Scenario

You are seeing in Quicklook a loss of connectivity to ShoreTel switches.  You wish to verify switch-to-switch connectivity is good.

More Information

* The ports being used for an LSP ping is 5440
* There are other ports that must be open for proper communication, **UDP ports 5440 - 5446 should be open** for proper communication between switches

Resolution

In order to get gain access to the switches you will need to start a Telnet session to the HQ SG switch and the Remote SG switch:

* Open up a command prompt on the ShoreTel Server or ShoreTel DVM
* Change the directory to the drive that shoretel is installed
* Change the directory to: Program Files\Shoreline Communications\Shoreware Server>
* Enter >ipbxctl -telneton (8.0 and above you will be prompted for a password which by default is ShoreTel)
* Press Enter to execute
* Type start telnet
* Press Enter to execute
* A telnet session will open requesting a login

   **login - anonymous
    password - ShoreTel (case sensitive)**

* If you are not presented with a vxworks command prompt yo will need to enter gotoshell

Running the Test

Example system-

HQ has a SG switch with an IP address of 10.10.254.152
Remote site has an SG switch with an IP address of 192.168.6.49

* Once telnet sessions are open on each switch to use for testing, you will want to enter the command ​>lsp\_debug\_level=4 in both switches.
* Next you will want to run the command >lsp\_ping "<IP Address>", this needs to be the IP address of the other switch. So following our example the command entered in the telnet session for the 192.168.6.49 switch would look like this: >**lsp\_ping "10.10.254.152"**
* Using the example above a successful ping from the Remote to the HQ switch will look like the following

You will see a send message from the remote switch
"lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152"

HQ switch receiving the ping from the remote switch
"recv\_message len 1147, code LSP\_PING 192.168.6.49"

HQ sending an acknowledgment
"lsp\_send\_message 0x0f06.LSP\_PING\_ACK 192.168.6.49"

Remote site receiving the acknowledgement form the HQ switch
"recv\_message len 702, code LSP\_PING\_ACK 10.10.254.152"

* Often times when there is a connectivity issue, you will see the send from the initiating switch with the receive and acknowledgement by the receiving switch, but the**initiating switch will never receive the acknowledgement**. This would point to a network error. This would look like the following

Remote Switch - sending the lsp ping
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152
lsp\_send\_message 0x0f06.LSP\_PING 10.10.254.152

HQ Switch - receiving the lsp ping
recv\_message len 1147, code LSP\_PING 192.168.6.49
lsp\_send\_message 0x0f06.LSP\_PING\_ACK 192.168.6.49
recv\_message len 1149, code LSP\_PING 192.168.6.49
lsp\_send\_message 0x0f06.LSP\_PING\_ACK 192.168.6.49
recv\_message len 1150, code LSP\_PING 192.168.6.49
lsp\_send\_message 0x0f06.LSP\_PING\_ACK 192.168.6.49
recv\_message len 1151, code LSP\_PING 192.168.6.49
lsp\_send\_message 0x0f06.LSP\_PING\_ACK 192.168.6.49
recv\_message len 1153, code LSP\_PING 192.168.6.49
lsp\_send\_message 0x0f06.LSP\_PING\_ACK 192.168.6.49
recv\_message len 1154, code LSP\_PING 192.168.6.49

As you can see the Remote never receives the expected acknowledgement form the HQ server

At the end of an lsp ping you will also receive a report of the packets being sent. It will look like this:

1000 missing packets
0 extraneous packets, with 0 duplicated sequences
0 out of order packets
0 bad length packets
0 bad data packets
Round Trip Times
-1 ms min
0 ms max
0 ms average

**NOTE:** This shows that of the default 1000 packets sent 100% were missing. This would be another indicator there is a possible network issue causing communication disruption between the SG switches.

To turn off debugging type **dbg "clear"**