



# T.38 Fax Support on Cisco UBE for IPv6

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- [Finding Feature Information, page 1](#)
- [Information About T.38 Fax Support on Cisco UBE for IPv6, page 1](#)
- [How to Configure T.38 Fax Support on Cisco UBE for IPv6, page 2](#)
- [Configuration Examples for T.38 Fax Support on Cisco UBE for IPv6, page 5](#)
- [Additional References, page 6](#)
- [Feature Information for T.38 Fax Support on Cisco UBE for IPv6, page 7](#)

## Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see [Bug Search Tool](#) and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table at the end of this module.

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](http://www.cisco.com/go/cfn). An account on Cisco.com is not required.

## Information About T.38 Fax Support on Cisco UBE for IPv6

- [Cisco Unified Border Element in VoIPv6, page 1](#)

### Cisco Unified Border Element in VoIPv6

The Cisco Unified Border Element (UBE) feature adds IPv6 capability to existing VoIP features. This feature adds dual-stack support on voice gateways and MTP, IPv6 support for SIP trunks, and support for SCCP-controlled analog voice gateways. Real-time control protocol (RTCP) pass-through and T.38 fax over IPv6 have also been added to Cisco UBE.



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# How to Configure T.38 Fax Support on Cisco UBE for IPv6

- [Configuring IPv6 Support for Cisco UBE, page 2](#)
- [Configuring T.38 Fax Globally, page 3](#)

## Configuring IPv6 Support for Cisco UBE

Perform this task to configure IPv6 support for Cisco UBE.



### Note

In Cisco UBE, IPv4-only and IPv6-only modes are not supported when endpoints are dual-stack. In this case, Cisco UBE must also be configured in dual-stack mode.

>

### SUMMARY STEPS

1. `enable`
2. `configure terminal`
3. `sip-ua`
4. `protocol mode {ipv4 | ipv6 | dual-stack preference {ipv4 | ipv6}}`
5. `end`

### DETAILED STEPS

Command or Action	Purpose
<b>Step 1</b> <code>enable</code>  <b>Example:</b> Router> <code>enable</code>	Enables privileged EXEC mode. <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>
<b>Step 2</b> <code>configure terminal</code>  <b>Example:</b> Router# <code>configure terminal</code>	Enters global configuration mode.
<b>Step 3</b> <code>sip-ua</code>  <b>Example:</b> Router(config)# <code>sip-ua</code>	Enters SIP user-agent configuration mode.

Command or Action	Purpose
<p><b>Step 4</b> <code>protocol mode { ipv4   ipv6   dual-stack preference { ipv4   ipv6 } }</code></p> <p><b>Example:</b></p> <pre>Router(config-sip-ua)# protocol mode ipv6</pre>	<p>Configures the Cisco IOS SIP stack.</p> <ul style="list-style-type: none"> <li>• <b>protocol mode dual-stack preference { ipv4   ipv6 }</b>--Sets the IP preference when the <b>anat</b> command is configured.</li> <li>• <b>protocol mode { ipv4   ipv6 }</b>--Passes the IPv4 or IPv6 address in the SIP invite.</li> <li>• <b>protocol mode dual-stack</b> --Passes both the IPv4 addresses and the IPv6 addresses in the SIP invite and sets priority based on the far-end IP address.</li> </ul>
<p><b>Step 5</b> <code>end</code></p> <p><b>Example:</b></p> <pre>Router(config-sip-ua)# end</pre>	<p>Exits SIP user-agent configuration mode.</p>

## Configuring T.38 Fax Globally

### SUMMARY STEPS

1. enable
2. configure terminal
3. voice service voip
4. no ip address trusted authenticate
5. allow-connections { h323 | sip } to { h323 | sip }
6. fax protocol t38 [nse [force]] [version { 0 | 3 }] [ls-redundancy value [hs-redundancy value]] [fallback { cisco | none | pass-through { g711ulaw | g711alaw } }]
7. sip
8. bind control source-interface *type number*
9. bind media source-interface *type number*
10. no anat
11. end

### DETAILED STEPS

Command or Action	Purpose
<p><b>Step 1</b> <code>enable</code></p> <p><b>Example:</b></p> <pre>Router&gt; enable</pre>	<p>Enables privileged EXEC mode.</p> <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> <pre>Router# configure terminal</pre>	Enters global configuration mode.
Step 3	<b>voice service voip</b>  <b>Example:</b> <pre>Router(config)# voice service voip</pre>	Enters voice service configuration mode.
Step 4	<b>no ip address trusted authenticate</b>  <b>Example:</b> <pre>Router(conf-voi-serv)# no ip address trusted authenticate</pre>	Disables the IP address trusted authentication feature for incoming H.323 or SIP trunk calls for toll-fraud prevention.
Step 5	<b>allow-connections {h323   sip} to {h323   sip}</b>  <b>Example:</b> <pre>Router(conf-voi-serv)# allow-connections sip to sip</pre>	Allows connections between specific types of endpoints in a VoIP network.
Step 6	<b>fax protocol t38 [nse [force]] [version {0   3}] [ls-redundancy value [hs-redundancy value]] [fallback {cisco   none   pass-through} {g711ulaw   g711alaw}]</b>  <b>Example:</b> <pre>Router(conf-voi-serv)# fax protocol t38 version 0 ls- redundancy 0 hs-redundancy 0 fallback cisco</pre>	Specifies the global default ITU-T T.38 standard fax protocol to be used for all VoIP dial peers.
Step 7	<b>sip</b>  <b>Example:</b> <pre>Router(conf-voi-serv)# sip</pre>	Enters SIP configuration mode.
Step 8	<b>bind control source-interface type number</b>  <b>Example:</b> <pre>Router(conf-serv-sip)# bind control source-interface GigabitEthernet 0/0</pre>	Binds Session Initiation Protocol (SIP) signaling packets and specifies an interface as the source address of SIP packets.



```

Content-Disposition: session;handling=required
Content-Length: 495
v=0
o=CiscoSystemsSIP-GW-UserAgent 7880 7375 IN IP6 2001:DB8:1:1:1:1:1:1115
s=SIP Call
c=IN IP6 2001:DB8:1:1:1:1:1:1115
t=0 0
a=group:ANAT 1 2
m=audio 17836 RTP/AVP 0 101 19
c=IN IP6 2001:DB8:1:1:1:1:1:1115
a=mid:1
a=rtpmap:0 PCMU/8000
a=rtpmap:101 telephone-event/8000
a=fmtp:101 0-16
a=rtpmap:19 CN/8000
a=ptime:20
m=audio 18938 RTP/AVP 0 101 19
c=IN IP4 9.45.36.111
a=mid:2
a=rtpmap:0 PCMU/8000
a=rtpmap:101 telephone-event/8000
a=fmtp:101 0-16
a=rtpmap:19 CN/8000
a=ptime:20
"Received:
INVITE sip:222222222@[2001:DB8:1:1:1:1:1:1117]:5060 SIP/2.0
Via: SIP/2.0/UDP [2001:DB8:1:1:1:1:1:1116]:5060;branch=z9hG4bK38ACE
Remote-Party-ID: <sip:
555555555@[2001:DB8:1:1:1:1:1:1116]>;party=calling;screen=no;privacy=off
From: <sip:555555555@[2001:DB8:1:1:1:1:1:1116]>;tag=4FE8C9C-1630
To: <sip:222222222@[2001:DB8:1:1:1:1:1:1117]>;tag=1001045C-992
Date: Thu, 10 Feb 2011 12:15:08 GMT
Call-ID: 5DEDB77E-ADC11208-808BE770-8FCACF34@2001:DB8:1:1:1:1:1:1117
Supported: 100rel,timer,resource-priority,replaces,sdp-anat
Min-SE: 1800
Cisco-Guid: 1432849350-0876876256-2424621905-3925258737
User-Agent: Cisco-SIPGateway/IOS-15.1(3.14.2)PIA16
Allow: INVITE, OPTIONS, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY, INFO,
REGISTER
CSeq: 101 INVITE
Max-Forwards: 70
Timestamp: 1297340108
Contact: <sip:555555555@[2001:DB8:1:1:1:1:1:1116]:5060>
Expires: 180
Allow-Events: telephone-event
Content-Type: application/sdp
Content-Length: 424
v=0
o=CiscoSystemsSIP-GW-UserAgent 8002 7261 IN IP6 2001:DB8:1:1:1:1:1:1116
s=SIP Call
c=IN IP6 2001:DB8:1:1:1:1:1:1116
t=0 0
m=image 17278 udpt1 t38
c=IN IP6 2001:DB8:1:1:1:1:1:1116
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"

```

## Additional References

**Related Documents**

Related Topic	Document Title
IPv6 addressing and connectivity	<i>IPv6 Configuration Guide</i>
Cisco IOS commands	<a href="#">Cisco IOS Master Command List, All Releases</a>
Cisco IOS IPv6 commands	<a href="#">Cisco IOS IPv6 Command Reference</a>
Cisco IOS IPv6 features	<a href="#">Cisco IOS IPv6 Feature Mapping</a>

**Standards and RFCs**

Standard/RFC	Title
RFCs for IPv6	<a href="#">IPv6 RFCs</a>

**Technical Assistance**

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	<a href="http://www.cisco.com/cisco/web/support/index.html">http://www.cisco.com/cisco/web/support/index.html</a>

## Feature Information for T.38 Fax Support on Cisco UBE for IPv6

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.

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**Table 1**      **Feature Information for T.38 Fax Support on Cisco UBE for IPv6**

<b>Feature Name</b>	<b>Releases</b>	<b>Feature Information</b>
T.38 Fax Support on Cisco UBE for IPv6	15.2(1)T	IPv6 supports this feature.

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