



NetApp®

Success Story

WhiteWater West Stays on the Fast Track with Integrated NetApp, Citrix, and Microsoft Solutions



KEY HIGHLIGHTS

Industry

Waterpark and attractions supplier

The Challenge

Deliver flexible, on-demand IT resources and 24x7 access to support a global enterprise.

The Solution

Deploy NetApp® storage systems with Microsoft® Windows Server® 2012 with Hyper-V®, NetApp Flash Cache™, and NetApp clustered Data ONTAP® to boost performance, uptime, and agility.

Benefits

- Support business needs with a powerful scale-up and scale-out storage infrastructure
- Speed ROI with clustered Data ONTAP by using the NetApp 7-Mode transition tool
- Optimize the value of easy to manage Microsoft SMB 3.0 and high-performance file copy (ODX) features with built-in NetApp support
- Improve productivity by reducing 3D CAD vault downloads by 75%

Customer Profile

For more than three decades, WhiteWater West Industries, of Vancouver, British Columbia, Canada, has thrilled patrons around the globe with water park attractions that encompass more than 27 million feet of water slides and 65 million gallons of waves. It also boasts some water feature firsts such as an Acrylic Master Blaster on a cruise ship and AquaLoop acceleration to 2.5g in less than two seconds. A trend-setting aquatic amusement innovator and builder with more than 30 patents, WhiteWater West is credited with more than 4,000 successful projects, including 19 of the world's top 20 water parks.

The Challenge

Eliminating barriers to growth

From the creation of a new whitewater park to cutting-edge interactive rides, WhiteWater West aims to consistently exceed both client and guest expectations on every project it undertakes. This dedication has led to an impressive list of award-winning play spots around the world, including the Bali waterpark, the largest indoor and outdoor waterpark in China, and Oregon's Evergreen Wings & Waves, featuring water slides spiraling from a Boeing 747 aircraft and an indoor

forest-themed structure with interactive spray jets, net climbs, and bridges. The company's success has also enabled it to expand its presence in new markets, including building products, medical equipment enclosures, movie backdrops, and transportation panels.

From 2011 to 2014, WhiteWater West opened 36 new offices and grew its global staff to more than 600 employees. To support the business as it expands, the company requires fast, anywhere, anytime access to Microsoft platforms and applications that are essential to its day-to-day operations. These include a Microsoft Windows Server 2012 with Hyper-V and System Center 2012 private cloud; Microsoft Exchange Server e-mail and Lync unified communications applications; Microsoft SQL Server® databases; a Microsoft SharePoint® Server 2010 intranet platform; and Microsoft Dynamics SL, GP, and CRM applications for project management, ERP, sales, customer service, and marketing support.

High performance and 24/7 availability are also necessities for the company's Citrix XenDesktop virtual desktop delivery platform, which runs 60 applications and currently supports 600 staff mem-

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bers, including those who need rapid and remote access to engineering and CAD applications and data. In addition, on-demand scalability is required to take on new projects and leverage new business opportunities, such as the recent acquisition of the PaR System Inc. MRTM 125 Marine Milling 5-axis router. The addition of this technology enhances the company's composite manufacturing capabilities resulting in faster production times and reduced production costs.

To provide continued support for its expanding requirements, WhiteWater West turned to long-time partner NetApp for a technology refresh. The strategy involved leveraging new performance-enhanced NetApp storage systems, along with the state-of-the-art flash and clustered technology to create a powerful, agile, and business-boosting storage foundation able to support the company for years to come. Contributing to lower TCO was the fact that all of the disks residing under the company's previous NetApp controllers could be seamlessly repurposed under the new storage controllers.

The Solution

Rapid deployment, faster ROI

Assisted by the NetApp 7-Mode transition tool, WhiteWater West's IT team quickly moved configurations and data from two existing NetApp systems in its Kelowna

and Vancouver data centers to new NetApp FAS2240HA and FAS8020HA storage platforms with the clustered Data ONTAP storage operating system. Along with deployment support from NetApp Professional Services, each system was configured and ready to service the company's virtualized Microsoft and Citrix environments within days.

Today, with over 110TB of available capacity, 2TB of NetApp Flash Cache, and the nondisruptive operations and scale-up and scale-out capabilities of clustered Data ONTAP, WhiteWater West is well positioned to meet the demands of a business that is doubling in size every 24 months. “The NetApp 7-Mode transition tool was a lifesaver,” explains Dan Morris, infrastructure team lead for WhiteWater West. “It eliminated a time-consuming manual process, enabling us to move our file shares and permissions to the new systems in days rather than weeks.”

Deep integration, new capabilities

Seamlessly integrating with WhiteWater West's Microsoft and Citrix platforms, clustered Data ONTAP enables the company's IT team to reduce complexity and improve agility and performance across the enterprise. This is especially true within WhiteWater West's extensive and fully virtualized Microsoft private cloud environment, which is vital to the day-to-day operations of the business.

In this complex environment with clustered Data ONTAP support for Microsoft Windows Server 2012 and the Microsoft Server Message Block (SMB) 3.0 protocol, Microsoft Hyper-V servers can be deployed on NAS, SAN, or both within WhiteWater West's shared, centrally managed NetApp cluster. Clustered Data ONTAP also supports Microsoft Windows® Offloaded Data Transfer (ODX), which significantly accelerates file copy operations and improves system utilization by offloading host file copy operations to a NetApp storage subsystem. “If we fire up SQL Server, and we want to create a 1TB VHDX [virtual hard drive], NetApp autoprovisions in seconds, saving us an hour of time,” says Morris.

Clustered Data ONTAP quality of service (QoS) capabilities are also highly valued because they enable the IT team to set performance limits. “With NetApp QoS capabilities, we can throttle down performance in less critical areas and save performance for the things that really need it, like our Citrix XenDesktop environment, which supports key business and engineering applications and is highly visible to users,” states Morris.

Seamless monitoring, management, and protection

The ability to monitor and manage NetApp storage from Microsoft System Center with NetApp OnCommand®

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plug-in for Microsoft and from Citrix XenCenter with NetApp Virtual Storage Console for Citrix XenServer has helped simplify and automate administrative functions across the company’s virtualized environments. NetApp Snapshot™ and SnapRestore® technologies, NetApp SnapManager® for Exchange, NetApp Single Mailbox Recovery, NetApp SnapManager for SQL Server, NetApp SnapManager for Hyper-V, and NetApp SnapMirror® are also used to enhance business continuity across Microsoft and Citrix environments by providing highly automated backup, recovery, and replication capabilities.

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Business Benefits

Accelerating the speed of business

Equipped with Flash Cache technology and clustered Data ONTAP, WhiteWater West’s new NetApp platforms are dramatically improving productivity across the enterprise. For example, instead of I/O reading from the disk, 80% of the reads now come out of Flash Cache for a notable uptick in performance. “Desktops

are fast, and opening and transferring large files are performed in seconds thanks to NetApp technology, which means no more waiting,” says Morris.

Flash Cache has also sped up deduplication, allowing WhiteWater West to take greater advantage of its benefits without affecting production performance. In an environment supporting over 30TB of data, the company has reclaimed close to 18TB of storage through deduplication, which will help extend storage investments.

Clustered Data ONTAP is playing a key role in enhancing global manufacturing operations based in Kelowna. Because the site supports manufacturing in Canada as well as the Philippines, 24/7 uptime is critical for consistently high productivity and output. “With clustered Data ONTAP we can maintain the system and even scale to support expanded manufacturing operations in the future without any downtime,” says Morris.

Driving innovation and opportunity

WhiteWater West is always pushing the envelope on what can be done, continually innovating by infusing its business with new technologies and capabilities through both internal development and acquisitions that strengthen and broaden its offerings.

Backed by the power and flexibility of its NetApp FAS8020 system, the company recently took on a major initiative to create an NVIDIA GRID-supported SolidWorks CAD environment. Running on the company’s Citrix XenDesktop platform, engineers are now able to access centralized 3D CAD vaults from any location at any time—and 75% faster than in the previous environment. This efficiency helps support a global design team and design process, which ultimately speeds time to market and revenue.

In addition, clustered Data ONTAP support for multi-tenancy and nondisruptive scale-up and scale-out capabilities better positions WhiteWater West to support its active acquisitions strategy. In the last year alone, several strategic acquisitions were incorporated under the WhiteWater West brand, one of which is expected to help the company take its whitewater park attractions to new heights by providing an interactive, game-like experience.

“Our NetApp solutions are really living up to their potential,” concludes Morris. “The performance, scalability, and seamless operations help us boost productivity on all levels and effortlessly grow at the pace of business.”

SOLUTION COMPONENTS

NetApp Products

NetApp FAS2240HA, FAS8020HA storage systems running the clustered Data ONTAP 8.2.1 operating system

NetApp Flash Cache

NetApp OnCommand Plug-in for Microsoft

NetApp Virtual Storage Console for Citrix XenServer

NetApp SnapManager for Microsoft Exchange, SQL Server, and Hyper-V

NetApp SnapMirror

NetApp Snapshot and SnapRestore technologies

NetApp Single Mailbox Recovery

NetApp deduplication

NetApp 7-Mode Transition Tool (7MTT)

Third-Party Products

Microsoft Windows Server 2003, 2008 R2, and 2012 R2 with Hyper-V

Microsoft System Center 2012 R2 Operations Manager, Configuration Manager, Data Protection Manager, Virtual Machine Manager, System Center Service Manager, and System Center Orchestrator

Microsoft Exchange Server 2010, 2013

Microsoft SharePoint Server 2010

Microsoft Lync 2010

Microsoft SQL Server

Microsoft Dynamics SL 2010, GP, and CRM 2013

Citrix XenDesktop 7.1

Protocols

iSCSI, NFS, Fibre Channel, SMB 3.0

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