

Native American Casino Chooses Nutanix Enterprise Cloud with AHV to Streamline Compliance, Be More Agile, and Improve Site Security



Coeur d'Alene Casino Moves Video Surveillance Systems to Nutanix

CHALLENGES

The Coeur d'Alene Casino and Resort is owned and operated by the local Coeur d'Alene tribe. The resort consists of a large casino with over 1,500 automatic gaming systems (AGMs), 300 hotel rooms, a spa, gas station, golf course, and over a dozen restaurants and retail outlets. The tribe also owns half of the public transportation services in the area, and operates its own bus fleet that brings visitors to the resort from Spokane.

“When I first joined the casino a few years ago, everything was bare-metal,” noted Zachary Williams, IT director at the Coeur d'Alene Casino. “We had seven racks of servers, ten direct attached storage (DAS) arrays, and a small EMC SAN. Our 650 security cameras continually record video footage, since the casino is open 24 hours per day. We were relying on video equipment that the surveillance industry had deemed ‘adequate’ for storing and editing feeds back in 2009 when we purchased it. But those legacy systems, which used RAID 6, didn’t provide any advanced protections, like clustering and replication, there was no redundancy, and they didn’t backup data. As a result, whenever we lost one of our servers—which happened several times each month—we lost all of the surveillance data on that server.”

Obtaining Gaming Industry Compliance

The National Indian Gaming Commission (NIGC) oversees Native American gaming for the federal government. “As a tribal casino, we must comply with NIGC and federal gaming agency rules on how surveillance video footage is stored and accessed by outside sources,” noted Williams. “In order to guarantee 24x7 availability of video feeds, we installed up to three separate cameras at some of the more strategic locations on our gaming floor, and distributed the feeds from those cameras to separate servers for higher availability. Maintaining 10 server racks and all of the cameras and recorders that went with them was a huge struggle for our IT team.”

SOLUTION

Williams started looking for a better surveillance solution in 2017. “I attended a gaming protection conference in Las Vegas and met with several companies that provided video management systems,” he said. “Most vendors were still offering solutions based on the classic proprietary model for surveillance, where you buy everything from one vendor, including the servers, storage, cameras, and it includes on-site support. But a couple of vendors, including Avigilon and Mirasys, offered software-only solutions that record all of the video and make exporting really easy, so you can choose the hardware you want. We liked that approach, and decided to go with Mirasys’ video management system on software-defined infrastructure based on hyperconvergence.”

Selecting Nutanix Enterprise Cloud

Coeur d'Alene Casino deployed the Mirasys solution using the Nutanix Enterprise Cloud Platform. “We wanted to go with the industry leader for a hyperconverged infrastructure-based solution,” noted Williams. “Nutanix is listed as a leader in the Gartner Magic Quadrant for Hyperconverged Infrastructure, based on its ability to execute and completeness of vision. From what we’ve experienced, we agree heartily with their assessment!”

“Nutanix Enterprise Cloud is the perfect solution for any tribal organization looking to simplify infrastructure management, increase system uptime and availability, streamline gaming industry security and compliance, and reign in their IT costs.”

— Zachary Williams, IT Director, Coeur d'Alene Casino and Resort

Choosing AHV

The Coeur d'Alene Casino also decided to use AHV, Nutanix's built-in virtualization solution. "Our thought was, if any hypervisor will work, we'd prefer to have an integrated stack on Nutanix," explained Williams. "After sending several of our team members to Nutanix training, they reported back that they liked AHV better than vSphere because it's a much simpler solution to manage. Eliminating the expensive VMware hypervisor licensing costs was just an added bonus."

The casino deployed a 12-node Nutanix cluster for the video management application. They also run the casino's loss prevention software based on Microsoft SQL Server, print server, radio server, file server, and video export server on Nutanix. "By moving to Nutanix, we were able to shrink our datacenter footprint from 10 racks of legacy server, DAS, and SAN infrastructure, down to just one rack," noted Williams. "This enables us to save a lot on datacenter space and power."

RESULTS

Reduced Management Time

"One of the biggest benefits of our move to Nutanix was the reduction in management time," Williams reported. "Since our legacy systems were always breaking, our Surveillance/IT team was spending a lot of time managing and replacing infrastructure. We had to log into the servers at least once a week to keep things running by setting up new VMs, provisioning storage, changing networks on the VMs, and performing other management tasks. Since moving to Nutanix, we've eliminated all of that overhead. We do glance at the Prism dashboards and graphs once a week to see how we're doing in terms of capacity and performance, but that's all it takes to manage the environment. As a result, we've been able to reallocate three of our four IT staff to more strategic projects."

Better Surveillance

"We employ two surveillance technicians that are in charge of maintaining and monitoring all of our cameras and security systems around the clock," reported Williams. "But they aren't IT people, they're surveillance specialists—they know how to hook up and program cameras, schedule video recordings, and design camera layouts. With the previous infrastructure, they were spending far too much time replacing hard drives. Since moving to Nutanix, they can now focus on actual surveillance of our casino. Nutanix has made the entire surveillance department run a 'million times' better."

Eliminating Downtime

"One of the main reasons we chose Nutanix was to improve fault tolerance and redundancy," Williams shared. "If our surveillance systems fail, all gaming operations need to be taken off-line, and the amount of money we could lose is astronomical. Nutanix Enterprise Cloud eliminates this risk, because the systems are self-healing and redundant. With Nutanix, we've eliminated all of the unreliability associated with our old approach. Even when we have to do maintenance or expand capacity, we don't have to worry about downtime or reconfiguration anymore with Nutanix. We can just plug the new nodes in, and they automatically join the network and start taking over workloads."

Simplifying Compliance and Improving Security

The Nutanix Enterprise cloud is also helping the casino comply with tribal and federal gaming industry regulations. "The gaming commission standards say that we have to keep X amount of footage on hand at all times, and must be able to export that footage within Y minutes," Williams said. "That footage also has to be in a format that is readily viewable by the tribal commission, the tribal gaming board, and local or federal law enforcement if it involves criminal activity. To ensure compliance, we had to have extra storage systems on hand just sitting there and ready in case we needed to quickly dump footage out for third-party viewing."

The casino can now provision storage 'on-the-fly' when they have to do large data exports. "With Nutanix, we don't have to provision storage until we actually need it," explained Williams. "When we need to export video, we dump a few terabytes of storage onto it, and soon as we're done, we can take that storage off and it becomes available again for the cluster. Plus, it's a very fast process since we're using a 10 GB network. As a result, we've seen a dramatic reduction in response times to requests for footage, helping law enforcement do their jobs and enabling us to comply with industry regulations."

Enabling a Hybrid Cloud Approach

"Most native tribes are very protective of their digital assets," explained Williams. "Data is king, and if you don't have it, you can't make sound financial decisions on how to allocate resources or support new economic endeavors. As a result, many tribes are resisting the move to public clouds, continuing to run applications like Microsoft Exchange and SQL Server on-prem along with their web servers and archives. Our tribe wants to take advantage of the best of both worlds in private and public clouds where it makes sense. We're starting to adopt a hybrid cloud model, and we're already an Office 365 customer. We'll still host a lot of our applications locally, including our player management database and accounting information, but our web hosting and email applications will be in the public cloud and it can help with disaster recovery. A hybrid cloud approach helps us achieve our goal to be an efficient, lean property, and tribal organization."

Simplifying Procurement

"Since we're subject to tribal government purchasing restrictions, we have to get three bids for everything we buy," noted Williams. "If we have to rapidly provision hybrid cloud or private cloud resources, we'll be able to do it much faster with Nutanix than with legacy infrastructure where we have to get three separate bids for servers, storage, and the networking. With Nutanix's Enterprise Cloud Platform and the simplicity of hyperconverged infrastructure, the procurement process is very streamlined."

NEXT STEPS

Coeur d'Alene Casino is planning on adding more Nutanix nodes to accommodate additional applications that will make the casino even safer. "Some of the apps we're considering include facial recognition software, a video analytics solution that enables behavioral patterning, and access control," explained Williams. "We're also interested in adding infrared or UV cameras, and installing microphones so we can do audio recording on the floor and hear transactions. The casino is also transitioning from analog to all IP cameras to improve image quality. But IP cameras create 4-8 times as much data as analog depending on the camera, so having an easily scalable and highly efficient platform will be essential."

Final Thoughts

"Many tribal organizations have already adopted some version of a converged or hyperconverged model, since the bare-metal model approach simply won't work past 2020," concluded Williams. "Nutanix Enterprise Cloud is the perfect solution for any tribal organization looking to simplify infrastructure management, increase system uptime and availability, streamline gaming industry security and compliance, and reign in their IT costs."

Company

The Coeur d'Alene Casino is a Native American gaming enterprise run by the Coeur d'Alene people in Worley, Idaho. The casino opened over 25 years ago, and now employs over 920 people in the Northern Idaho region.

Industry

Hospitality, Entertainment

Business Need

Existing infrastructure was unreliable and due for an upgrade. Wanted to deploy a comprehensive platform to reduce management demands, improve uptime, and increase site security.

Solution

- › Nutanix Enterprise Cloud Platform
 - › Acropolis software-defined infrastructure stack, including AHV virtualization
 - › Prism management plane
- › Mirasys Video Management System
- › Microsoft SQL Server and other virtualized applications

Benefits

- › Enabled the team to implement new, incremental IT projects by reducing system management requirements from 4 full-time admins to 1
- › Reduced opportunity for safety or fraud incidents by improving availability of surveillance video data and speeding access to camera feeds
- › Facilitated gaming industry compliance by ensuring 24x7 site monitoring
- › Improved site security by eliminating downtime in legacy systems from failures or upgrades
- › Enhanced business agility and efficiency by simplifying the allocation of storage resources and facilitating the move to a hybrid cloud

Nutanix makes infrastructure invisible, elevating IT to focus on the applications and services that power their business. The Nutanix enterprise cloud platform leverages web-scale engineering and consumer-grade design to natively converge compute, virtualization and storage into a resilient, software-defined solution with rich machine intelligence. The result is predictable performance, cloud-like infrastructure consumption, robust security, and seamless application mobility for a broad range of enterprise applications. Learn more at www.nutanix.com or follow us on [Twitter@nutanix](https://twitter.com/nutanix).

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