



Dial Peer Matching

CUBE allows VoIP-to-VoIP connection by routing calls from one VoIP dial peer to another. As VoIP dial peers can be handled by either SIP or H.323, CUBE can be used to interconnect VoIP networks of different signaling protocols. VoIP internetworking is achieved by connecting an inbound dial peer with an outbound dial peer.

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Dial Peers in CUBE

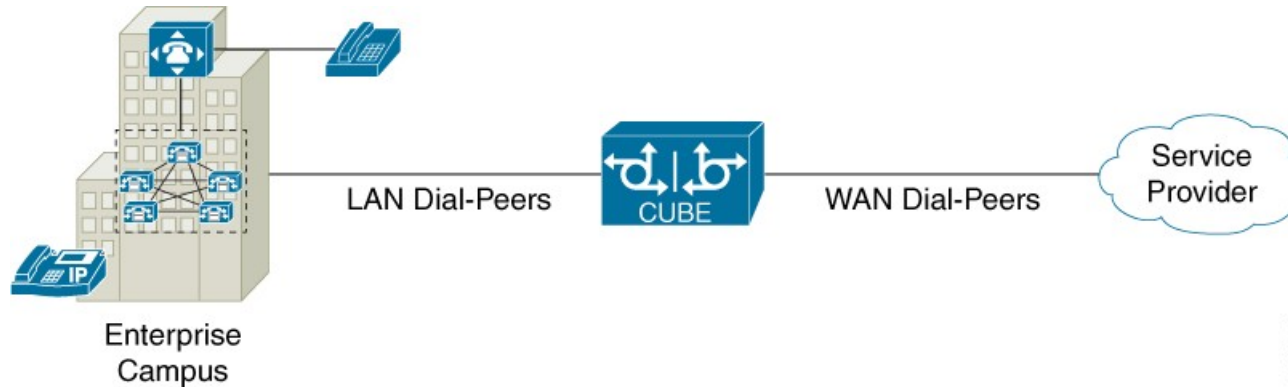
A dial peer is a static routing table mapping phone numbers to interfaces or IP addresses

A call leg is a logical connection between two routers or between a router and a VoIP endpoint. A dial peer is associated or matched to each call leg according to attributes that define a packet switched network, like destination address.

Voice-network dial peers are matched to call legs based on configured parameters, after which an outbound dial peer is provisioned to an external component using the component's IP address. For more information, refer to [Dial Peer Configuration Guide](#).

In CUBE, dial peers can also be classified as LAN dial peers and WAN dial peers based on the connecting entity that CUBE sends or receives calls from.

Figure 1: LAN and WAN Dial Peers



A LAN dial peer is used to send or receive calls between CUBE and the Private Branch Exchange (PBX), a system of telephone extensions within an enterprise. Given below are examples of inbound and outbound LAN dial peers.

Figure 2: LAN Dial Peers

Inbound Dial-Peer for calls from CUCM to CUBE

```
dial-peer voice 100 voip
description *** Inbound LAN side dial-peer ***
incoming called-number 9T
session protocol sipv2
codec g711ulaw
dtmf-relay rtp-nte
```

CUCM sending 9
+ All digits dialed
(Outgoing calls)

Incoming call number
used to match the
inbound LAN dial peer

Outbound Dial-Peer for calls from CUBE to CUCM

```
dial-peer voice 200 voip
description *** Outbound LAN side dial-peer ***
destination-pattern [2-9].....
session protocol sipv2
session target ipv4:<CUCM_Address>
codec g711ulaw
dtmf-relay rtp-nte
```

SP will be sending
10 digits inbound
(Incoming Calls)

Destination pattern
used to match the
outbound LAN dial peer

A WAN dial peer is used to send or receive calls between CUBE and the SIP trunk provider. Given below are examples of inbound and outbound WAN dial peers.

Figure 3: WAN Dial Peers

Inbound Dial-Peer for calls from SP to CUBE

```
dial-peer voice 100 voip
description *** Inbound WAN side dial-peer ***
incoming called-number [2-9].....
session protocol sipv2
codec g711ulaw
dtmf-relay rtp-nte
```

Catch-all for all inbound PSTN calls. (Incoming Calls)

Incoming call number used to match the inbound WAN dial peer

Outbound Dial-Peer for calls from CUBE to SP

```
dial-peer voice 200 voip
description *** Outbound WAN side dial-peer ***
translation-profile outgoing Digitstrip
destination-pattern 9[2-9].....
session protocol sipv2
voice-class sip bind control source gig0/1
voice-class sip bind media source gig0/1
session target ipv4:<SIP_Trunk_IP_Address>
codec g711ulaw
dtmf-relay rtp-nte
```

Dial-peer for making long distance calls to SP (Outgoing Calls)

Destination pattern used to match the outbound WAN dial peer

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Configuring Inbound and Outbound Dial Peers Matching for CUBE

The following commands can be used for inbound and outbound dial peer matching in CUBE

Table 1: Incoming Dial Peer Matching

Command in Dial-Peer Configuration	Description	Call Setup Element
incoming called-number <i>DNIS_string</i>	This command uses the destination number that was called to match the incoming call leg to an inbound dial peer. This number is called the dialed number identification service (DNIS) number.	DNIS number

Command in Dial-Peer Configuration	Description	Call Setup Element
answer-address <i>ANI_string</i>	This command uses the calling number to match the incoming call leg to an inbound dial peer. This number is called the originating calling number or automatic number identification (ANI) string.	ANI string
destination-pattern <i>ANI_string</i>	This command uses the inbound call leg to the inbound dial peer.	ANI string for inbound
{incoming called incoming calling} e164-pattern-map <i>pattern-map-group-id</i>	This command uses a group of incoming called (DNIS) or incoming calling (ANI) number patterns to match the inbound call leg to an inbound dial peer. The command calls a globally defined voice class identifier where the E.164 patten groups are configured.	E.164 Patterns
incoming uri {from request to via} <i>URI_class_identifier</i>	This command uses the directory URI (Uniform Resource Identifier) number to match the outgoing SIP call leg to an outgoing dial peer. This directory URI is part of the SIP address of a device. The command calls a globally defined voice class identifier where the directory URI is configured. It requires the configuration of session protocol sipv2	Directory URI
incoming uri {called calling} <i>URI_class_identifier</i>	This command uses the directory URI (Uniform Resource Identifier) number to match the outgoing H.323 call leg to an outgoing dial peer. The command calls a globally defined voice class identifier where the directory URI is configured.	Directory URI

Table 2: Outgoing Dial Peer Matching

Dial Peer Command	Description	Call Setup Element
destination-pattern <i>DNIS_string</i>	This command uses DNIS string to match the outbound call leg to the outbound dial peer.	DNIS string for outbound ANI string for inbound
destination <i>URI_class_identifier</i>	This command uses the directory URI (Uniform Resource Identifier) number to match the outgoing call leg to an outgoing dial peer. This directory URI is part of the SIP address of a device. The command actually refers to a globally defined voice class identifier where the directory URI is configured.	Directory URI
destination e164-pattern-map <i>pattern-map-group-id</i>	This command uses a group of destination number patterns to match the outbound call leg to an outbound dial peer. The command calls a globally defined voice class identifier where the E.164 pattern groups are configured.	E.164 patterns

