

Giving resort guests the best experience

Park City Mountain Resort enhances IT services for staff, helping them to exceed guests' expectations



Photo courtesy of Park City Mountain Resort

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Ryan Hayes, IT Manager, Park City Mountain Resort

Customer profile



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| Company | Park City Mountain Resort |
| Industry | Hospitality |
| Country | United States |
| Employees | 1,500 |
| Website | parkcitymountain.com |

Business Need

Park City Mountain Resort (PCMR) needed a powerful server, storage and networking solution that could support and enhance IT services, including those delivered via its Dell-powered virtual desktop infrastructure.

Solution

The resort chose to deploy a Dell™ Compellent storage array and Dell Networking switches alongside its existing Dell blade servers, which has optimized performance for its critical applications.

Benefits

- Enhances the employee and guest experience with a Dell-powered VDI
- Lowers server costs by \$50,000 with annual energy savings of \$20,000
- Achieves major cost savings with tiered storage
- Deploys voice-over-IP for savings of \$1,800 a month
- Delivers constant service availability
- Optimizes deployment, with the ability to resolve support issues in real time

Solutions featured

- [Storage](#)
- [Networking](#)
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In the hospitality industry, success depends on delivering an excellent experience for every single visitor and guest. Hotels and resorts that can achieve this typically increase repeat business, maximize positive feedback online and in print, and attract more new visitors to their properties.

Park City Mountain Resort (PCMR), which is operated by Powdr Corporation, wants each guest and ski pass holder to have the best experience possible. The resort spans 3,300 acres of the Wasatch Mountains in Utah, with 114 runs of all difficulty levels spread over eight mountain peaks and nine bowls. In the summer, visitors can enjoy alpine activities and children’s rides, as well as miniature golf, lift-served mountain biking, hiking and horseback riding. PCMR is consistently ranked a top-five resort by the readers of SKI and Transworld Snowboarding magazines.

PCMR relies heavily on information and communications technologies to provide the best experience for its guests, whether they are requesting information, booking vacations, paying for their trip, renting equipment, or making their way to the ski lifts or other attractions. At the same time, the resort relies on IT to help it improve operating efficiency, save energy and minimize its environmental impact.

With most of its revenue generated during the five-month ski season, PCMR systems must be constantly available during this period, when any unplanned downtime can result in significant financial losses. In addition, the resort must guarantee systems’ security to comply with the Payment Card Industry Data Security Standard (PCI DSS) for payments processing, and ensure that guests and employees use the resort’s free wireless internet service legally and responsibly.

Technology at work

Services

Dell™ Support Services

- Dell Compellent Copilot Support
- Dell ProSupport

Hardware

Dell SonicWALL NSA 4600 firewalls

Dell Compellent Storage Center SC8000

Dell Networking MXL 10/40GbE blade switches with Intel® 10Gb x520 Mezzanine cards

Dell PowerEdge M1000e blade enclosure

Dell PowerEdge M610x blade servers with Intel® Xeon® X5690 processors

Dell PowerEdge M620 blade servers with Intel® Xeon® e5-2697 v2 processors

Dell PowerEdge M710HD blade servers with Intel® Xeon® X5675 processors

Dell Wyse thin clients

Software

Dell SonicWALL Analyzer

VMware® vSphere® and VMware Horizon View®

Enhancing the guest experience with a Dell-powered VDI

To deliver consistently great services for staff and guests, increase operational efficiency and ensure that critical IT services are constantly available, the PCMR IT team deployed a virtual desktop infrastructure (VDI) powered by Dell and VMware® technologies. The infrastructure runs on two next-generation Dell™ PowerEdge M620 blades, powered by Intel Xeon E5-2697 v2 processors, plus Dell PowerEdge M710HD blade servers and Dell PowerEdge M610X blade servers. All the resort's servers are running VMware vSphere® hypervisor ESXi 5.5.

About 75 Dell Wyse thin clients running VMware Horizon View® give staff access to the applications they need via the VDI. Ryan Hayes, IT manager at PCMR, says, "We started by deploying contact center applications on our Dell-powered VDI and providing Dell Wyse endpoints for contact center staff. We are also using Dell Wyse thin clients for Rental Customer Check-In, which involves guests filling in rental agreements for ski equipment at our rental stations."

Based on the success of these early VDI trials, which delivered excellent service availability and performance, PCMR decided to extend the scope of its VDI strategy. "We migrated office productivity tools to the VDI and deployed 30 additional thin clients for administrators, and we also rolled out thin clients to provide internet access for staff across the resort," says Hayes. "At the same time, we rolled out a SKIDATA contactless, radio-frequency identification-based app on the VDI that allows staff to check guests' ski passes on a tablet, so they can walk straight up to the ski lifts without showing their passes. We also migrated our critical snow production system to the VDI."

With more and more apps delivered via the VDI, however, applications began to run slowly, keeping users waiting. "Our storage area network was reaching

capacity, and our network switches couldn't provide the throughput we needed," says Hayes. "Employees started experiencing slow app performance and inconsistent service quality. So we went to market for a new, more powerful storage and network solution that could support our VDI ambitions and deliver great performance for our non-VDI apps, including our mission-critical, point-of-sale system."

Delivering VDI scalability

After evaluating storage solutions from several companies, PCMR chose to deploy a Dell Compellent storage array equipped with two redundant SC8000 controllers. This includes three tiers of data storage made up of flash drives (tier 1), 15k SAS drives (tier 2) and 7.2k SAS drives (tier 3). The Compellent array is connected to PCMR's virtualized Dell blade server environment and iSCSI environment with Dell Networking MXL switches and Intel Ethernet X520 10 Gigabit Mezzanine Cards, which maximize app performance in virtualized Dell blade server environments. "Dell Compellent offered a range of technical and cost benefits compared with the other solutions we considered. It is also the only solution that allows us to scale up capacity incrementally and at low cost, with the option to buy and deploy new disks when we need them," says Hayes. "The Dell Networking switches also offered us the extremely high throughput we need to support more apps and users on the VDI, as well as supporting multiple protocols and speeds of up to 40 gigabits per second. We use the Dell Networking MXL switches to maximize throughput on our dedicated iSCSI network, where they deliver energy savings of about 80 watts compared with traditional switches."

There were other reasons why PCMR chose Compellent. "Competitors were offering solutions that were either reaching end of lifecycle, or lacked industry recognition and an installed user base. We didn't want to buy into a technology that was being phased out,



Photo courtesy of Park City Mountain Resort

"The logging and monitoring tools in Dell SonicWALL are fantastic. We can see attempted intrusions almost immediately and confirm that they have been blocked."

*Craig Casey, Systems Engineer,
Park City Mountain Resort*

nor did we feel confident in an untested solution. We chose to entrust our critical IT systems to Dell, which is an established industry leader.

Maximizing returns on VDI investments

PCMR now has the processing power, storage capacity and network connectivity it needs to achieve its goals for VDI expansion. Craig Casey, systems engineer at PCMR, says, "We have 75 Dell Wyse thin clients today, but our target is to migrate our entire estate of 225 desktops and tablets to the VDI to maximize efficiency and returns on investment. This is now possible with our powerful Dell virtualized blade environment, Dell Compellent storage array and the Dell Networking switches. Furthermore, we have already begun migrating large, mission-critical applications, such as our POS system, to the VDI, which would have been impossible before."

Maximizing systems' security

PCMR must adhere to PCI standards to protect sensitive customer data. In addition, there is a free public wireless internet service available for employees and guests, and the resort needs to block illegal activities, such as peer-to-peer video and music downloads.

To meet its stringent security requirements, the resort replaced its existing Cisco ASA firewall with two Dell SonicWALL NSA 4600 firewalls in a high-availability configuration. "We attended a Dell SonicWALL discussion at a Dell event in Salt Lake City and we were very impressed with its capabilities," says Hayes. "The application level monitoring and blocking features in Dell SonicWALL were very attractive. We needed something with high availability." The Dell SonicWALL firewalls also provide significant room for growth, with 16 interfaces, and WAN load balancing unlike the resort's previous Cisco solution.

PCMR is using advanced next-generation firewall features, such as content filtering, application control, SSL VPN, L2TP VPN,

Geo-IP Filtering, Botnet Filtering, and Analyzer to secure its critical systems and networks. "The logging and monitoring tools in Dell SonicWALL are fantastic," says Casey. "We can see attempted intrusions almost immediately and confirm that they have been blocked. We've also deployed Analyzer, which gives us a historical record of the malware and intrusions that the firewall detects and protects us from."

To ensure a fast, transparent transition to the Dell SonicWALL firewalls, PCMR worked with Dell. "A Dell engineer came out to help with the initial configuration, and he was also available by phone to answer any questions we had during the final configuration process," says Hayes. "Once everything was up and running, we transitioned over to Dell SonicWALL and the process was completely transparent for end users, for which we were aiming."

Based on the success of the Dell SonicWALL deployment at PCMR, there are plans to deploy the technology at other Powdr Corporation resorts. "Dell SonicWALL protects us from cyber threats and gives us an in-depth view of our network," says Casey. "It has shown its value here and we hope to use it at our other resorts too."

Increasing management efficiency

PCMR has streamlined management and support by deploying an end-to-end Dell infrastructure. "Because all the elements of our infrastructure are from Dell and are engineered to work together seamlessly, we have time to be more proactive in terms of enhancing services for employees and guests," says Hayes. The IT team is also seeing major management benefits with its converged Dell infrastructure. "We have a small team, and the ability to set up this equipment remotely through our existing CMC (Dell Chassis Management Controller) server management software allows us to accomplish the IT directive to do more with less."

The PCMR IT team is achieving additional

time savings with VMware tools that streamline the management of Dell infrastructure. "We use the VMware vCenter plug-in, which allows us to monitor, configure and manage Dell servers from inside vCenter," says Hayes. "We also use VMware Enterprise Management, which makes it faster and simpler to provision compute and storage resources on our virtualized Dell servers."

Lowering server costs by \$50,000 with annual energy savings of \$20,000

The resort is achieving significant cost savings by expanding its VDI with Dell. "Between procurement and operating costs, we are saving about \$50,000 a year with our virtualized Dell PowerEdge servers compared with traditional server infrastructure," says Hayes. "What's more, we're saving up to \$20,000 a year on energy with the Dell Wyse thin clients, which are far more efficient than rich-client PCs. We expect that figure will triple when we have all our users accessing apps via the VDI. We are now one of the top departments in the resort in terms of delivering year-over-year energy savings, which is great news for us and for the resort's carbon footprint."

Achieving cost savings with tiered storage

PCMR is achieving the right balance of cost-effectiveness and excellent performance with the "automated tiering" features of Dell Compellent, which push less frequently accessed data to less expensive storage. "We have 33 terabytes of data in our Storage Area Network (SAN) and have reduced our storage costs significantly by pushing large chunks of that data that we don't use much, down to slower-spinning, less expensive disks in our Compellent array," says Casey. "We have been able to reallocate those cost savings to high-end, solid-state disks that maximize the performance of our VDI and Windows-based POS system."

Saving \$1,800 per month with VDI-based voice-over-IP

PCMR has replaced traditional phone lines across the resort with a voice-over-IP (VoIP) system that runs in the virtualized Dell server environment. "By taking out about 30 copper phone lines and deploying VoIP on the Dell VDI and our campus fiber infrastructure, we are reducing our telephony costs by about \$1,800 a month. This will double to \$3,600 a month when we replace our remaining 30 phone lines in the near future," says Casey.

Delivering constant service availability

By supporting more apps and users on the VDI, the Dell infrastructure is helping PCMR reduce the risk of system downtime. "We frequently experience power issues up here at the resort, mostly related to an oversubscribed power grid," says Casey. "Although power outages caused staff IT interruptions in the past, users now access apps on the VDI in our data center, which has a backup power supply to keep things running through the worst power fluctuations."

PCMR has also increased the speed and availability of services with its new Dell infrastructure. "Our previous SAN could only handle 8,000 I/Os per second and couldn't cope with our boot storms or general maintenance windows," says Casey. "The new Dell Compellent array not only excels during maintenance windows but also handles our boot storms with no negative impact on service performance for employees."

Supporting remote and mobile access for traveling executives

PCMR executives can work more productively on the move with the Dell-powered VDI. "Using a virtual private network, traveling executives can access their work desktops from their tablets, or from any other internet-connected device," says Casey. "That means they can work productively on the road and stay in touch with what's going on here at the resort."

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Ryan Hayes, IT Manager, Park City Mountain Resort

Optimizing deployment and resolving support issues in real time

To ensure that critical IT services are always available, PCMR purchased Dell Compellent Copilot support, which provides instant access to trained Compellent engineers. “It’s difficult to do justice to Dell Copilot support without actually experiencing it,” says Hayes. “It pays for itself; it’s amazing. We call Copilot if we have any sort of questions, and we’re immediately connected to an engineer who can help us right then and there. We also used Copilot extensively while we were deploying Compellent, which helped us optimize configurations for redundancy and failover and speeded up the whole process.”

PCMR also has peace of mind that its Compellent environment is working properly at all times. “We were doing our monthly maintenance and we rebooted one of the controllers on our Compellent array,” says Casey. “Immediately, we got a phone call from Copilot to make sure we knew about the controller going down. We were seriously impressed with that.”

Achieving success in partnership with Dell

The PCMR IT team has helped the resort increase efficiency, lower IT costs and reduce carbon emissions in partnership with Dell. “We have a very active partnership with Dell,” says Hayes. “We frequently attend lunch-and-learns down in Salt Lake City, and we have the Dell team up here often to talk about the latest technology developments. We just got the chance to kick the tires of the new Dell PowerEdge VRTX server. Dell is a single point of contact for all our IT needs, and we look forward to many more successful years working together.”

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