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## MAXCS Release 7.0

### Application Note: VoIP NAT Test Tool

Intended audience:  
AltiGen Authorized Partners

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## About This Guide

This guide explains how to use AltiGen's VoIP/NAT (Network Address Translator) test tool to assess whether a customer's NAT device is compatible with the MaxCS system's NAT Traversal scheme.

MaxCS will support IP phones behind NAT with most NAT/Firewall devices. If an IP phone does not work on a particular NAT, one of the following issues is likely the cause of the conflict:

- The NAT device is blocking outbound traffic (in this scenario, check the NAT device settings and firewall settings)
- The NAT device is interpreting the SIP REGISTER and other SIP messages as an attack (in this scenario, check the NAT device settings, firewall settings, and security settings)
- The NAT device is performing SIP ALG on port 10060 and is causing a conflict with the MaxCS system's SIP ALG (Currently, only the EdgeMarc implementation SIP ALG is certified and supported)
- The NAT device's UDP session expires within 60 seconds (Check for 'consistent NAT' on SonicWall firewalls)
- The NAT device has some other issues with users browsing the Internet

This test tool can be used both before deployment, to check for potential NAT conflicts, and as a troubleshooting tool post-deployment.

## Related Documents

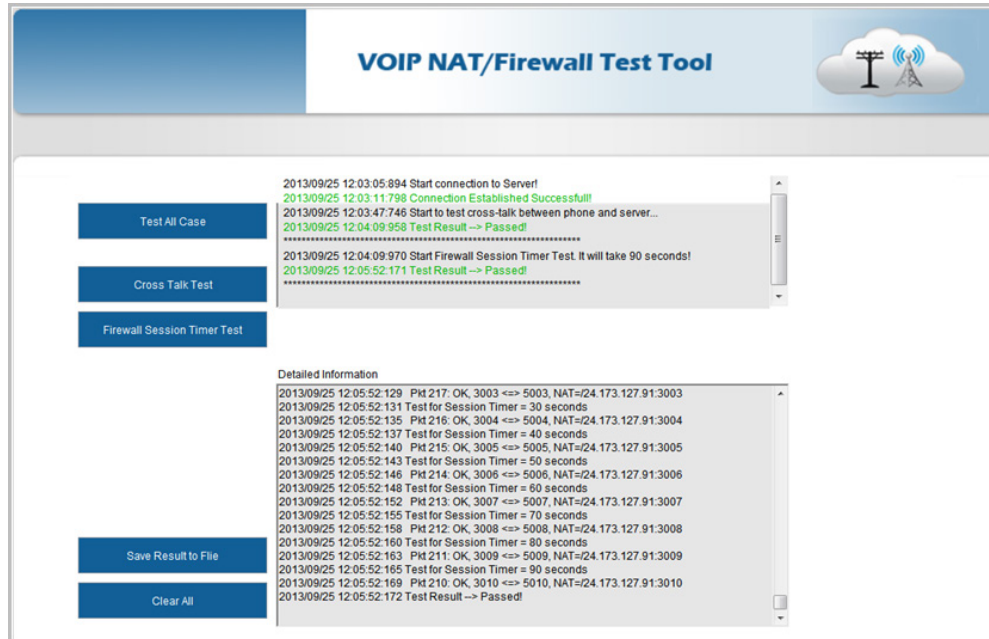
For instructions on deploying an EdgeMarc SBC for remote survivability, refer to the document, *Application Note: Remote Survivability with EdgeMarc SBC and AudioCodes MP-118*. This guide is available from your AltiGen representative.

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## Introduction

NAT is network protocol used in IPv4 networks that allows multiple devices to connect to a public network using the same public IPv4 address. NAT is included with routers and often with corporate firewalls, to map internal IP address to and from external IP address.

AltiGen's VoIP/NAT test tool is a Java applet that checks the server to evaluate whether the customer's NAT device is compatible with the MaxCS system's NAT traversal scheme.



The tool includes the following tests:

- **Cross-Talk test**—This test sends UDP packets to the server by mapping multiple routes through the NAT device. It checks whether the server responds to the correct ports for the applet.
- **Firewall Session Timer test**—This test verifies the firewall’s UDP session timer. It tests up to 90 seconds.
- **SIP ALG Detection test**—This test detects if the NAT device changes SIP packets on ports 5060 and/or port 10060. If the SIP Application Layer Gateway (ALG) is detected on port 10060, the tool displays a message that NAT traversal may not work well on this NAT device (unless the device is an EdgeMarc SBC that has been configured according to AltiGen’s guidelines, which are provided in the document, *Application Note: Remote Survivability with EdgeMarc SBC and AudioCodes MP-118.*).

## Testing NAT Compatibility

This section describes the steps to follow to test the customer’s NAT device.

**Note:** If the customer’s MaxCS 7.0 server is behind a NAT/firewall, shut down all MaxCS services and shut down all SIP clients that use port 5060 and port 10060 prior to running the tests.

### Prerequisites

Follow these steps before you begin the tests:

- 1 Make sure that the customer’s firewall, anti-virus programs, or any other applications do not block the following network ports; the NAT Test tool uses these ports:
  - 3000 - 3010
  - 5000 - 5010
  - 8080



- 2 Close all browsers and any Java Console (to make sure that only one instance of the Java applet is running).

## Using the NAT Test Tool

Follow these steps to test NAT compatibility:

- 1 Open a browser and navigate to <http://nat.atgncloud.com:8080/NatTest/test.htm>. If a pop-up asks whether you want to run the application, click **Run**.
- 2 If more than one IP address is detected on the system, select the IP address that is in the same network as the customer's AltiGen or Polycom IP phones.
- 3 When the tool detects the NAT/Firewall's WAN IP address, verify that the NAT public address is correct.
- 4 Click **Start Testing**. This performs all tests.

## Interpreting the Test Results

For the Cross-Talk test and the Firewall Session Timer test, the tool will show either *Passed* or *Failed*.

For the SIP ALG test, the tool shows whether or not the SIP ALG was detected:

- If the NAT is an EdgeMarc SBC that was configured according to AltiGen specifications, the SIP ALG will be detected in both port 5060 and port 10060. Warning text will appear in red; disregard this warning message. If SIP ALG is detected on port 5060, the configuration should still work, because MaxCS SIP only uses port 10060.
- If the NAT is not an EdgeMarc SBC and SIP ALG is detected on port 10060, SIP conflicts can occur. Check with the customer's NAT/Firewall vendor to turn off SIP ALG on port 10060.

To see additional details, check the **Advanced View** checkbox. This also allows you to run single tests independently from one another.

## Saving and Clearing the Log File

To save the log file (so that you can send the log file to AltiGen Technical Support), click **Save Results to File** after you run the tests.

The VoIP NAT Test tool appends test results to the end of the file each time you run tests; to clear the log file and clear the display, click **Clear All** after you run the tests.

## AltiGen Technical Support

AltiGen provides technical support to Authorized AltiGen Partners and distributors only. End user customers, please contact your Authorized AltiGen Partner for technical support.

Authorized AltiGen Partners and distributors may contact AltiGen technical support by the following methods:

- You may request technical support on AltiGen's Partner web site, at <https://partner.altigen.com>. Open a case on this site. A Technical Support representative will respond within one business day.
- Call 888-ALTI GEN, option 5, or 408-597-9000, option 5, and follow the prompts. Your call will be answered by one of AltiGen's Technical Support Representatives or routed to the Technical Support Message Center if no one is available to answer your call.



Technical support hours are 5:00 a.m. to 5:00 p.m., PT, Monday through Friday, except holidays.

If all representatives are busy, your call will be returned in the order it was received, within four hours under normal circumstances. Outside AltiGen business hours, only urgent calls will be returned on the same day (within one hour). Non-urgent calls will be returned on the next business day.

Please be ready to supply the following information:

- Partner ID
- AltiGen Certified Engineer ID
- Product serial number
- AltiWare or MAXCS version number
- Number and types of boards in the system
- Server model
- The telephone number where you can be reached