



Case Study – Bandwidth

About Bandwidth

Bandwidth is a software company focused on communications for the enterprise. Companies like Google, Microsoft, Cisco, Zoom and Ring Central use Bandwidth's APIs to easily embed voice, messaging and 911 access into software and applications. Bandwidth is the first and only CPaaS provider offering a robust selection of communications APIs built around their own nationwide IP voice network - one of the largest in the nation.

Dramatic, Dynamic Effects on Network Capacity due to COVID-19

When the US started entering lockdowns and companies implemented work-from-home policies, the effects on Bandwidth's network were dramatic and dynamic. The Bandwidth team needed to quickly address changing demands on its network capacity that COVID-19 induced, by causing a rapid rise in the number of people working from home. Not only did they have to meet the new network capacity needs, but they needed to ensure all their network traffic would continue to be secure and reliable.

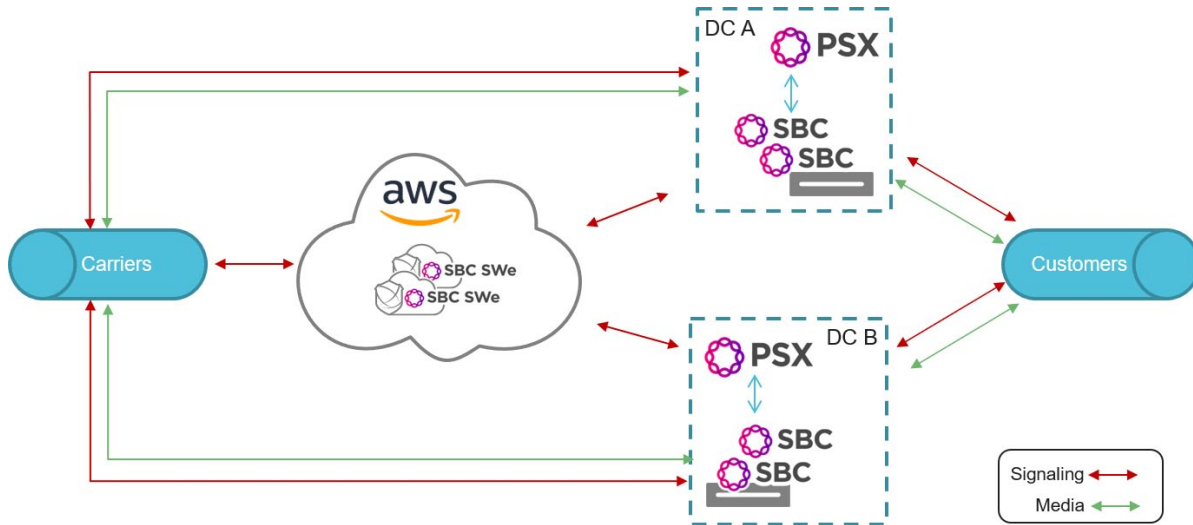


Needed a Solution in Days

Bandwidth knew they needed to ramp their session border controller (SBC) capacity to align with their changing network traffic. One option was to increase their SBC capacity in their own data centers, but that just was not going to be rapid enough. They needed a solution that could rapidly scale, and they needed to be able to deploy it as fast as possible. If their own data center was not the answer, what was? The answer – leverage a public cloud and take advantage of what the public cloud does best – scale fast.

"We worked with the Ribbon team to rapidly deploy their SBC SWe on AWS and were able to easily accommodate the rapid spike in demand from our customers. Our customers are some of the most recognized brands in the world and they have come to expect world-class support from Bandwidth."

Scott Mullen
Chief Technology Officer



Bandwidth Deployment of Ribbon SBCs

The Solution - Ribbon Virtual SBC on AWS

When Bandwidth came calling, Ribbon was ready. Ribbon’s SBC Software Edition (SBC SWe) was already qualified and deployed on Amazon Web Services (AWS).

Ribbon’s SBC SWe is a powerful cloud-native solution that can scale up or down via simple software licenses, allowing operational teams to dynamically adjust scale in minutes, rather than in hours, days or months. And this scalability comes without sacrificing any features or functionality.

To address the network traffic disruption from COVID-19, Bandwidth deployed 12 high availability (HA) pairs of Ribbon’s SBC SWe on AWS, configured as signaling only SBCs. These cloud-native SBCs connect with Bandwidth’s existing Ribbon SBCs in their data centers where the media is anchored. Connectivity between AWS and Bandwidth’s data centers was provided using the AWS Direct Connect service.

Rapid solution turn-up was enabled with provisioning done using AWS Cloud Formation templates and automated configuration using Ansible.

Bandwidth – Ribbon Partnership

Ribbon has been a long-time supplier for Bandwidth, but this challenge was something neither company had previously encountered. The real success story here is how the two teams took on this challenge together and made it happen with accelerated speed.

In less than a week, Bandwidth and Ribbon went from the initial request to solution design, AWS provisioning and configuration, testing, and live traffic turn-up.

By working together as a critical priority, Bandwidth was able to implement 8000 calls per second (CPS) of additional SBC capacity on AWS to continue delivering secure and reliable interconnect services to their customers.