway Configuration or Route List Configuration window for reference, depending on whether the Gateway/Route List field contains a gateway or a route list, so you can see the route group(s) that are included in that route list, if route group(s) was specified. If not, you see devices.


### Related Topics

- [Finding a Route Pattern, page 19-2](#)
- [Route Pattern Wildcards and Special Characters, page 22-1](#)
- [Adding a Route Filter, page 16-4](#)
- [Updating a Route Pattern, page 19-5](#)
- [Copying a Route Pattern, page 19-6](#)
- [Deleting a Route Pattern, page 19-7](#)
- [Route Pattern Configuration Settings, page 19-9](#)
- [Understanding Route Plans, Cisco CallManager System Guide](#)

## Updating a Route Pattern

This section describes how to update a route pattern.

### Procedure

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- Step 1** Choose **Route Plan > Route Pattern**.
- Step 2** Locate the route pattern that you want to update. See the [“Finding a Route Pattern” section on page 19-2](#).
-  **Note** If you change the gateway/route list, you must click **Update** prior to selecting the **Edit** link. Otherwise, you get linked to the previous gateway/route list.
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- Step 3** Update the appropriate settings as described in the [“Route Pattern Configuration Settings” section on page 19-9](#).
- Step 4** Click **Update**.
- The updated route pattern displays.
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### Related Topics

- [Finding a Route Pattern, page 19-2](#)
- [Route Pattern Wildcards and Special Characters, page 22-1](#)
- [Adding a Route Filter, page 16-4](#)
- [Adding a Route Pattern, page 19-4](#)
- [Copying a Route Pattern, page 19-6](#)
- [Deleting a Route Pattern, page 19-7](#)
- [Route Pattern Configuration Settings, page 19-9](#)
- [Understanding Route Plans, Cisco CallManager System Guide](#)

## Copying a Route Pattern

This section describes how to copy a route pattern.

### Procedure

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- Step 1** Choose **Route Plan > Route Pattern**.
  - Step 2** Locate the route pattern that you want to copy. See the [“Finding a Route Pattern” section on page 19-2](#).
  - Step 3** Check the check box next to the route pattern that you want to copy.
  - Step 4** Click the **Copy** icon of that route pattern.  
The window displays the copy of the route pattern.
  - Step 5** Update the appropriate settings as described in [Table 19-1](#).
  - Step 6** To add the new route pattern, click **Insert**.



### Note

After you click **Insert** and the window refreshes, an **(Edit)** link appears in the window next to the Gateway/Route List field. This link takes you to the Gateway Configuration or Route List Configuration window for reference, depending on whether the Gateway/Route List field contains a gateway or a route list, so you can see the route group(s) that are included in that route list, if route group(s) was specified. If not, you see devices.



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**Tip** You can also copy a route pattern by locating and displaying the route pattern that you want to copy and clicking **Copy**. Then, follow the instructions in [Step 5](#) and [Step 6](#).

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#### Related Topics

- [Finding a Route Pattern, page 19-2](#)
- [Route Pattern Wildcards and Special Characters, page 22-1](#)
- [Adding a Route Filter, page 16-4](#)
- [Adding a Route Pattern, page 19-4](#)
- [Updating a Route Pattern, page 19-5](#)
- [Deleting a Route Pattern, page 19-7](#)
- [Route Pattern Configuration Settings, page 19-9](#)
- [Understanding Route Plans, Cisco CallManager System Guide](#)

## Deleting a Route Pattern

This section describes how to delete a route pattern.

#### Procedure

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- Step 1** Choose **Route Plan > Route Pattern**.
- Step 2** Locate the route pattern that you want to delete. See the [“Finding a Route Pattern” section on page 19-2](#).
- Step 3** Check the check box of the route pattern that you want to delete and click **Delete Selected**.
- A message that displays states that you cannot undo this action.
- Step 4** To delete the route pattern, click **OK** or to cancel the deletion, click **Cancel**.

**Tip**

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You can also delete a route pattern by locating and displaying the route pattern that you want to delete and clicking **Delete**.

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**Related Topics**

- [Finding a Route Pattern, page 19-2](#)
- [Route Pattern Wildcards and Special Characters, page 22-1](#)
- [Adding a Route Filter, page 16-4](#)
- [Adding a Route Pattern, page 19-4](#)
- [Updating a Route Pattern, page 19-5](#)
- [Copying a Route Pattern, page 19-6](#)
- [Route Pattern Configuration Settings, page 19-9](#)
- [Understanding Route Plans, \*Cisco CallManager System Guide\*](#)

# Route Pattern Configuration Settings

[Table 19-1](#) describes the available fields in the Route Pattern Configuration window.

**Table 19-1** *Route Pattern Configuration Settings*

Field	Description
<b>Pattern Definition</b>	
Route Pattern	<p>Enter the route pattern, including numbers and wildcards (do not use spaces); for example, for NANP, enter 9.@ for typical local access, or 8XXX for a typical private network numbering plan.</p> <p><b>Note</b> Ensure that the directory route pattern, that uses the chosen partition, route filter, and numbering plan combination, is unique. Check the route pattern, translation pattern, directory number, call park number, call pickup number, message waiting on/off, or Meet Me number if you receive an error that indicates duplicate entries. You can also check the route plan report.</p> <p>See the <a href="#">“Route Pattern Wildcards and Special Characters”</a> section on page 22-1 for more information about wildcards.</p>

Table 19-1 Route Pattern Configuration Settings (continued)

Field	Description
Partition	<p>If you want to use a partition to restrict access to the route pattern, choose the desired partition from the drop-down list box. If you do not want to restrict access to the route pattern, choose &lt;None&gt; for the partition. See the “<a href="#">Partition Configuration</a>” section on page 14-1 for more information on how to use partitions.</p> <p>If more than 250 partitions exist, the ellipsis button (...) displays next to the drop-down list box. Click the ... button to display the Select Partition window. Enter a partial partition name in the <b>List items where Name contains</b> field. Click the desired partition name in the list of partitions that displays in the <b>Select item to use</b> box, and click <b>OK</b>.</p> <p><b>Note</b> To set the maximum list box items, choose <b>System &gt; Enterprise Parameters</b> and choose <b>CCMAdmin Parameters</b>.</p> <p><b>Note</b> Make sure that the combination of route pattern, route filter, and partition is unique within the Cisco CallManager cluster.</p>
Description	Enter a description of the route pattern.
Numbering Plan	Choose a numbering plan.

Table 19-1 Route Pattern Configuration Settings (continued)

Field	Description
Route Filter	<p>If your route pattern includes the @ wildcard, you may choose a route filter. The optional act of choosing a route filter restricts certain number patterns.</p> <p>The route filters that display depend on the numbering plan you choose from the Numbering Plan drop-down list box.</p> <p>If more than 250 route filters exist, the ellipsis button (...) displays next to the drop-down list box. Click the ... button to display the Select Route Filters window. Enter a partial route filter name in the <b>List items where Name contains</b> field. Click the desired route filter name in the list of route filters that displays in the <b>Select item to use</b> box, and click <b>OK</b>.</p> <p><b>Note</b> To set the maximum list box items, choose <b>System &gt; Enterprise Parameters</b> and choose <b>CCMAdmin Parameters</b>.</p>
Gateway/Route List	<p>Choose the gateway or route list for which you are adding a route pattern.</p> <p><b>Note</b> If at least one port of the defined gateway that is included in a route group does not exist, or has an assigned DN, this drop-down list box does not include that gateway. When a gateway is chosen in the drop-down list box, Cisco CallManager uses all the ports in the gateway to route/block this route pattern. This action does not apply for MGCP gateways.</p>
Route Option	<p>The Route Option designation indicates whether you want this route pattern used for routing calls (such as 9.@ or 8[2-9]XX) or for blocking calls. Choose the Route this pattern or Block this pattern radio button.</p>
Provide Outside Dial Tone	<p>Check the check box if appropriate.</p>
Urgent Priority	<p>Check the check box if appropriate.</p>

Table 19-1 Route Pattern Configuration Settings (continued)

Field	Description
<b>Calling Party Transformations</b>	
Use Calling Party's External Phone Number Mask	<p>Check the check box if you want the full, external phone number to be used for CLID on outgoing calls. You may also configure an External Phone Number Mask on all phone devices.</p> <p><b>Note</b> The calling party transformation settings that are assigned to the route groups in a route list override any calling party transformation settings that are assigned to a route pattern that is associated with that route list.</p>
Calling Party Transform Mask	<p>Enter a transformation mask value. Valid entries for the NANP include the digits 0 through 9, the wildcard character X, the characters * and #, and blank. If this field is blank and the preceding field is not checked, no calling party transformation takes place. See the <a href="#">“Calling Party Transformations Settings”</a> section on page 22-19 for more information.</p>
Prefix Digits (Outgoing Calls)	<p>Enter prefix digits in the Prefix Digits (Outgoing Calls) field. Valid entries for the NANP include the digits 0 through 9, #, *, and blank.</p> <p><b>Note</b> The appended prefix digit does not affect which directory numbers route to the assigned device.</p>
Calling Party Presentation	<p>Choose whether Cisco CallManager transmits or blocks caller ID.</p> <p>Choose <i>Allowed</i> if you want to set the presentation field to allow the caller ID. Choose <i>Restricted</i> if you want to set the presentation field to restrict the caller ID. Choose <i>Default</i> if you do not want to change the presentation field from its previous setting.</p> <p>For more information about this field, see <a href="#">Table 22-4</a> in the <a href="#">“Calling Party Transformations Settings”</a> section on page 22-19.</p>

**Table 19-1 Route Pattern Configuration Settings (continued)**

Field	Description
<b>Called Party Transformations</b>	
Discard Digits	From the Discard Digits drop-down list box, choose the discard digits instructions that you want to be associated with this route pattern. The discard digits that display depend on the numbering plan you choose from the Numbering Plan drop-down list box. See the “ <a href="#">Discard Digits Instructions</a> ” section on page 22-5 for more information on discard instructions for the North American Numbering Plan.
Called Party Transform Mask	Enter a transformation mask value. Valid entries for the NANP include the digits 0 through 9, the wildcard character X, the characters * and #, and blank. If the field is blank, no transformation takes place. Cisco CallManager sends the dialed digits exactly as dialed.
Prefix Digits (Outgoing Calls)	Enter prefix digits in the Prefix Digits (Outgoing Calls) field. Valid entries for the NANP include the digits 0 through 9, #, *, and blank.  <b>Note</b> The appended prefix digit does not affect which directory numbers route to the assigned device.
<b>ISDN Network-Specific Facilities Information Element</b>	
Carrier Identification Code	Enter the appropriate carrier identification code (0, 3, or 4 digits) in the Carrier Identification Code field. Carrier identification codes allow customers to reach the services of interexchange carriers.  The following list shows examples of commonly used carrier identification codes: <ul style="list-style-type: none"> <li>• ATT—0288</li> <li>• Sprint—0333</li> <li>• WorldCom/MCI—0222</li> </ul> For a complete list of NANP carrier identification codes, go to <a href="http://www.nanpa.com/">http://www.nanpa.com/</a> .

**Table 19-1** *Route Pattern Configuration Settings (continued)*

Field	Description
Network Service Protocol	From the Network Service Protocol drop-down list box, choose the PRI protocol that matches the protocol of the terminating gateway.
Network Service	Choose the appropriate network service. The values vary depending on the network service protocol that you choose from the Network Service Protocol field.
Service Parameter Name	This field displays the service parameter name that is associated with the chosen network service. If no service parameter exists for the network service, the field displays <Not Exist>.
Service Parameter Value	Enter the appropriate service parameter value. Valid entries include the digits 0 through 9. If a service parameter does not exist for the network service, Cisco CallManager Administration disables this field.

**Related Topics**

- [Finding a Route Pattern, page 19-2](#)
- [Adding a Route Pattern, page 19-4](#)
- [Updating a Route Pattern, page 19-5](#)
- [Copying a Route Pattern, page 19-6](#)
- [Deleting a Route Pattern, page 19-7](#)