

VoIP FAQ

Q. What does Biamp support with respect to VoIP?

- A. Currently the only VoIP vendors that Applications Engineering is able to support are those listed in the table on the support page at <https://support.biamp.com/VoIP>.

These are systems for which Biamp Systems has been able to document the configuration process and is based on extensive in-house testing or certification testing with said provider. At this time the list is composed of Cisco, Avaya, Mitel, ShoreTel, and Lync/Skype for Business (check the web page for supported versions and updates).

Q. What kind of VoIP providers are we not able to provide post-sales support for?

- A. We aren't able to test/certify every system available, so any system not listed on the webpage above is not eligible for post-sales support from Biamp Applications Engineering. This includes all cloud-based systems at this time.

Q. If the VoIP system that I am trying to integrate with is not on the above list, does that mean that Tesira won't work?

- A. Not necessarily.

Biamp has always supported SIP-based VoIP telephony. If a phone system has the ability to support third party SIP clients, then the Tesira device may work with them as long as the server that we are registering with is SIP v2.0 compliant. SIP v2.0 is an internet protocol that has been standardized by the Internet Engineering Task Force (IETF); anyone can create a device that *should* be able to communicate successfully with other devices that are SIP v2.0 compliant.

Realistically, a VoIP system that's not on the list may require more interaction with the customer to ensure that the Tesira system works for them (and continues to do so).

Q. If I can get the Tesira device to register in my office, does that mean it will work at the customer site?

- A. Not necessarily.

There are a number of factors that contribute to the correct operation of the VoIP interface, the most significant of these is the firewall that's located at each site. Almost every firewall is configured differently (different manufacturer, different settings, different encryption capabilities, different methods of dealing with broadcast storms, etc.), and IT managers have different opinions regarding the requirements to keep their network infrastructure secure. Thus, there may be additional steps necessary to get the VoIP interface to work properly.

The most common issue encountered when the VoIP interface traverses a firewall is that the Real Time Protocol (RTP) streams get blocked from passing back through the firewall to the VoIP interface. The typical symptoms include the VoIP interface registering with the server correctly, but when a call is placed there is no audio present. The call appears to have connected correctly, but you won't be able to hear anything in the local room from the VoIP interface.

The primary cause of this condition is Network Address Translation (NAT) creating a slightly more complicated situation for the network data to reach the correct location.

Q. How do we solve firewall and NAT traversal issues?

A. This is the most complicated portion of the cloud-based VoIP support. There are a number of firewall and NAT traversal protocols that are available, and each of them handles NAT traversal in a slightly different manner. The most common are:

- Session Traversal Utilities for NAT (STUN)
- Traversal Using Relays around NAT (TURN)
- Interactive Connectivity Establishment (ICE)

The only one of these protocols that Tesira supports is STUN version 1.

Q. When should I verify functionality and interoperability of Tesira with the cloud-based VoIP system?

A. Interoperability testing should always occur prior to when it is purchased.

Overlooking or skipping this step typically leads to customer frustrations, lost project time, and failure to meet project deadlines.

Q. Who should I get involved to verify whether or not a Tesira product will work with the customer's cloud-based system?

A. The people that should be involved to get a cloud environment verified includes:

- A representative from the cloud VoIP provider*
- A member of the customer's network information technology administrative team*
- A VoIP-trained technician from the integrator
- In a pre-sales situation, Biamp has a Field Sales Engineer to assist with interoperability testing

Q. Where should this testing occur?

A. It's critical to perform this testing at the customer's site.

Every firewall is configured slightly differently, so if the testing is done at a different site, the results will be different as well. Therefore the Tesira VoIP interface may not function as expected when it's finally installed at the customer's facility, behind the customer's firewall.

Q. Does Biamp have a suggested process when integrating with cloud-based VoIP systems?

A. Yes. First you should carefully consider the information above, then follow these steps:

1. Hold a conference call with:
 - A representative from the cloud VoIP provider*
 - A member of the customer's network information technology administrative team*
 - A VoIP-trained technician from the integrator
 - A Biamp Field Sales Engineer
2. The integrator and customer should establish and document expectations regarding the features that will be available, and when the testing will take place. This should include a nominal service fee that could be deducted from the final invoice at the end of the project.
3. Perform the testing at the customer's location in the exact environment that the final installation will be installed into.
4. Receive customer sign-off on the established expectations in step 2.
5. Proceed with the installation.

*These members of the team may be direct employees of the customer or employees of a third party vendor.