



## DRFortress Upgrades Data Center to Future-Proof Its Customers

### CASE STUDY

DRFortress is a Hawaii-based, managed colocation provider that offers data center and Internet exchange services to enterprise organizations, network providers and e-commerce companies. *The Fort*, its flagship facility in Honolulu, is Hawaii's largest Class-A shared data center and the only commercial Internet peering exchange in the state. As its name implies, DR ("designed for resilience") Fortress offers customers "24/Forever" secure operations.

A privately-held company, DRFortress was founded in 2006 by four former employees of Equinix, a leading global data center and interconnection provider. DRFortress acquired all of Equinix's business operations in Hawaii, including an 11,800-square-foot data center in Honolulu, which was built in 2000.

During the December 2006 launch of DRFortress, co-founder Fred Rodi characterized the facility as "vital to the state's economy and technology initiatives." Dozens of the area's leading enterprises, network providers and eCommerce companies maintain their applications there. "Similarly, several organizations outside of Hawaii also use the data center to reach audiences throughout the Pacific region."



## Customers Need More Space and Capacity

At the same time they launched DRFortress, the co-founders announced plans to immediately upgrade and expand the data center. Customers, including DataHouse, Hawaiian Telecom, Qwest, Mobi PCS, as well as a number of financial-service companies, top-tier Internet Service Providers (ISPs) and international companies, had pushed the data center to the limits of its physical capacity. To accommodate current customers and accept new ones, The Fort soon would need to offer more high-quality colocation space, electrical power and access to the core networks serving Hawaii.

DRFortress executives and engineers realized they would have to more than double the physical footprint of the facility. In addition, they knew The Fort's existing Category 5e cabling could not support the growing customer demand for higher-bandwidth networks and services, such as emerging high-speed technologies like 10-Gigabit and beyond. An extensive internal study, along with an evaluation of various products on the market, persuaded the DRFortress team that ADC had the upgrade/expansion solutions they needed.



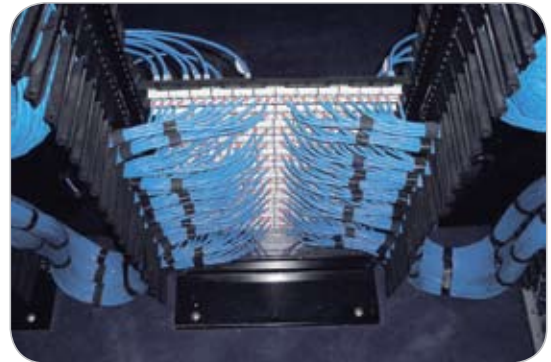
**ADC's FiberGuide® – Ensuring proper bend radius and ultimate fiber protection**

For one thing, the existing facility already used ADC's fiber and copper solutions extensively, including the FiberGuide® fiber-management system, and DRFortress wanted to maximize its return on that investment. Equally important, DRFortress wanted an upgrade/expansion solution that would not only enable the company to offer customers a future-proof, 20-year technological warranty, but also offer a phased-design approach for the cable plant in response to changing customer and industry demands. As Adam Cheong,

DRFortress network and data center manager, explains it, "Our philosophy is to grow our business in well-planned phases, and ADC helped us with an infrastructure designed to do this."

## The Solution

In early 2007, DRFortress expanded the data center to 21,300 square feet and awarded the inside cable plant expansion contract to ADC and Bowman Connectivity Solutions (BCS), a Honolulu-based, ADC-certified value-added reseller. Working closely together, ADC, BCS and DRFortress engineers divided the eight-month infrastructure project into two phases. Phase I focused on installing the ADC solution in the new areas of the facility.



**ADC's CopperTen® – Solutions for higher-bandwidth networks and services**

Phase II centered on the interconnections that linked the old and new cable plants along with the installation of cabinets to accommodate new customers.

The ADC solution within The Fort consists of the entire inside cable plant expansion project except the racks and cabinets: Cat6 and CopperTen® Cat6a cabling; 24- and 48-port TrueNet® Cat6 and Cat6a patch panels; and, of course, ADC's FiberGuide system.

One aspect of the ADC solution that was especially attractive to the DRFortress engineers was ADC's patented AirES® (Air Enhanced System) technology. By using air as part of the conductor insulation, the AirES technology enhances signal speed and strength while minimizing cable size and cross-talk. AirES cabling also reduces pulling tension by nearly one-third, thus enabling technicians to pull more cables simultaneously and thereby shorten overall installation time. In addition, the smaller-diameter AirES cable increases by about 30 percent the number of cables that can fit into the available space. As a result, customers such as DRFortress can deploy more cables in their limited physical space and, at the same time, reduce the number of required cable trays, conduits and raceways.

Another ADC solution that DRFortress implemented was the low profile FiberGuide Express Exit™ fiber guide drop. "The Express Exit really suited our modular design and requirements for rapid deployment," says Cheong. "The ability to quickly install without the need for cutting into the existing fiber raceway saves us time and valuable labor resources."

## The Benefits

With a business model that calls for expansion of the data center, according to customers' actual needs, DRFortress managers hoped they could initially expand The Fort by building on the existing ADC solution. At the same time, whatever solution they chose to upgrade the data center had to be designed to allow them to expand the facility again and again, if necessary, and always in a cost-efficient manner. After evaluating various vendors' products, DRFortress determined that ADC could build on its existing solution—and provide a world-class inside cable plant.

The DRFortress-ADC-BCS team completed the project on time and within budget and, more than a year later, there have been zero customer complaints. Cheong of DRFortress says the proven quality of ADC's products and ease of deployment, as well as the teamwork that went into the design and installation efforts, were two of the three factors behind his company's decision to choose ADC. The third factor was ADC's 20-year product warranty for its solution, "which

is basically a lifetime. It is important to us because it gives us a sales advantage, and it appeals to our customers, who don't have to worry about reliability. This focus on quality supports the guarantee we give our customers," Cheong says, "something they can rely on for many years."

ADC's cabling solutions portfolio also features a 20-year Zero-Bit-Error warranty that backs both physical component performance and data throughput.

"The success of the ADC/BCS cable plant project, together with leveraging some of our newer service offerings such as Business Continuity and Disaster Recovery (BCDR) and Virtual Colocation Solutions (VCS), allow us to assist customers to easily transition into highly reliable, highly efficient and cost-effective IT operations demanded by today's economic environment," notes Cheong.

"When DRFortress looks back at its existing Cat5e infrastructure, originally designed and deployed many years ago, and how it continues to support many of the customer requirements, even today," he observes, "it's very reassuring to know that ADC's innovation and forethought will help carry us through in the years to come."

With its state-of-the-art communications infrastructure now in place, DRFortress is looking forward to partnering with its customers and solutions providers to move rapidly into the new era of next-generation eBusiness/ eCommerce opportunities.



**DRFortress' newly expanded data center ready to support growing customer demands**

CASE STUDY



## Challenges and Solutions

**Challenge:** Upgrade existing data center infrastructure to support more customers and advanced services

**Solution:** Choose next-generation, end-to-end cabling infrastructure that leverages existing infrastructure—and paves a smooth cost-effective path to additional upgrades and expansions

**Challenge:** Ensure that new cabling infrastructure cost-effectively maintains existing air flow and heat efficiency designs

**Solution:** Deploy smaller-diameter cables that reduce air blockages and minimize physical footprint

**Challenge:** Conform to DRFortress' modular data center infrastructure philosophy

**Solution:** Utilize ADC's broad product line to enable a phased-design approach for the cable plant that also allows for rapid deployment in response to changing customer and industry demands

**Challenge:** Find skilled resources to meet the demands of such a large-scale project

**Solution:** Team up with an ADC-certified, value-added reseller with the experience and expertise to accomplish the task



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