

BRINGING THE ISLANDS OF PALAU CLOSER WITH LOW-COST TELEPHONE AND INTERNET SERVICES



"It is very hard to bring communications to a small and remote country in cost-effective manner"

—Alexey Pavlyuts
General Manager
Palau Telecom

"To interconnect international operators, we needed a virtualized software-based session border controller with High Availability, which downscales both performance and price and have a very small footprint without compromising security and availability."

—Alexey Pavlyuts

BACKGROUND

Palau is an archipelago small nation in the western Pacific Ocean, made up of roughly 340 islands across an area of 466 square kilometers. An independent nation since the 1981, Palau is governed as a presidential republic and home to more than 21,000 people. With a GDP per capita of about \$16,000, Palau's economy consists of primarily of tourism, fishing and subsistence agriculture, with significant financial assistance from the United States. Being one of the most world-famous diving destinations, Palau hosts over 100,000 tourists per year.



The limited population, expansive geography and the remoteness of the island nation has made serving the residents of Palau and their tourist guests with telecommunications services especially difficult. Because of the diverse geography, the island has depended on VHF wireless radios and pre-paid GSM telephone service as the dominant communications technologies.

Palau Telecom is one of two service providers that compete to offer the islands with internet and VHF.

With only satellite links available, access to the rest of world has historically been very limited and expensive, with high minute-based rates for international calling and poor internet penetration. The result is a community that is isolated with little access to internet services and information – things that most of the world depend on to improve their economies, education system and healthcare.

CHALLENGES

In 2016, funding was secured to lay a submarine fiberoptic cable, linking Palau to Guam and the wider SEA-SU project. Upon completion in 2018, Palau would have access to improved international telephone services and internet.

As the submarine cable becomes available, Palau Telecom started to rollout GSM network to supply the nation and guests with more affordable voice services. One of the challenges was to interconnect GSM network to SIP-based trunking from one or more international providers.

The key challenge was to downscale. Limited population means they needed very low scale solution while keeping per-customer CAPEX and OPEX cost reasonable. Every lowest sizing bracket of the most vendors still too big and expensive, rocketing per customer costs up to the sky.

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*"In addition to security,
flexible call routing to
the international
operators was a key
capability that
we needed in our
implementation"*

*"We can't afford too
many engineers, so we
need something
very simple to install
and manage."*

*"I needed help
with configuration -
and the TelcoBridges
technical support
was really great!"*

*"Call trace feature
is great! It makes
interconnection debug
tasks much easier"*

*"FreeSBC works well
and is very stable...
everything just works!"*

—Alexey Pavlyuts

SOLUTION

To bridge their wireless network to international networks, Palau Telecom chose TelcoBridges' FreeSBC PRO-edition session border controller software. With the pricing bottom line of \$500 per year it's affordable even for this tiny size. As a subscription-based software solution, FreeSBC reduced up-front software costs with annual subscription fees for licensing, maintenance and support.

By using a virtualized software version of FreeSBC, Palau Telecoms was able to eliminate the need for costly dedicated hardware, only two small virtual machines allocated on existing servers.

To avoid outages due to hardware failures, Palau Telecom chose to implement FreeSBC with High Availability features, automatically detecting server failures and quickly switching over to a redundant instance.

FreeSBC provides security to the Palau Telecom network, preventing intrusion and TDOS attacks that could potentially disrupt service.

RESULTS

With the new submarine cable and GSM network, Palau Telecom now able to offer low-cost telephone and internet services to the residents of Palau and island guests. This brought the islands closer and improved the lives of the residents and the many tourists that visit the island paradise.