STUN Support

Table of Contents

The Session Traversal Utilities for NAT (STUN) prococol is used in Network Address Translation (NAT) traversal for real-time voice, video, messaging, and related interactive IP application communications. This light-weight, client-server protocol allows applications passing through a NAT to obtain the public IP address for the UDP connections the application uses to connect to remote hosts.

STUN support is provided at the SIP connector level, using the STUN for Java project. The STUN for Java project provides a Java implementation of the STUN Protocol (RFC 3489), which allows each SIP connector to select whether it should use STUN to discover a public IP address, and then use this address in the SIP messages sent through the connector.

To make a SIP connector STUN-enabled, three attributes must be appended to the child element in the *server.xml* or child element in *standalone-sip.xml* file. The properties are:

- useStun="true"

  Enables STUN support for this connector. Ensure that the `ipAddress` attribute is not set to `127.0.0.1`.

- stunServerAddress="<Public_STUN_Server>"

  STUN server address used to discover the public IP address of this SIP Connector. See Public STUN Servers for a suggested list of public STUN servers.

- stunServerPort="3478"

  STUN server port of the STUN server used in the `stunServerAddress` attribute. Both TCP and UDP protocols communicate with STUN servers using this port only.

> A complete list of available SIP connector attributes and their descriptions is located in the Configuring SIP Connectors and Bindings section of this guide.

A number of public STUN servers are available, and can be specified in the `stunServerAddress`. Depending on the router firmware used, the STUN reply packets' MAPPED_ADDRESS may be changed to the router's WAN port. To alleviate this problem, certain public STUN servers provide XOR_MAPPED_ADDRESS support. Public STUN Servers provides a selection of public STUN servers.

Table 1. Public STUN Servers

Server Address	XOR Support	DNS SRV Record
stun.ekiga.net	Yes	Yes
stun.fwdnet.net	No	Yes
stun.ideasip.com	No	Yes
stun01.sipphone.com	Yes	No
stun.softjoys.com	No	No
stun.voipbuster.com	No	No

Server Address	XOR Support	DNS SRV Record
stun.voxgratia.org	No	No
stun.xten.com	Yes	Yes
stunserver.org	Yes	Yes

For more information about NAT traversal best practices, refer to NAT Traversal..