



Partitions and Calling Search Spaces

Partitions and calling search spaces provide the capability for implementing calling restrictions and creating closed dial plan groups on the same Cisco CallManager.

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Understanding Partitions and Calling Search Spaces

A partition comprises a logical grouping of directory numbers (DNs) and route patterns with similar reachability characteristics. Devices typically placed in partitions include DNs and route patterns. These are entities associated with DNs that users dial. For simplicity, partition names usually reflect their characteristics, such as "NYLongDistancePT," "NY911PT," and so on. When a DN or route pattern is placed into a certain partition, this creates a rule that specifies what devices can call that device or route list.

A calling search space comprises an ordered list of partitions that users can look at before being allowed to place a call. Calling search spaces determine which partitions calling devices, including IP phones, soft phones, and gateways, can search when attempting to complete a call.

When a calling search space is assigned to a device, the list of partitions in the calling search space comprises only the partitions that the device is allowed to reach. All other DNs that are in partitions not in the device calling search space receives a busy signal.

Partitions and calling search spaces address three specific problems:

- Routing by geographical location
- Routing by tenant
- Routing by class of user

Partitions and calling search spaces provide a way to segregate the global dialable address space. The global dialable address space comprises the complete set of dialing patterns to which the Cisco CallManager can respond.

Partitions do not significantly impact the performance of digit analysis, but every partition specified in a calling device's search space does require that an additional analysis pass through the analysis data structures. The digit analysis process looks through every partition in a calling search space for the best match. The order of the partitions listed in the calling search space serves only to break ties when equally good matches occur in two different partitions. If no partition is specified for a pattern, the pattern goes in the null partition to resolve dialed digits. Digit analysis always looks through the null partition last.

Examples

Calling search spaces determine which partitions calling devices search when attempting to complete a call.

For example, assume a calling search space named “Executive” has four partitions: NYLongDistance, NYInternational, NYLocalCall, and NY911. Assume another calling search space named “Guest,” includes two partitions: “NY911” and NYLocalCall.

If the Cisco IP phone associated with a phone or line is in the “Executive” calling search space, the search looks at partitions “NYInternationalCall,” “NYLongDistance,” “NYLocalCall,” and “NY911” when attempting to initiate the call. Users calling from this number can place international calls, long-distance calls, local calls, and calls to 911.

If the Cisco IP phone associated with a phone or line is in the “Guest” Calling Search Space, the search looks only at the “NYLocalCall” and “NY911” partitions when initiating the call. If a user calling from this number tries to dial an international number, a match does not occur, and the call cannot be routed.

Guidelines and Tips

Use concise and descriptive names for your partitions. The `CompanynameLocationCalltypePT` format usually provides a sufficient level of detail and is short enough to enable you to quickly and easily identify a partition. For example, `CiscoDallasMetroPT` identifies a partition for toll-free inter-LATA (local access and transport area) calls from the Cisco office in Dallas.

Where to Find More Information

Related Topic

- [Understanding Route Plans, page 13-1](#)

Additional Cisco Documentation

- [Partition Configuration](#), *Cisco CallManager Administration Guide*
- [Calling Search Space Configuration](#), *Cisco CallManager Administration Guide*

■ Where to Find More Information