



SIP Dial Rules Configuration

The administrator uses SIP dial rules configuration to configure SIP phone dial plans and associate them with the following SIP phones:

- Cisco SIP IP Phone model 7911, 7941, 7961, 7970, and 7971. These phones use the 7940_7960_OTHER dial rules patterns. These phones support Key Press Markup Language (KPML), which allows the digits to be sent to Cisco CallManager without requiring the user to press the Dial softkey. To increase the performance of Cisco CallManager (increasing the number of calls that get processed), Cisco recommends that administrators configure SIP dial rules.
- Cisco SIP IP Phone model 7940 and 7960. These phones use the 7940_7960_OTHER dial rules patterns and do not support KPML. If the administrator does not configure a SIP dial plan for these phones, the user must press the Dial softkey or wait a specified time before digits are sent to Cisco CallManager for processing. This extra step for the user delays the actual call from being processed.
- Cisco SIP IP Phone model 7905 and 7912. These phones use the 7905_7912 dial rules patterns and do not support KPML. If the administrator does not configure a SIP dial plan for these phones, the user must press the Dial softkey or wait a specified time before digits are sent to Cisco CallManager for processing. This extra step for the user delays the actual call from being processed.

If the administrator does not configure a SIP phone dial plan, the user must press the Dial softkey unless the phone supports KPML. If the administrator configures SIP dial plans, those dial plans must get associated with a SIP phone, so the dial plans get sent to the device.

The following sections describe SIP dial rules configuration:

- [Finding a SIP Dial Rule, page 31-1](#)
- [Configuring SIP Dial Rules, page 31-3](#)
- [SIP Dial Rule Configuration Settings, page 31-3](#)
- [Deleting a SIP Dial Rule, page 31-6](#)
- [Resetting a SIP Dial Rule, page 31-7](#)
- [Related Topics, page 31-7](#)

Finding a SIP Dial Rule

Because you may have several SIP dial rules in your network, Cisco CallManager lets you locate specific SIP dial rules based on specific criteria. Use the following procedure to locate SIP dial rules.

**Note**

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

Procedure

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- Step 1** Choose **Call Routing > Dial Rules > SIP Dial Rules**.
The Find and List SIP Dial Rules window displays.
- Step 2** From the first Find SIP Dial Rules where drop-down list box, choose one of the following criteria:
- Name
 - Dial Pattern
- Step 3** From the second drop-down list box, choose one of the following criteria:
- begins with
 - contains
 - ends with
 - is exactly
 - is empty
 - is not empty
- Step 4** Specify the appropriate search text, if applicable, and click **Find**. You can also specify how many items per window to display.

**Note**

To find all SIP dial rules that are registered in the database, click **Find** without entering any search text.

A list of discovered SIP dial rules displays.

- Step 5** From the list of records, click the SIP dial rule that matches your search criteria.
The window displays the SIP Dial Rule Configuration window for the SIP dial rule that you chose.
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Additional Information

See the [“Related Topics”](#) section on page 31-7.

Configuring SIP Dial Rules

Perform the following procedure to add or update a SIP dial rule.

Procedure

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- Step 1** In the menu bar, choose **Call Routing > Dial Rules > SIP Dial Rules**.
The Find and List SIP Dial Rules window displays.
- Step 2** Perform one of the followings tasks:
- To add a new SIP dial rule, click the **Add New** button and continue with [Step 3](#).
 - To update an existing SIP dial rule, locate the appropriate SIP dial rule as described in [“Finding a SIP Dial Rule” section on page 31-1](#) and continue with [Step 9](#).
- Step 3** From the Dial Pattern drop-down list box, choose either 7905_7912 or 7940_7960_OTHER as the SIP dial rule type.
- Step 4** Click the **Next** button.
The SIP Dial Rule Configuration redisplay with updated information.
- Step 5** Enter a name and description of the Dial Rule that you are creating by using the information as described in [Table 31-1](#). Click **Save**.
The SIP Dial Rule Configuration redisplay with updated information.
- Step 6** Enter a name for the pattern description by using the information as described in [Table 31-1](#).
- Step 7** Depending on the type of dial pattern that you want to create, click **Add Pattern** or **Add PLAR**.
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Note The Add PLAR button only displays for 7940_7960_OTHER dial rules.
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- The SIP Dial Rule Configuration redisplay with updated information and an area to configure the dial pattern parameters.
- Step 8** From the Dial Parameter drop-down list box, choose the type of parameter by using the information as described in [Table 31-1](#).
- Step 9** Enter the appropriate value, parameter, and description for the dial rule as described in [Table 31-1](#).
- Step 10** After completing a configuration, click the **Save** button.
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Additional Information

See the [“Related Topics” section on page 31-7](#).

SIP Dial Rule Configuration Settings

[Table 31-1](#) describes the available settings in the SIP Dial Rules Configuration window. For more information about related procedures, see the [“Related Topics” section on page 31-7](#).

Table 31-1 SIP Dial Rule Configuration Settings

Field	Description
Dial Pattern	Choose the dial pattern that is applicable to the SIP phone type that you have; for example, dial pattern 7905_7912 applies for Cisco SIP IP Phone model 7905 and 7912, and dial pattern 7940_7960_OTHER applies for Cisco SIP IP Phone model 7911, 7940, 7941, 7960, 7961, 7970, and 7971. Note Cisco IP Phone model 7905, 7912, 7940, and 7960 do not support KPML.
SIP Dial Rule Information	
Name	Enter a name for the SIP dial rule; for example, Long Distance. Enter up to 50 alphanumeric characters including spaces and special characters.
Description	Enter a brief description of the dial rule.
Pattern Information	
Pattern Description	Enter a name for the pattern description; for example, Emergency.
Delete Pattern	Check this check box to delete the dial pattern; then, click the Delete Selected button.
Dial Parameter	From this drop-down list box, choose the type of parameter for this pattern from the following choices: • Pattern—Use this parameter for 7905_7912 and 7940_7960_OTHER dial rules. See the “Pattern Formats” section on page 31-5 for specific pattern formats. • Button—This parameter specifies the dial pattern to which line button applies. If the user is initiating a call on line button 1, only the dial pattern that is specified for Button 1 applies. If this optional parameter is not configured, the dial pattern applies to all lines. It only applies to the Cisco SIP IP Phone model 7940, 7941, 7960, 7961, 7970, and 7971. The administrator must enter a button number as the value. The button number corresponds to the order of the buttons on the side of the screen that is on the phone, from top to bottom, with 1 being on top. The Cisco SIP IP Phone models 7940 and 7941 have two line buttons, the models 7960 and 7961 have six line buttons, and the models 970 and 7971 have eight line buttons. • Timeout—This parameter specifies the time, in seconds, before the system times out and dials the number as entered by the user. To have the number dial immediately, specify 0. Use this parameter only for 7940_7960_OTHER dial rules. • User—This parameter represents the tag that automatically gets added to the dialed number. Valid values include IP and Phone for this tag that is not case sensitive. Use this parameter only for 7940_7960_OTHER dial rules.
Value	For the dial parameters that this table describes, enter the value for that field here; for example, enter 1 for Button 1 of PLAR.
Delete Parameter	Check this check box to delete the dial pattern; then, click the Delete Selected button.

Table 31-1 SIP Dial Rule Configuration Settings (continued)

Field	Description
Edit Parameter	Click this button to update an existing parameter.
Add New Parameter	Click this button to add a new parameter to the pattern.
Delete Selected	Click this button to delete a parameter or a pattern.
Pattern Addition	
Pattern Description	Enter a name for a new pattern; for example, Longdistance; then, click the Add Pattern or Add PLAR button.
Add Pattern	Click this button to add the new pattern to the Pattern Information pane.
Add PLAR	Click this button to add the new PLAR pattern to the Pattern Information pane.

Pattern Formats

See the following formats for the 7905_7912 and 7940_7960_OTHER patterns.

Value for 7905_7912 Pattern

- Period (.) matches any digit.
- Hyphen (-) means more digits can be entered. If this character is needed, it must appear at the end of an individual rule. For example, 1408t5- is legal, but 1408t5-3... is illegal.
- Pound sign (#) acts as the terminating key, and termination can be applied only after matching hits >#. So >* means that the terminating character specifies the asterisk (*); that is, the terminating key must follow the greater-than sign (>).
- Characters “tn” set the timeout to *n* seconds.



Note *n* equals 0-9, and a-z, which ranges from 0 to 26.

- Characters “rn” repeat the last pattern *n* times.



Note The characters “>#” and “tn” specify modifiers, not patterns. *n* equals 0-9 and a-z, which ranges from 0 to 26. Use the repeat modifier to specify more rules in less space.

- Modifier “S” causes rule-matching to cease (that is, if a rule matches and the modifier “S” is seen, all other rules after that matching rule do not get used for matching).

Value for 7940_7960_OTHER Pattern

- Period (.) matches any character.
- Asterisk (*) matches one or more characters. The * gets processed as a wildcard character. You can override this by preceding the * with a backward slash (\) escape sequence, which results in the sequence *. The phone automatically strips the \, so it does not appear in the outgoing dial string. When * is received as a dial digit, it gets matched by the wildcard characters * and period (.).

- Comma (,) causes the phone to generate a secondary dial tone.

Example: 7.... will match any 4-digit DN that starts with 7. 8,..... will match 8, play secondary dial tone, then match any 5-digit DN.

SIP Dial Plan Rules Examples

Table 31-2 provides some example SIP dial plan rules for the 7905_7912 dial rules.

Table 31-2 SIP Dial Plan Rule Examples

Pattern String	Effect
.t7>#.-----t4-	You must enter at least one digit. After that, the send occurs after 7 seconds. The terminating # character can also be applied after the first digit is entered. After 7 digits are entered, the timeout changes to 4 seconds. The * character means that more digits can be entered, as long as timeout or # does not terminate the string.
911	Send immediately.
1t7>#.-----t1-	You must enter at least one digit. After that, the send occurs after 7 seconds. The terminating character # can also be applied after the first digit is entered. After 10 digits are entered, the timeout changes to 1 second. The * character means that more digits can be entered, as long as timeout or # does not terminate the string.
0t4>#.t7-"	After a 0, if no other digit is entered, the send occurs after 4 seconds. If another digit is entered, send occurs after 7 seconds. Again, # acts as the terminating digit.

Deleting a SIP Dial Rule

Perform the following procedure to delete a SIP dial rule.

Procedure

- Step 1** From Cisco CallManager Administration, choose **Call Routing > Dial Rules > SIP Dial Rules**.
- Step 2** Locate the SIP dial rule that you want to delete. See the [“Finding a SIP Dial Rule” section on page 31-1](#).
- Step 3** Check the check box next to the SIP dial rule that you want to delete and click **Delete Selected**.
A dialog box displays to warn you that you cannot undo deletion of SIP dial rules.
- Step 4** To delete the SIP dial rule, click **OK** or, to cancel the action, click **Cancel**. If you click **OK**, Cisco CallManager removes the SIP dial rule from the SIP dial rules list.



Note

You can delete multiple dial rules from the Find and List SIP Dial Rules window by checking the check boxes next to the appropriate dial rules and clicking **Delete Selected**. You can delete all the SIP dial rules in the window by clicking **Select All** and then clicking **Delete Selected**.

Additional Information

See the [“Related Topics”](#) section on page 31-7.

Resetting a SIP Dial Rule

Perform the following procedure to reset or restart the SIP phone when the SIP dial rule gets updated, so the phone gets updated with the new SIP dial rule.

Procedure

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|---------------|---|
| Step 1 | From Cisco CallManager Administration, choose Call Routing > Dial Rules > SIP Dial Rules . |
| Step 2 | Locate the SIP dial rule that you want to reset. See the “Finding a SIP Dial Rule” section on page 31-1. |
| Step 3 | Click on the SIP dial rule that you want to reset.
The SIP Dial Rule Configuration window displays. |
| Step 4 | Click Reset .
The Device Reset dialog displays. |
| Step 5 | Click one of the following choices: <ul style="list-style-type: none">• Restart—Restarts the chosen devices without shutting them down (reregisters the phones with Cisco CallManager).• Reset—Shuts down, then restarts, the device.• Close—Closes the Reset Device dialog without performing any action. |
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Additional Information

See the [“Related Topics”](#) section on page 31-7.

Related Topics

- [Finding a SIP Dial Rule](#), page 31-1
- [Configuring SIP Dial Rules](#), page 31-3
- [SIP Dial Rule Configuration Settings](#), page 31-3
- [SIP Dial Plan Rules Examples](#), page 31-6
- [Deleting a SIP Dial Rule](#), page 31-6
- [Resetting a SIP Dial Rule](#), page 31-7
- [Dial Rules Overview](#), *Cisco CallManager System Guide*

