

CIANBRO GUARDS AGAINST DISASTER WITH DELL EMC VXRAIL APPLIANCE

Deploys VxRail in under 60 minutes

CIANBRO CORPORATION

INDUSTRY

- Heavy construction

SIZE

- Privately held construction and construction services company
- One of the nation's top 30 general contractors
100 percent owned through an employee stock ownership plan (ESOP).
- Operations in more than 40 states

Challenges

- A major failure in the company's primary data center would be a catastrophic event
- Need to replace outdated tape-based backup solution
- Production data center also required a technology update to work with the new DR site

Solutions

- Dell EMC VxRail Appliance
- VMware vSphere and VMware vSAN software
- Dell EMC VxBlock System 350 with Dell EMC Unity 300F All-Flash array

Results

- Up to 80 percent cost savings compared to a DR-as-a-service solution
- Simplified management based on familiar VMware ecosystem tools
- Efficient 2U footprint to fit within co-located data center facility
- Single-source support from Dell EMC



Headquartered in Pittsfield, Maine, Cianbro is one of the largest privately held, 100 percent employee-owned construction companies in the US—with more than 4,000 team members and operations in over 40 states. Founded in 1949 by the four Cianchette brothers, Cianbro today builds a wide variety of projects including civil, structural, mechanical, and electrical—as well as offering instrumentation, fabrication, and coating services. The company operates under a number of approaches: design-build, design-bid-build, construction management, construction manager/general contractor, and engineer, procure, construct (EPC). Cianbro is committed to delivering its projects on time and within budget—while maintaining the highest level of safety.

The Challenge: outdated tape-based backup and recovery

As Cianbro had grown over the years, the company needed to invest in a true disaster recovery (DR) data center.

“We scheduled tape-based backups like most businesses,” said Ryan Deppe, network operations supervisor for Cianbro. “We stored those backup tapes offsite. We also used an ancillary data center to replicate some workloads and data. But we had never created a full DR site on a different grid in a geographically diverse location.”

Cianbro has two former astronauts who serve on its board of directors, and with the American space program's emphasis on multiple redundant systems and extensive fail-safe planning to protect the lives of mission personnel, the former astronauts expressed their serious reservations about the lack of a state-of-the-art DR site.

"There was concern that if something happened to our corporate data center, it might be a business-changing event, which could take weeks or months to rebuild everything," Deppe explained.

The Solution: Dell EMC VxRail appliance

After reviewing a number of options—everything from infrastructure-as-a-service to repurposing some of its older hardware—Cianbro chose the Dell EMC VxRail 240F All-Flash hyper-converged infrastructure appliance. VxRail was installed in a co-located data center in the Midwest.

"VxRail provides more than enough horsepower, storage capacity, and simplified management capabilities for our DR data center—while maintaining a very condensed footprint," remarked Deppe.

Cianbro currently replicates approximately 40 TB of data and 100 virtual machines (VMs) from its primary data center to the DR site in the Midwest. Fully integrated with VMware vSAN—the industry-leading, software-defined storage platform for VMware hyper-converged infrastructure solutions—the VxRail Appliance has enabled Cianbro to start small and easily replicate additional VMs for expanding workloads and new applications as required.

Transforming its production data center with Dell EMC VxBlock Systems

While evaluating solutions for its DR site, Cianbro realized that to make everything work optimally, it was best to update its production data center with the latest technologies as well. After thorough analysis of converged and hyper-converged platforms, Cianbro selected the Dell EMC VxBlock System 350 with a Dell EMC Unity 300F All-Flash storage array for its highly-virtualized environment with approximately 200 VMs.

“Over the long run, VxRail has been leaps and bounds cheaper than investing in a DR-as-a-service solution. In addition, for our business a capital purchase is often preferable to ongoing operational expenses.”

– Ryan Deppe, Network Operations Supervisor, Cianbro Corporation

All the company's workloads and applications have been consolidated onto the VxBlock System and Dell EMC Unity array, providing a vastly improved experience for developers as well as end users. Applications include Microsoft's SQL Server, SharePoint, and a range of back-office applications. The company also runs its own custom, construction-specific ERP and materials management solutions on the VxBlock platform.

VxRail deployed in one hour

VxRail's simplified deployment enabled Deppe and just one other engineer to remotely deploy the appliance from within Cianbro's data center at its headquarters facility.

"In less than 60 minutes, the VxRail was up and running, which was pretty awesome," Deppe observed. "We quickly set up the switching, access lists, and other elements—with assistance from the Dell EMC support team. If we'd had to build the same DR environment from individual components, it would have taken us weeks."

The Result: a disaster recovery site ready for anything

With the successful deployment of the VxRail Appliance in its DR site, Deppe and his team are now ready for anything—from a single application failure to a full data center shutdown. In tests it has conducted, Cianbro has had no issues running live workloads—whether it's the SQL Server or Oracle databases, web servers, or other applications.

"We started with a short list of requirements," recalled Deppe. We needed a good replication target, enough horsepower for a disaster situation, and a space-saving footprint. At the end of the day, it was, 'Check, check, check.' We're confident that should we ever need our DR center, VxRail will be there and ready to go."

Other benefits of the VxRail Appliance at Cianbro's DR site include

- **Cost savings of up to 80 percent** – Cianbro was looking at spending up to \$20,000 per month on a "cold storage" DR-as-a-service solution. The capital investment in VxRail and supporting infrastructure in Cianbro's co-located DR center has reduced its recurring monthly costs by as much as 80 percent, while providing additional flexibility to use the DR site to spin up workloads for testing, repeated failover testing, and many other uses.

"Over the long run, VxRail has been leaps and bounds cheaper than investing in a DR-as-a-service solution," Deppe commented. "In addition, for our business a capital purchase is often preferable to ongoing operational expenses."

- **Simplified management** – The fully integrated, pre-configured, and pre-tested VxRail Appliance provided a familiar experience that was simpler to manage for Deppe and his team. "It was much easier than having to worry about three separate pieces of technology that we'd have to take care of from a compute, networking, and storage standpoint," he said.

Deppe and his engineers were also very comfortable with the VMware environment, so having VxRail designed and built with such deep integration into the VMware ecosystem eliminated a costly and time-consuming learning curve.

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- **Efficient footprint** – The exceptionally compact footprint for the VxRail Appliance—which fits within a 2U rack—is ideal for Cianbro's space in the co-located data center.
- **Single-source support** – Should Cianbro need support for its VxRail Appliance, it now has a single source—Dell EMC—with one number to call and Dell EMC's reputation for truly personalized, proactive service.

"With technology now being so integral to the construction business, we've been moving toward a digital transformation," stated Deppe. "Both VxRail and VxBlock are built on a set-it-and-forget-it model. That allows my team to be more focused on business-driven IT projects, creating innovations that drive the business and responding quickly to any requirements from our executive team or board of directors. We've moved away from a 'keep the lights on' mentality to devoting more energy into aligning IT with our strategic business operations."



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