Tiny Telecom Takes on Titans with Next-Generation Network

Customer Case Study

Hawaii Dialogix Telecom attracts bigger customers with better network based on Cisco solutions.

EXECUTIVE SUMMARY

Customer name: Hawaii Dialogix Telecom

Industry: Voice and Internet service provider

Location: Honolulu, Hawaii

Number of employees: 20

Challenge

- Replace piecemeal multivendor network with homogeneous next-generation solution
- Increase reliability and performance of voice/IP network
- Extend network's reach and serve larger customers

Solution

- Cisco Aggregation Service Routers provide backbone for next-generation voice/IP network
- Single-vendor core-to-edge solution provides increased resiliency, better performance
- Cisco Capital–supported financing allows deal to commence at desired speed

Results

- Attracted enterprise customers with carrier-grade services and faster, more reliable network
- Reduced service delivery times by minimizing provisioning and turn-up chores
- Provided new and improved services without adding to network operation costs

Challenge

Founded in 2009 through the merger of Hawaii Direct Telephone Co. and Dialogix, Honolulu-based Hawaii Dialogix Telecom (HDT) is a licensed public utility that provides phone and Internet services to businesses and multitenant high-rise buildings throughout Hawaii. Today the third largest phone company in the state, HDT reached that position by taking a good, hard look at the competition and then providing what the dominant carriers did not. In 2006, the solution was delivering hosted private branch exchange (PBX) services for businesses.

"At the time, there was no business/VoIP product available in Hawaii, so we knew there was a market for our solution," says HDT Co-President Stephen Hon. "Since we weren't competing directly with the major carriers, we were able to lease finished services from them, which we used to deliver IP services to the customer premises and then run our IP voice services over them." This solution, however, proved inefficient over the long term for a company trying to distinguish itself through superior phone and Internet service.

"To provide a reliable business-grade voice service over IP networks, you need a reliable, business-grade IP network," says Hon. But as time went on, the company found that the typical IP network was insufficient to run a reliable voice system. So in 2007–2008, HDT began to build its own. "But because we were bootstrapping ourselves, that network still consisted of a patchwork of networking types and equipment."

Hon and HDT Co-President Jared Grugett realized it was time for the utility to build an entirely new network. Not only was HDT looking to serve customers beyond its small and medium-size business base, it realized that Internet speed could be a key differentiator in a state with wide broadband penetration but slow Internet speeds.

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Stephen Hon
Co-President
Hawaii Dialogix Telecom

Says Grugett, "To expand our customer base and provide the performance, we needed to compete with the big guys, we needed to replace our multivendor environment with a homogeneous next-generation network that included all of the service provider features we required. This was the only way we could grow our business."

Solution

Although the way to grow the business was obvious, the choice of which solution provider to use was not. Says Hon, "Since we had been using such a wide variety of equipment on our legacy network, we had no clear preferences for where to start with our new network. What we did know was that we needed to work with a systems integrator that could design and engineer our system, hold our hand through deployment, and support the network on an ongoing basis."

Although HDT evaluated solutions from Brocade, Juniper, and Ciena, Cisco was the only solution provider that was also able to identify a suitable partner with a history of strong systems integration for service providers. Says Hon, "We used a lot of Cisco voice products on the old network, and when one of the Cisco systems engineers heard of our current struggle, he suggested that we talk with Datalink. He said, 'These guys are used to working with companies like yours; they'll have no trouble helping you identify, design, and deploy the best solution for your business.'"

That systems engineer was right. With Cisco® Gold Certified Partner Datalink at its side, HDT had no trouble deploying a Cisco backbone for its next-generation network. Says Hon, "In the ASR [Aggregation Service Routers] product line, Cisco offers a solution that provides a harmonious relationship between the core, transport, and access layers of the network. This was in contrast to the other solution providers, which still had a hodgepodge of equipment going from core to access layers."

Adds Grugett, "Cisco put together a complete core-to-edge solution. We were able to one-stop shop to fulfill our needs for the next 12 to 18 months. This was not something we were able to do with any of the other solution providers."

Another thing that tipped the scales in favor of Cisco was Cisco Capital®. Says Hon, "As a service provider, it can take us time to start monetizing any investment in our infrastructure. Cisco Capital recognized this and believed in our business enough to give us very favorable terms and a 90-day ramp-up period before billing. Being able to ease our way into financing made the deal happen at the speed we wanted it to."

Today, Hon is particularly happy with the Multiprotocol Label Switching (MPLS) and network operations and management (OAM) capabilities that the Cisco routers provide, citing improved redundancy and higher service-level agreements (SLAs). Best of all, by taking advantage of the Cisco Aggregation Service Routers product line, HDT has been able to consolidate its operations. Says Hon, "Before, we had to operate two networks: a packet-based network and a circuit-based network. In our new next-generation network from Cisco, that's all been collapsed. Now, we have just one packet-based network using timing mechanisms and TDM [time-division multiplexing] interface modules with various Cisco ASR models."

Grugett sums up the situation even more succinctly: "We weren't a Cisco shop before, but because of the great financing opportunity offered by Cisco Capital and the way Cisco was going to work with us, we became a Cisco shop."

Results

Even though the migration to the next-generation Cisco network is not yet complete, HDT is already reaping the benefits of its newly robust network. Not the least of these benefits is the ability to serve a new breed of enterprise and institutional customers. Says Grugett, "Three years ago we wouldn't have been on the radar of the third-largest bank in Hawaii or the construction giant that's heading up Honolulu's rail project, but today we can count both as customers because we've re-groomed our network core to support the needs of large companies. Having constructed our new MPLS network on the Cisco backbone, we now have the capability and resiliency to move beyond our traditional base of small to medium-size businesses."

Now, the 20-employee organization is competing for some of the same enterprise customers as the state's dominant carrier, a company with hundreds of employees and approximately US$400 million in revenue. Recently, in fact, it beat out that carrier to sign a contract with the state's largest landowner, Kamehameha Schools, to build a free public Wi-Fi network for a nine-block region that the organization is redeveloping. According to Hon, that win was directly attributable to the network performance and pricing afforded by HDT's migration to the Cisco Aggregation Service Routers network.

Indeed, that new Cisco network has significantly lessened service delivery time, reducing by 65 percent the number of provisioning procedures associated with configuring and turning up services. This capability, in turn, is allowing HDT to deliver a range of new products. Says Hon, "In conjunction with this Cisco deployment, we've put a lot of time and effort into building a fixed wireless backhaul network around Oahu and the greater Honolulu region. The combination of fixed wireless and the Cisco ASR networking equipment is allowing us to provide products that are an order of magnitude better at little to no increase in network operating costs."

And the savings don't stop there. Says Grugett, "We're always looking for ways to run our network more efficiently, and the Cisco solutions allow us to do just that. Over the long term, those efficiencies will help us save money *and* make money. You can't ask for a better solution than that."

Next Steps

With its new network in place, HDT is now embarking on another journey: migrating its data center to a larger space within DR Fortress, Hawaii's premier data center facility. Says Hon, "Having deployed our next-generation Cisco network in advance of this migration, we now have the redundancy to transfer facilities without risking network downtime. And because this migration involves a wholesale conversion to Cisco data center products, we're looking at easier management and lower total cost of ownership (TCO) down the road."

By replacing its substantial investment in HP BladeSystem c7000 enclosures with Cisco Nexus® switches, Cisco Unified Computing System™ (UCS®) servers, and NetApp storage, HDT is moving away from a system that Hon describes as "archaic" in its management capabilities to one that has an easy, error-free process to configure new customers and scale the infrastructure. Says Hon, "As soon as we began working with Cisco UCS and the Nexus switch fabric, we saw a huge simplification of processes. By using one management interface to control many devices, we were able to turn up new customers occurs in a more consistent and mechanized fashion, which enabled us to dramatically increase our provisioning volume."

This advancement will be especially important as HDT looks to extend the reach of its network and provide next-generation cloud-based services. Says Grugett, "We're known for being a very fast and flexible company. Our long-term goal is to extend that reputation to our network. With our newly acquired Cisco equipment and the way we're building the network, we should have no problem achieving that goal."

One sign that HDT is already well on its way to achieving that goal is the co-marketing and sales effort that it has just entered into with DR Fortress to bundle that company's cloud compute and storage products with its own networking services. The result: a comprehensive package for small and medium-size business that are interested in collocating resources in DR Fortress' data center.

More Information

To find out more about Cisco solutions, visit www.cisco.com/go/solutions.

Product List

- Cisco Aggregation Service Routers 901, 903, 9000
- Cisco Unified Computing System C-220 M3 rack servers
- Cisco Unified Computing System B-200 blade servers
- Cisco Unified Computing System 5100 Series Blade Server Chassis
- Cisco Nexus 5000 switches
- Cisco Nexus 2000 switches

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