



# Domain-Based Routing Support on the Cisco UBE

First Published: June 15, 2011

Last Updated: July 22, 2011

The Domain-based routing feature provides support for matching an outbound dial peer based on the domain name or IP address provided in the request URI of the incoming SIP message or an inbound dial peer.

Domain-based routing enables for calls to be routed on the outbound dialpeer based on the domain name or IP address provided in the request Uniform Resource Identifier (URI) of incoming Session IP message.

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## Feature Information for Domain-Based Routing Support on the Cisco UBE

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 software image support. Cisco Feature Navigator enables you to determine which software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn> . An account on Cisco.com is not required.

Table 1: Feature Information for Domain-Based Routing Support on the Cisco UBE

Feature Name	Releases	Feature Information
Domain Based Routing Support on the Cisco UBE	15.2(1)T	The domain-based routing enables for calls to be routed on the outbound dial peer based on the domain name or IP address provided in the request URI (Uniform Resource Identifier) of incoming SIP message.  The following commands were introduced or modified: <b>call-route</b> , <b>voice-class sip call-route</b> .
Domain Based Routing Support on the Cisco UBE	Cisco IOS XE Release 3.8S	The domain-based routing enables for calls to be routed on the outbound dial peer based on the domain name or IP address provided in the request URI (Uniform Resource Identifier) of incoming SIP message.  The following commands were introduced or modified: <b>call-route</b> , <b>voice-class sip call-route</b> .

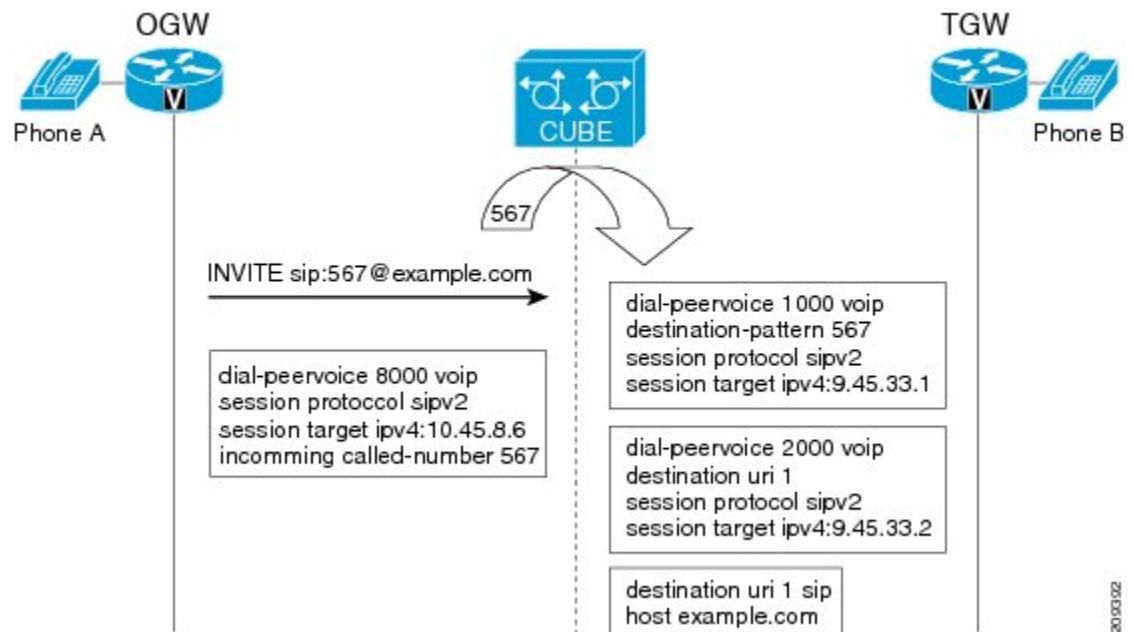
Any Internet Protocol (IP) addresses used in this document are not intended to be actual addresses. Any examples, command display output, and figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses in illustrative content is unintentional and coincidental. © 2011 Cisco Systems, Inc. All rights reserved

## Restrictions for Domain-Based Routing Support on the Cisco UBE

Domain-based routing support is available only for SIP-SIP call flows.

## Information About Domain-Based Routing Support on the Cisco UBE

When a dial peer has an application configured as a session application, then only the user parameter of the request URI is used and is sent from the inbound SIP SPI to the application. The session application performs a match on an outbound dial peer based on the user parameter of the request URI sent from the inbound dial peer. In the figure below, 567 is the user portion of the request-URI that is passed from the inbound dial peer to the application and the matching outbound dial-peer found is 1000.



With the introduction of the domain-based routing feature, all parameters including the domain name of the request URI will be sent to the application and the outbound dial peer can be matched with any parameter. In Figure 1, when the domain name example.com is used to match an outbound dial peer the resulting dial peer is 2000. The **call route url** command is used for configuring domain-based routing.



**Note** Whenever using the **call route url** command, apply translation rule at outbound dial-peer not in to call-route url.

# How to Configure Domain-Based Routing Support on the Cisco UBE

## Configuring Domain-Based Routing at Global Level

### SUMMARY STEPS

1. enable
2. configure terminal
3. voice service voip
4. sip
5. call-route url
6. exit

## DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b> <b>Example:</b> Device> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>
<b>Step 2</b>	<b>configure terminal</b> <b>Example:</b> Device# configure terminal	Enters global configuration mode.
<b>Step 3</b>	<b>voice service voip</b> <b>Example:</b> Device(config)# voice service voip	Enters voice service configuration mode.
<b>Step 4</b>	<b>sip</b> <b>Example:</b> Device(conf-voi-serv)# sip	Enters voice service SIP configuration mode.
<b>Step 5</b>	<b>call-route url</b> <b>Example:</b> Device(conf-serv-sip)# call-route url <b>Example:</b>	Routes calls based on the URL.
<b>Step 6</b>	<b>exit</b> <b>Example:</b> Device(conf-serv-sip)# exit	Exits the current mode.

## Configuring Domain-Based Routing at Dial Peer Level

## SUMMARY STEPS

1. enable
2. configure terminal
3. dial-peer voice *dial-peer tag* voip
4. voice-class sip call-route url
5. exit

## DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b> <b>Example:</b> Device> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>

	Command or Action	Purpose
Step 2	<b>configure terminal</b> <b>Example:</b> Device# <code>configure terminal</code>	Enters global configuration mode.
Step 3	<b>dial-peer voice <i>dial-peer tag</i> voip</b> <b>Example:</b> Device(config)# <code>dial-peer voice 2 voip</code>	Enter dial peer voice configuration mode.
Step 4	<b>voice-class sip call-route url</b> <b>Example:</b> Device(config-dial-peer)# <b>Example:</b> Routes calls based on the URL	
Step 5	<b>exit</b> <b>Example:</b> Device(config-dial-peer)# <code>exit</code>	Exits the current mode.

## Verifying and Troubleshooting Domain-Based Routing Support on the Cisco UBE

### SUMMARY STEPS

1. `enable`
2. `debug ccsip all`
3. `debug voip dialpeer inout`

### DETAILED STEPS

#### Step 1 `enable`

Enables privileged EXEC mode.

**Example:**

```
Device> enable
```

#### Step 2 `debug ccsip all`

Enables all SIP-related debugging.

**Example:**

```
Device# debug ccsip all
Received:
INVITE sip:5555555555@[2208:1:1:1:1:1:1:1:1118]:5060 SIP/2.0
Via: SIP/2.0/UDP [2208:1:1:1:1:1:1:1:1115]:5060;branch=z9hG4bK83AE3
Remote-Party-ID: <sip:222222222@[2208:1:1:1:1:1:1:1:1115]>;party=calling;screen=no;privacy=off
```



```
s=SIP Call
c=IN IP6 2208:1:1:1:1:1:1:1:1116
t=0 0
m=image 17278 udptl t38
c=IN IP6 2208:1:1:1:1:1:1:1:1116
a=T38FaxVersion:0
a=T38MaxBitRate:14400
a=T38FaxFillBitRemoval:0
a=T38FaxTranscodingMMR:0
a=T38FaxTranscodingJBIG:0
a=T38FaxRateManagement:transferredTCF
a=T38FaxMaxBuffer:200
a=T38FaxMaxDatagram:320
a=T38FaxUdpEC:t38UDPRedundancy"
```

### Step 3 debug voip dialpeer inout

The **debug ccsip all** and **debug voip dialpeer inout** commands can be entered in any order and any of the commands can be used for debugging depending on the requirement.

#### Example:

```
Displays information about the voice dial peers
Device# debug voip dialpeer inout
```

```
voip dialpeer inout debugging is on
```

The following event shows the calling and called numbers:

#### Example:

```
*May 1 19:32:11.731: //-1/6372E2598012/DPM/dpAssociateIncomingPeerCore:
  Calling Number=4085550111, Called Number=3600, Voice-Interface=0x0,
  Timeout=TRUE, Peer Encap Type=ENCAP_VOIP, Peer Search Type=PEER_TYPE_VOICE,
  Peer Info Type=DIALPEER_INFO_SPEECH
```

The following event shows the incoming dial peer:

#### Example:

```
*May 1 19:32:11.731: //-1/6372E2598012/DPM/dpAssociateIncomingPeerCore:
  Result=Success(0) after DP_MATCH_INCOMING_DNIS; Incoming Dial-peer=100
*May 1 19:32:11.731: //-1/6372E2598012/DPM/dpAssociateIncomingPeerCore:
  Calling Number=4085550111, Called Number=3600, Voice-Interface=0x0,
  Timeout=TRUE, Peer Encap Type=ENCAP_VOIP, Peer Search Type=PEER_TYPE_VOICE,
  Peer Info Type=DIALPEER_INFO_SPEECH
*May 1 19:32:11.731: //-1/6372E2598012/DPM/dpAssociateIncomingPeerCore:
  Result=Success(0) after DP_MATCH_INCOMING_DNIS; Incoming Dial-peer=100
*May 1 19:32:11.735: //-1/6372E2598012/DPM/dpMatchPeersCore:
  Calling Number=, Called Number=3600, Peer Info Type=DIALPEER_INFO_SPEECH
*May 1 19:32:11.735: //-1/6372E2598012/DPM/dpMatchPeersCore:
  Match Rule=DP_MATCH_DEST; Called Number=3600
*May 1 19:32:11.735: //-1/6372E2598012/DPM/dpMatchPeersCore:
  Result=Success(0) after DP_MATCH_DEST
*May 1 19:32:11.735: //-1/6372E2598012/DPM/dpMatchPeersMoreArg:
  Result=SUCCESS(0)
```

The following event shows the matched dial peers in the order of priority:

#### Example:

```
List of Matched Outgoing Dial-peer(s):
```

```
1: Dial-peer Tag=3600
2: Dial-peer Tag=36
```

---

## Configuration Examples for Domain-Based Routing Support on the Cisco UBE

### Example Configuring Domain-Based Routing Support on the Cisco UBE

The following example shows how to enable domain-based routing support on the Cisco UBE:

```
Device> enable
Device# configure terminal
Device(config)# voice service voip
Device(conf-voi-serv)# sip
Device(conf-serv-sip)# call-route url
Device(conf-serv-sip)# exit
Device(config)# dial-peer voice 2 voip
Device(config-dial-peer)# voice-class sip call-route url
Device(config-dial-peer)# exit
```