

Matching Inbound Dial Peers by URI of Incoming SIP Calls

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Inbound Dial Peer Matching (by URI)

The inbound dial peer matching by URI feature allows you to configure the selection of inbound dial peers by matching parts of the URI sent by a remote (neighboring) SIP entity. The match is done on different parts of the URI like username, IP address, and DNS. This feature configures configuration policies, enforce specific call-treatment, security, and routing policies on each SIP trunk by originating SIP entity.

In a scenario where multiple SIP hops are involved in a call, there would be multiple via headers that are involved, and the topmost via header of an incoming SIP invite represents the last hop that forwarded the SIP request, and the bottom-most via header would represent the originator of the SIP request. This feature supports matching by the last hop that forwarded the request (neighboring SIP entity), which is the topmost via header.

Note For incoming dial-peer match based on URI, if there are multiple dial-peers matches, then the longest matching dial-peer is chosen (similar to multiple dial-peers match based on an incoming called number). However for the URI pattern match, there is no match length and hence this is the least preferred.

Feature Information

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Feature Name	Releases	Feature Information
Inbound Dial-peer Match Based on Remote IP Address on SIP Trunks	Baseline Functionality	This feature was implemented on the Cisco Unified Border Element. The following commands were introduced or modified: **dial-peer voice**, **voice-class uri**.

Configure an Inbound Dial Peer to Match on URI

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **voice class uri** *voice-class-uri-tag*
4. Specify a URI field for the voice class:
   - **host** *hostname-pattern*
   - **host ipv4:** *ipv4-address*
   - **host ipv6:** *ipv6-address*
   - **host dns:** *dns-address*
   - **pattern** *uri-pattern*
   - **user-id** *username-pattern*
5. **exit**
6. **dial-peer voice** *tag* **voip**
7. **session protocol sipv2**
8. **incoming uri** { **from** | **request** | **to** | **via**} *voice-class-uri-tag*
9. **end**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Device> configure terminal`	Enters global configuration mode.

	Command or Action	Purpose
Step 3	**voice class uri** *voice-class-uri-tag* **Example:** `Device(config)# voice class uri 200`	Creates voice class for matching SIP dial peers and enters a voice URI class configuration mode.

Step 4	Specify a URI field for the voice class:
	• **host** *hostname-pattern*
	• **host ipv4:** *ipv4-address*
	• **host ipv6:** *ipv6-address*
	• **host dns:** *dns-address*
	• **pattern** *uri-pattern*
	• **user-id** *username-pattern*
	Example:
	`Device(config-voice-uri-class)# host server1`
	Example:
	`Device(config-voice-uri-class)# host ipv4:10.0.0.0`
	Example:
	`Device(config-voice-uri-class)# host dns:xxx.yyy.com`
		• You can specify up to ten instances of the **host ipv4:**, **host ipv6:**, and **host dns:** commands.
		• You can specify only one instance of the **host** *hostname-pattern* commands.
		• Length of *uri-pattern*, *username-pattern*, and *hostname-pattern* must be less than 32.
		• *username-pattern* is matched against the username field of the URI.
		• *hostname-pattern* is matched against the host field of the URI.
		• *uri-pattern* is matched against the entire URI.
		• Only one instance of the **pattern** and **host** commands is possible.
		Note Patterns are case-sensitive.

Step 5	**exit** **Example:** `Device(config-voice-uri-class)# exit`	Enters global configuration mode.
Step 6	**dial-peer voice** *tag* **voip** **Example:** `Device(config)# dial-peer voice 6000 voip`	Enters dial peer voice configuration mode.
Step 7	**session protocol sipv2** **Example:** `Device(config-dial-peer)# session protocol sipv2`	Configures SIP as the session protocol type.
Step 8	**incoming uri** { **from** | **request** | **to** | **via**} *voice-class-uri-tag* **Example:** `Device(config-dial-peer)# incoming uri via 200`	Configures the voice class with an inbound dial peer, so that it is matches against configured URI fields.

	Command or Action	Purpose
Step 9	**end** **Example:** `Device(config-dial-peer)# end`	Exits dial peer voice configuration mode and enters privileged EXEC mode.

Examples for Configuring an Inbound Dial Peer to Match on a URI

Matching Against IPv4 Address and VIA

CUBE is configured to use incoming dial-peer 101 for incoming SIP calls from remote SIP endpoint having an IP address of 10.10.10.1

```
voice class uri 201 sip
host ipv4:10.10.10.1

dial-peer voice 101 voip
 session protocol sipv2
 incoming uri via 201
```

Incoming INVITE that can be matched against this dial peer.

```
INVITE sip:123@1.2.3.4:5060 SIP/2.0
Via: SIP/2.0/TCP 10.10.10.1:5093;branch=z9hG4bK-17716-1-0
Via: SIP/2.0/TCP 10.10.14.20:5093;branch=z9hG4bK-28280-1-0
```

Matching Against DNS Name and VIA

CUBE is configured to use incoming dial-peer 102 for incoming SIP calls from sample.com or an IP address that represents one of the resolved IP address of sample.com.

```
voice class uri 202 sip
host dns:sample.com

dial-peer voice 101 voip
 session protocol sipv2
 incoming uri via 202
```

Incoming INVITE that can be matched against this dial peer.

```
INVITE sip:123@1.2.3.4:5060 SIP/2.0
Via: SIP/2.0/TCP sample.com;branch=z9hG4bK-17716-1-0
```

```
INVITE sip:123@1.2.3.4:5060 SIP/2.0
Via: SIP/2.0/TCP 10.10.10.25:5093;branch=z9hG4bK-17716-1-0
```

10.10.10.25 is a resolved IP address of sample.com.

Matching Against Multiple Attributes and VIA

CUBE is configured to use incoming dial-peer 103 for incoming SIP calls from xxx.yyy.com, abc.def.com and IP addresses 10.10.10.10, 10.9.10.11 and 10.10.10.10.

```
voice class uri 203 sip
  host dns:xxx.yyy.com
  host dns:abc.def.com
  host ipv4:10.10.10.10
  host ipv4:10.9.10.11
  host ipv4:10.10.10.10

dial-peer voice 103 voip
 session protocol sipv2
 incoming uri via 203
```

Incoming INVITE that can be matched against this dial peer.

```
INVITE sip:123@1.2.3.4:5060 SIP/2.0
Via: SIP/2.0/TCP 10.10.10.10:5093;branch=z9hG4bK-17716-1-0
Via: SIP/2.0/TCP 10.10.14.20:5093;branch=z9hG4bK-28280-1-0
```

10.10.10.25 is a resolved IP address of sample.com.