



Trusted communication - anywhere

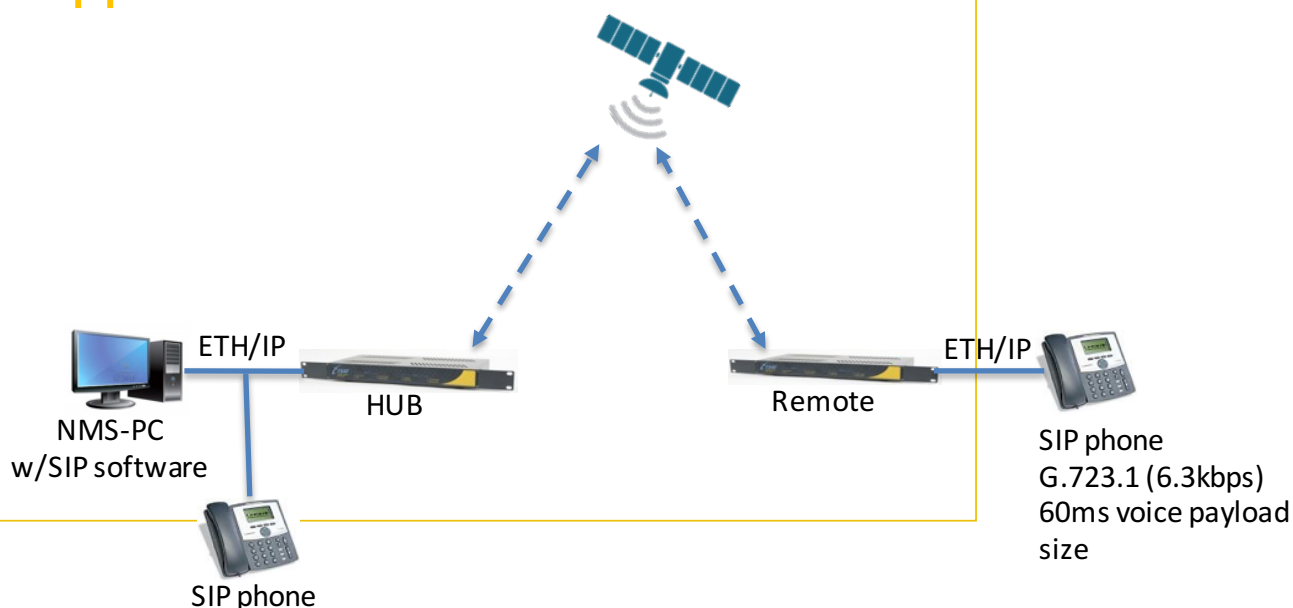


VoIP over TSAT-3000

Application note

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Occasional voice

Voice calls over a TSAT network is fully supported. A typical VoIP call requires 90kbps of IP bandwidth which in a SCADA context is quite a significant amount of bandwidth considering that many SCADA networks have gross bandwidth requirements of less than 32kbps. Adding 90kbps of additional bandwidth to support an occasional call is therefore a costly proposition.

VoIP codec

By selecting to use the G.723.1 (6.3kbps) codec, you achieve good quality voice with less than 20kbps of IP bandwidth. A 78% savings compared to the more common and less efficient VoIP codecs.

Dynamic bandwidth allocation

To minimize bandwidth requirements even further, TSAT employs a highly efficient dynamic bandwidth allocation scheme. Normally a given remote is allocated just enough bandwidth to support the required SCADA traffic.

However, when a call from a remote is initiated, TSAT's slot request and reservation scheme, assigns additional slots (bandwidth on demand) to that specific remote and the call is enabled. The additional bandwidth may be taken from capacity allocated to other remotes, or surplus capacity (pool) assigned to the network for making a voice call. When a call is completed the allocated bandwidth is released and available for other remotes to use.

Call routing

The TekSip proxy software is installed on the NMS PC and enables the use of simple SIP phones, and facilitates the routing of calls within the TSAT network. VoIP calls outside of TSAT require the use of a VoIP Gateway. Please consult TSAT for same.



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