

# FREQUENTLY ASKED QUESTIONS

ETERNITY PE/GE/ME/LE

What  
When  
Which  
Where  
How  
Who  
Why



**Date:** 16<sup>th</sup> June, 2015

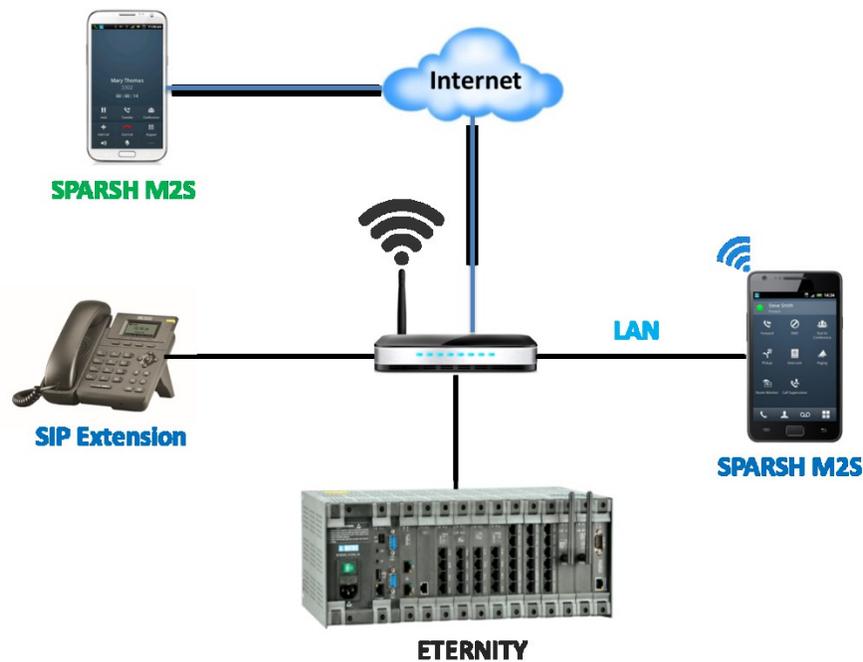
**Version:** V1R1

**Author:** Jubin Aghara

## How to troubleshoot issues in 'Behind the NAT VoIP' scenarios?

While registering a SIP Extension/Trunk in a PBX behind NAT, we often face certain issues such as:

- Unsuccessful Registration of SIP Extension
- One Way or No-speech in Peer to Peer and Proxy Calling



### What is SIP ALG?

- SIP ALG (or SIP Transformation) performs the SIP Transformation on Inbound and Outbound SIP Packets in various Headers.
- SIP ALG changes the Port, Connection Information IP which leads the Server or Client to respond incorrectly to infinite destination addresses.
- To avoid this, it is very important that your Firewall must not perform SIP Transformation and for Firewall to handle SIP traffic properly SIP ALG must be disabled.

## **TROUBLESHOOTING STEPS FOR THE BEHIND NAT SCENARIOS:**

### **1. Prerequisites for behind the Router/Firewall cases**

- SIP ALG Must be disabled in Firewall/Router.
- The Firewall must be turned off on inbound and outbound packets.
- Disable Stateful Packet Inspection SPI if applicable.

### **2. Change the SIP Ports**

- Change the SIP TCP, UDP, TLS and RTP ports to higher ranges (above 40,000).
- By changing the Port to Higher Range, Firewall/Router will not inspect the SIP Port in most of the cases and voice communication will work properly.

### **3. Use SIP over TLS**

- Using SIP over TLS, it is observed that most of the Firewall will not be able to modify the SIP Payload because TLS data is encrypted. Client should support the SIP over TLS.
- MATRIX SPARSH M2S supports TLS Transport, it is recommended to use TLS to get rid of SIP Transformation.

**Note:** Some Firewalls have the capability to transform the TLS packets, in such cases you are required to disable SIP ALG.

Following is the list of Routers in which SIP ALG is enabled by default (as tested by Matrix Comsec) and you must disable it with the help of technical support of respective Router manufacturers for proper VoIP communication and SIP Extension Registration.

Sr.No	Router or Firewall
1	Fortinet/FortiGate
2	Cyberoam
3	Cisco
4	D-Link DIR-655 etc.
5	Linksys
6	Sonic-Wall
7	Netgear

-  
For more information, contact  
Matrix Technical Training Team  
[Training@MatrixComSec.com](mailto:Training@MatrixComSec.com)

**Disclaimer:** The information contained in this e-mail and/or attachment may contain confidential or privileged information. Unauthorized use, disclosure or copying is strictly prohibited and may constitute unlawful act and can possibly attract legal action, civil and/or criminal. The contents of this message need not necessarily reflect or endorse the views of Matrix Comsec on any subject matter. Any action taken or omitted on this message is not entirely at your risk and the originator of this neither message nor does Matrix Comsec take any responsibility or liability towards the same. If you are not the intended recipient, please notify us immediately and permanently delete the message.