VoIP Assessments

The basic VoIP Assessment is made up of a series of tests to the selected targets of your choosing. These tests vary the call load, and enable/disable the QoS settings to predict the performance of voice over those paths. Each individual test in a basic voice assessment is similar to a diagnostic test on a chosen path. Once a basic voice assessment is completed, the results can be accessed on PathView Cloud. From here, a report containing an executive summary about your network's suitability for voice traffic can be generated for download.

VoIP Assessment Steps

Plan your Assessment
You need to ask why you are running the assessment. Is this a pre or post deployment Assessment?

- Pre-Deployment Assessment - You can target existing network elements to mimic the behavior of VoIP on a network as a way of testing readiness. This is as simple as targeting a server on the same switch the real voice server would be deployed on and targeting computers across the estate to mimic single call volume out to multiple handsets. In this way you will know if the network is ready to go before you purchase any VoIP equipment.

- Post-Deployment Assessment - After a VoIP system has been deployed you may find the network has undergone changes such as new VLANS, new switches, new network drops, and new reliance on 3rd party hosted services. Voice Assessments will help test the new network configuration so you can 'sign off' on a service into production.

If you wish to perform a multisite VoIP assessment you could deploy one or more Tier3 NetTools devices at each site. This is best practice as you will have a localized view within each LAN and you will still be afforded the ability to test across the WAN (Point To Point or VPN) and also out to any hosted VoIP servers in use.

Deploy your Tier3 NetTools Device(s)
Once you have decided where to deploy your Tier3 NetTools Device(s) you will need to configure them for the network.

You will need to identify:

- Appliance Configuration File - You get this from Admin->Manage Appliances within PathView Cloud
- IP setup required (DHCP or static)
- Gateway address (in case of static IP)
- Subnet mask (in case of static IP)
- DNS server addresses (in case of static IP)
- VLAN Interface configuration information (as configured on switch port)
- Multiple interface IP/VLAN configuration
- Tier3 Technologies can provide you with a quick set-up checklist to facilitate this process
Define Your Targets
It's important to have an idea of the network topology so you can classify your assessment targets appropriately. Remember, not everything makes a good target. The goal should be to understand VoIP performance along the paths the VoIP data will take. This means you should think about targeting to good targets across the same layer 2 infrastructure used for the production VoIP environment. In most cases all servers & workstations are targeted.

- **Pre-Deployment Assessment** - Choose one or more servers and set it as your 'Voice Server' in the Assessment. Multiple call loads will be sent to these Servers. Choose multiple computers to set them as 'Voice Handset' in the Assessment. Single call load will be sent to these devices. Voila – you will now know if you can deploy!
- **Post-Deployment Assessment** - After a VoIP system has been deployed you will choose your voice server(s) set as 'Voice Server' in the Assessment. Multiple call loads will be sent to these Servers. Choose multiple handsets to set them as 'Voice Handset' in the Assessment. Single call loads will be sent to these devices.

Add Your Targets and Start Your Assessment
You can do a discovery from one or more Tier3 NetTools Devices, or add from monitored paths to save time. To begin a VoIP assessment, you are required to select the paths you wish to test. There are three methods for selecting paths:

- **Discover Targets**: Discovering targets is the same method used when adding paths in PathView Cloud; PathView Cloud finds other nodes in your network and allow you to select them as a path for monitoring/testing.
- **Add from Monitored Paths**: Adding from monitored paths allows you to select paths that are already monitored using PathView Cloud.
- **Add New Path**: Adding a new path allows you to create a path that is not currently monitored in PathView Cloud. For the new path, you can selected the appliance, appliance interface, target, and target type

Review Your Assessment and Run Reports
There are a wide variety of reports available, using Tier3 NetTools Devices, depending on the scope and needs of your assessment. Here is a sample Overview Report:
VoIP Assessment Strategy – Single Site
In the example above the local voice server and the hosted voice server could be targeted as 'Voice Server' in the VoIP Assessment. Multiple call loads will be sent to these Servers. Multiple handsets would be set as 'Voice Handset' in the Assessment. Single call loads will be sent to these devices. You will now see performance levels of the production VoIP deployment across any new VoIP infrastructure. Location of Tier3 NetTools Device is circled:
**VoIP Assessment Strategy – Multiple Sites**
If you are testing across multiple sites connected via a point to point link, VPN, etc., you should deploy a Tier3 NetTools device within each local LAN. This will allow you to see local VoIP LAN performance, as well as site to site VoIP performance. In the example below, the local voice server and the hosted voice server could be targeted as 'Voice Server' in the VoIP Assessment. You could also target the far site voice server as 'Voice Server'. Multiple call loads will be sent to these Servers. Multiple handsets would be set as 'Voice Handset' in the Assessment. Single call loads will be sent to these devices. You will be able to see local, site-to-site, and hosted handoff VoIP performance. Locations of Tier3 NetTools Devices are circled: