Configure Partitions

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Partitions Overview

Partitions are logical groups of any of the following:

- Route patterns
- Directory numbers (DNs)
- Translation patterns
- Transformation patterns
- Universal resource indicators (URIs)
- Hunt pilots

Partitions facilitate call routing by dividing the route plan into logical subsets that are based on similar accessibility requirements, organization, location, and call type.

Calling Search Space Overview

A Calling Search Space (CSS) is a prioritized list of partitions. Calling Search Spaces determine the call destinations that are available for a caller to call. The call destination must be in a partition that is available to the caller's calling search space, or the caller cannot call that destination. You can assign calling search spaces to directory numbers and to devices such as phones and gateways.

If a calling search space is assigned both to the caller's phone and to the caller's directory number, the system concatenates the two to provide the CSS for the caller.

You can use partitions and calling search spaces to organize your system according to call privileges. For example, you could:

- Limit some employees from placing long-distance calls
- Limit a lobby phone from place a direct call to the CEO

Class of Service

You can use partitions and calling search spaces (CSS) to configure classes of service. The table below provides an example of partitions and calling search spaces that you can create for classes of service that provide PSTN access to:

- Emergency calls
- Local calls
- National calls
- International dialing

Table 1: Examples of Partitions and Calling Search Spaces

Calling Search Space	Route Partition 1	Route Partition 2	Route Partition 3	Capabilities
Base_CSS	Base_PT	—	—	• Emergency • On-net
LocalPSTN_CSS	PSTN_Local_PT	—	—	• Emergency • On-net • Local
NationalPSTN_CSS	PSTN_Local_PT	PSTN_National_PT	—	• Emergency • On-net • Local • National
InternationalPSTN_CSS	PSTN_Local_PT	PSTN_National_PT	PSTN_Intl_PT	• Emergency • On-net • Local • National • International

Devices automatically register with a calling search space such as Base_CSS. This allows all devices to dial both on-net and emergency off-net numbers. You must assign the remaining calling search spaces to the directory number on the user device profile to provide local 7-digit or local 10-digit, national, and international dialing capabilities.

Partition Configuration Task Flow

Procedure

	Command or Action	Purpose
Step 1	Configure Partitions, on page 3	Configure partitions to create a logical groupings of system resources with similar reachability characteristics.
Step 2	Configure Calling Search Spaces, on page 4	Configure the partitions that calling devices search when they are attempting to complete a call.

Configure Partitions

Configure partitions to create a logical group of system resources with similar reachability characteristics. You can create partitions for any of the following:

- Route patterns
- Directory numbers (DNs)
- Translation patterns
- Transformation patterns
- Universal resource indicators (URIs)
- Hunt pilots

Partitions facilitate call routing by dividing the route plan into logical subsets that are based on organization, location, and call type. You can configure multiple partitions.

Procedure

Step 1 From Cisco Unified CM Administration, choose **Call Routing** > **Class of Control** > **Partition**.

Step 2 Click **Add New** to create a new partition.

Step 3 In the **Partition Name, Description** field, enter a name for the partition that is unique to the route plan.

Partition names can contain alphanumeric characters, as well as spaces, hyphens (-), and underscore characters (_). See the online help for guidelines about partition names.

Step 4 Enter a comma (,) after the partition name and enter a description of the partition on the same line.

The description can contain up to 50 characters in any language, but it cannot include double quotes ("), percentage sign (%), ampersand (&), backslash (\), angle brackets (<>), or square brackets ([ ]).

If you do not enter a description, Cisco Unified Communications Manager automatically enters the partition name in this field.

Step 5 To create multiple partitions, use one line for each partition entry.

Step 6 From the **Time Schedule** drop-down list, choose a time schedule to associate with this partition.

The time schedule specifies when the partition is available to receive incoming calls. If you choose **None**, the partition remains active at all times.

Step 7 Select one of the following radio buttons to configure the **Time Zone**:

- **Originating Device**—When you select this radio button, the system compares the time zone of the calling device to the **Time Schedule** to determine whether the partition is available is available to receive an incoming call.
- **Specific Time Zone**—After you select this radio button, choose a time zone from the drop-down list. The system compares the chosen time zone to the **Time Schedule** to determine whether the partition is available is available to receive an incoming call.

Step 8 Click **Save**.

Partition Name Guidelines

The list of partitions in a calling search space is limited to a maximum of 1024 characters. This means that the maximum number of partitions in a CSS varies depending on the length of the partition names. Use the following table to determine the maximum number of partitions that you can add to a calling search space if partition names are of fixed length.

Table 2: Partition Name Guidelines

Partition Name Length	Maximum Number of Partitions
2 characters	340
3 characters	256
4 characters	204
5 characters	172
...	...
10 characters	92
15 characters	64

Configure Calling Search Spaces

A calling search space is an ordered list of route partitions that are typically assigned to devices. Calling search spaces determine the partitions that calling devices can search when they are attempting to complete a call.

Procedure

Step 1 From Cisco Unified CM Administration, choose **Call Routing** > **Class of Control** > **Calling Search Space**.

Step 2 Click **Add New**.

Step 3 In the **Name** field, enter a name.

Ensure that each calling search space name is unique to the system. The name can include up to 50 alphanumeric characters and can contain any combination of spaces, periods (.), hyphens (-), and underscore characters (_).

Step 4 In the **Description** field, enter a description.

The description can include up to 50 characters in any language, but it cannot include double-quotes ("), percentage sign (%), ampersand (&), back-slash (\), or angle brackets (<>).

Step 5 From the **Available Partitions** drop-down list, perform one of the following steps:

- For a single partition, select that partition.
- For multiple partitions, hold down the **Control (CTRL)** key, then select the appropriate partitions.

Step 6 Select the down arrow between the boxes to move the partitions to the **Selected Partitions** field.

Step 7 (Optional) Change the priority of selected partitions by using the arrow keys to the right of the **Selected Partitions** box.

Step 8 Click **Save**.

Partition Interactions and Restrictions

Table 3: Partition Restrictions

Function or Action	Restriction
Delete a Partition	Ensure that you complete one of the following tasks, before you delete a partition: • Assign a different partition to any calling search spaces, devices, or other items that are using the partition that you want to delete. • Delete the calling search spaces, devices, or other items that are using the partition that you want to delete. Check carefully to ensure that you are deleting the correct partition, because you cannot retrieve deleted partitions. If you accidentally delete a partition, you must rebuild it.
Translation Patterns	A translation pattern contains digit manipulations and is assigned to a partition. When a call matches the translation pattern, Unified CM performs the translation and then reroutes the call using the calling search space that the translation pattern specifies. For details on translation patterns, see the Configure Call Routing chapter.
Time of Day Routing	Configure a schedule for when a partition is available to accept incoming calls. For details on configuring time of day routing, see the Configure Call Routing chapter.

Function or Action	Restriction
Logical Partitioning	**Optional**: Allows you split your internal VoIP network from your external network with gateway and trunk access. Logical partitioning is optional for most deployments, but is mandatory in countries such as India where regulations mandate that all calls that leave the internal network go to a local PSTN gateway. For details on Configuring Logical Partitioning, refer to the "*Configure Logical Partitioning*" section in the *Feature Configuration Guide for Cisco Unified Communications Manager*.