ProSBC™ by TelcoBridges

# Case Study

## X2NSAT DELIVERS SATELLITE BUSINESS CONTINUITY WITH PROSBC

X2nSat extending your reach


## Summary

- X2nSat is a network integrator specialized in satellite communications for business
- As part of their services, they provide voice connectivity business continuity
- To improve efficiency, X2nSat uses low-bit-rate codecs for the satellite links
- They selected ProSBC with the optional Transcoding Hardware for their Satellite Gateway sites
- Advanced call routing and APIs make new customer provisioning more efficient




"Voice compression improves the efficiency of the satellite link, but we must transcode back to G.711 before passing traffic to the SIP trunk providers"

**Venkata Yanamandra,**
project engineer at X2nSat Inc.

## Background

X2nSat Inc. started in 1997 as a network integrator specialized in satellite communications for business. A key area of focus is providing business continuity for business and remote location connectivity. Industries that most benefit include healthcare, utilities, oil & gas, enterprise, retail, distribution, and telecommunications. With headquarters and a primary ground station in Petaluma, CA, the company also has a second geo-redundant ground station in Las Cruces, NM.

Utilizing both low earth orbit (LEO) and geosynchronous orbit (GEO) satellites, X2nSat provides voice and data connectivity across North, Central and Western South America.

"We have hundreds of network access points and are working toward automating configuration"

**Venkata**

## Challenge

With business growth and increasing demand for voice business continuity, an effort was initiated by X2nSat to re-evaluate an existing session border controller solution, searching for a more cost-effective alternative that met both feature and performance requirements for growth.

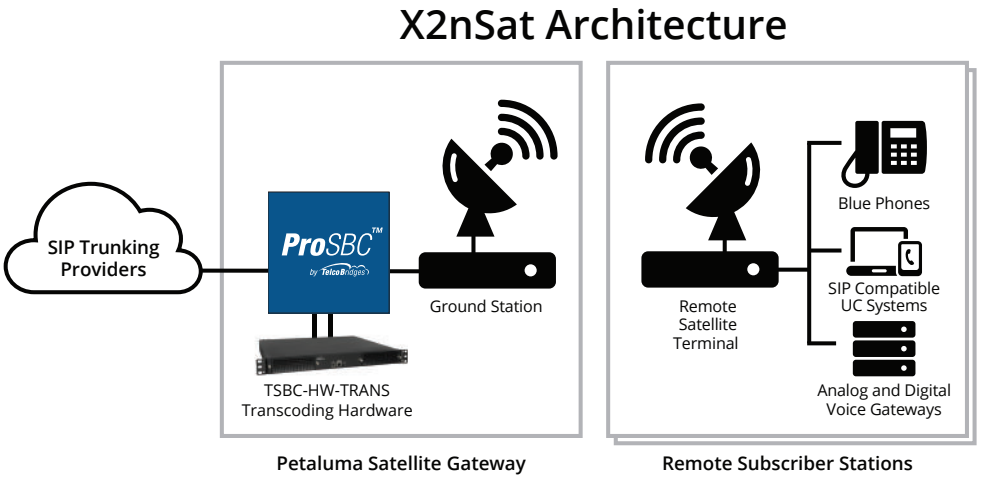
One important requirement was support for voice transcoding, allowing the use of G.723 or G.729 voice compression for traffic traversing the satellite link, increasing the efficiency of the limited satellite bandwidth. However, before delivering voice calls to SIP trunking providers, the voice must be in an uncompressed G.711 format, requiring transcoding.

"Voice compression improves the efficiency of the satellite link, but we must transcode back to G.711 before passing traffic to the SIP trunk providers", stated Venkata Yanamandra, project engineer at X2nSat Inc.

To meet the growing number of subscribers, their network design also requires a single SBC solution that can support hundreds of simultaneous subscribers, routing traffic to/from each subscriber's associated SIP trunk provider. Options to automate the administration and provisioning of new customers was also identified as a requirement.

## Solutions

To meet these requirements, X2nSat selected TelcoBridges' ProSBC, operating in a redundant VMware environment with an external TelcoBridges Hardware Transcoding accelerator, supporting up to 1,372 transcoding sessions. The equipment was installed in the Petaluma ground station, with a geo-redundant site planned for Las Cruces, NM.



ProSBC™ TechTrained

"ProSBC is easy to install and configure … and has been very reliable"

"We had been comparing SBCs… when you compare all the features and the price, ProSBC wins"

**Venkata Yanamandra,**
**project engineer at X2nSat Inc.**

In this configuration, the satellite link is always active between the remote subscriber sites and the satellite gateway, allowing instant activation upon failure of the subscriber's terrestrial circuits.

Each customer is provisioned a SIP Trunk, each assigned to a network access point (NAP). Managing traffic between the remotes and the SIP trunks is accomplished using ProSBC's Label Routing feature. This feature matches customer telephone numbers with the associated SIP trunk, bi-directionally routing calls. As part of the provisioning automation process, the ProSBC RESTful API will be used to make modifications to the Label Routing configuration, simplifying new customer provisioning.

"We have hundreds of network access points and working toward automating configuration", noted Venkata.

Knowing how to use advanced ProSBC features, including Label Routing and Transcoding, came from participating in TelcoBridges informational webinars as well as on-line ProSBC training. By completing the training, Venkata has secured his ProSBC TechTrained status, readying him for this and other network challenges.

## Results

Looking back at his experience with ProSBC, Venkata noted that he felt that ease of installation and management helped in the selection process.

When asked about his experience, Venkata shared "ProSBC is easy to install and configure … and has been very reliable"

After many months of operation, ProSBC has proven to very reliable for X2nSat and their unique satellite-based business continuity use case.

"We had been comparing SBCs… when you compare all the features and the price, ProSBC wins"

## Further Reading

More on **X2nSat** can be found at https://www.X2nSat.com
More on **ProSBC** at: https://freesbc.telcobridges.com/
More on **ProSBC Transcoding unit** at: https://freesbc.telcobridges.com/wp-content/uploads/2019/11/TSBC-HW-TRANS_v1_3.pdf

TelcoBridges

**TelcoBridges Inc.**
138 de la Barre Street
Boucherville, QC J4B 2X7
CANADA

**Sales** +1.450.655.8993
**TB Support** +1.866.438.4703
info@telcobridges.com
freesbc.telcobridges.com