

STUN Support

The Session Traversal Utilities for NAT (STUN) protocol 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 |
| stun.voxgratia.org | No | No |

| Server Address | XOR Support | DNS SRV Record |
|----------------|-------------|----------------|
| stun.xten.com | Yes | Yes |
| stunserver.org | Yes | Yes |



For more information about NAT traversal best practices, refer to [NAT Traversal](#)..