



NetApp®

## Success Story

# Efficient NetApp IT Empowers Denver Broncos to Invest in the Future



Another NetApp solution delivered by:



### KEY HIGHLIGHTS

#### Industry

Professional sports

#### The Challenge

Meet the growing enterprise-level IT, storage, and operational demands of a midsize organization tasked with supporting a winning football team.

#### The Solution

Deploy NetApp® FAS2240 storage systems in the primary and secondary data centers to provide asynchronous disaster recovery for each site.

#### Benefits

- Empowers IT organization with efficient, streamlined storage management
- Eliminates off-site tape storage, reduces capex and opex, and accelerates recovery of critical Broncos data
- Provides infrastructure to seamlessly scale from 50 terabytes to 1 petabyte

### Customer Profile

The Denver Broncos are a professional football team based in Denver, Colorado. Owned by CEO Pat Bowlen and managed by the Denver Broncos Football Club, the team is a member of the West Division of the American Football Conference (AFC) in the National Football League (NFL). The Broncos play at Sports Authority Field at Mile High and have four players in the Pro Football Hall of Fame: John Elway, Floyd Little, Gary Zimmerman, and Shannon Sharpe.

### The Challenge

#### Maintaining a competitive football edge

The Denver Broncos are one of the most successful teams in NFL history, winning two Super Bowls and six AFC Championships. With an intensely loyal fan base, the team has succeeded in selling out every home nonstrike regular-season game since 1970 and growing its waiting list for season tickets to 32,000 fans.

The Denver Broncos organization depends on an advanced IT infrastructure to operate both on and off the field. The organization of approximately 300 employees operates out of offices at both Sports Authority Field at Mile

High and the Paul D. Bowlen Memorial Broncos Center at Dove Valley, a state-of-the-art facility where the team trains. Day to day, the Broncos IT staff leverages technology and delivers IT services that streamline operations, help the team maintain its competitive edge, and foster a positive experience for fans.

Activities such as negotiating trades and securing draft picks depend on management's ongoing access to the organization's Microsoft® Exchange Server e-mail system. On game day, key applications that control the scoreboard and audio systems that players and coaches rely on must remain available. New initiatives such as a mobile video application for fans demand a flexible, high-performance infrastructure that won't let fans down.

To meet current operational needs and carry the organization forward, the IT staff established that it needed to upgrade the storage environment. "We're a relatively small shop with enterprise needs," says Russ Trainor, Denver Broncos vice president of Information Technology. "We run opposing team videos at Dove Valley, deliver digital playbooks via Apple iPads to our team and coaches, and create a highly

“With a flexible, dynamic NetApp environment, supporting innovative tools such as the Apple® iPad® running the PlayerLync App with digital playbooks, the entire Broncos organization can better support the Broncos team in taking on the opposition while we attract and retain fans for years to come.”

**Russ Trainor**

Vice President of Information Technology, Denver Broncos Football Club

collaborative communication environment for a sizable game-day staff at the stadium. Our IT and storage demands for both performance and capacity are continually growing.”

High performance, efficiency, and high availability were top criteria for the new storage solution, along with the flexibility to accommodate 10GbE connectivity when the time was right. The IT team wanted to step up its backup, restore, and disaster recovery capabilities. Integration with existing Microsoft, Cisco®, VMware®, and other technologies was imperative. In addition, the new storage solution had to provide ample room to grow for years into the future.

**The Solution**

**Supporting players, coaches, staff, and fans**

The Broncos IT team deployed NetApp FAS2240 storage systems in the club’s primary data center at Sports Authority Field at Mile High and its secondary data center at Dove Valley. PEAK Resources, Inc., a technology solutions provider based in Denver, Colorado, and participant in the NetApp Partner Program for Resellers, assisted the Denver Broncos with designing, deploying, and implementing best practices for the NetApp solution. “We worked closely with PEAK Resources, from designing the platform to disk configurations,

plugging in cables, and setting up the communication protocols for the system,” says Trainor. “PEAK Resources provides superior technical skills and excellent customer service.”

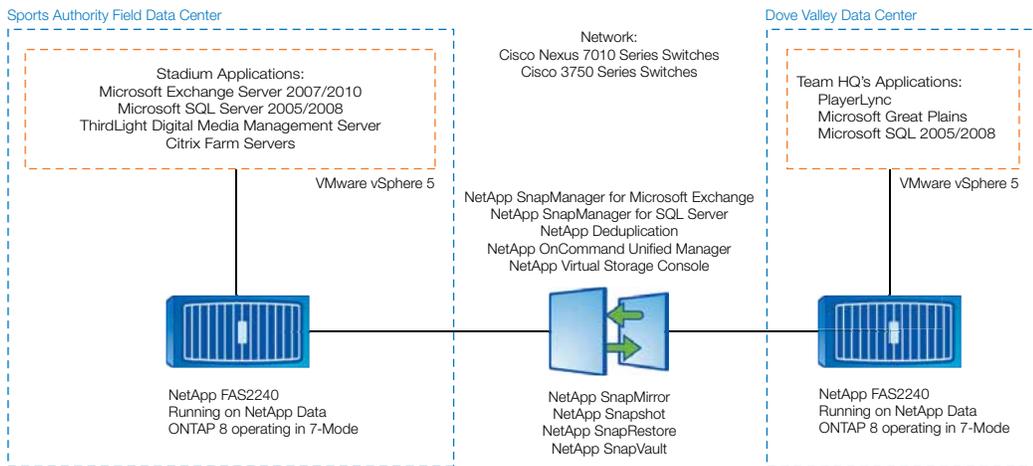
The NetApp platform runs on the Data ONTAP® 8 architecture operating in 7-Mode and stores more than 50 terabytes of data, with the ability to seamlessly scale to a capacity of just under 1 petabyte. NetApp deduplication helps optimize the storage environment by reducing storage requirements by up to 20 to 25%. “The NetApp FAS2240 system offers us the efficiency and manageability we need today, plus the flexibility and scalability to support delivery of new, diverse IT services as Denver Broncos needs change,” says Chris Newman, IT architect for the Denver Broncos.

The NetApp solution will soon support the Broncos’ Microsoft Exchange Server 2010 environment and currently supports the team’s Microsoft SQL Server® 2008 environments, which are fully virtualized on VMware vSphere® along with 95% of the organization’s infrastructure. The Broncos Club recently upgraded its wired and wireless network infrastructure at the stadium and training facility with Cisco Nexus® and 3750 series switches, Cisco 3500 and 3600 series access points, and Cisco 5508 and 2504 controllers. NetApp integrates with these technologies via OnCommand® plug-ins,

robust APIs, and important technology partnerships.

The NetApp solution supports the organization’s new PlayerLync application, which provides digital video playback, playbook, and communication features to Broncos coaches, players, and the player personnel department as they prepare for the next game. The Broncos’ NetApp environment also supports the organization’s Microsoft Great Plains accounting software and the ThirdLight digital media management server, which enables internal employees, media, and sponsors to retrieve Broncos event photographs, its Citrix farm servers, remote-user servers and file shares, an event management application, security systems, various application servers, and more.

The IT team uses NetApp OnCommand management software to efficiently control NetApp storage systems as a single pool of resources across the SAN environment. OnCommand Insight, which will be installed shortly, will help the staff perform activities such as monitoring and optimizing the performance of virtual servers. OnCommand Protection Manager, NetApp SnapMirror® technology, and NetApp SnapVault® technology help protect Broncos administrative staff and football team data through replication between data centers over the wire.



**Figure 1)** Denver Broncos deployed NetApp FAS2240 storage systems in the primary and secondary data centers running Data ONTAP 8 operating in 7-Mode and stores more than 50 terabytes of data. The NetApp solution supports the new PlayerLync application, the organization's Microsoft Great Plains accounting software, and the ThirdLight digital media management server.

Snapshot™ and SnapRestore® technology, the Virtual Storage Console, and SnapManager for Microsoft Exchange and Microsoft SQL Server protect data locally.

### Business Benefits

#### Doing things better and faster in IT

NetApp OnCommand management software and a highly flexible data infrastructure enable the IT team to quickly and effectively manage and modify the storage environment to accommodate data growth and changing Broncos requirements. Also important, the staff can make even extensive changes to the environment without disrupting critical day-to-day Broncos operations.

“With our previous storage solution, we were very restricted in our data management, making it difficult even to grow CIFS share volumes,” says Newman. “NetApp allows us to manage our data far more intelligently. We can resize Microsoft SQL Server volumes on the fly, doubling the space while the virtual servers continue to run and employees continue to access important application data.”

Smarter, streamlined storage management translates into a highly responsive IT organization. “We can simply do things better and faster with NetApp, and with no impact to the Broncos staff in costly downtime,” notes Newman.

“Whether our accounting team is managing financial data or Broncos players are viewing videos in our training facility on their iPads, they can keep doing what they’re doing.”

#### Protecting invaluable Broncos data

NetApp backup and recovery solutions help protect critical team and organizational assets with 90 days of local backups ready for quick restoration and remote, replicated data for recovery in the event of a disaster. The staff replicates data between the stadium and training facility 20 miles away, eliminating the need for physical storage space and tape backups while reducing the risks of a disaster.

“We no longer have to call the off-site tape storage company and spend valuable time and money waiting to recover lost data,” says Trainor. “We just log into the NetApp OnCommand management console and in minutes can retrieve the requested files or data, which reduces capex and opex and helps us better serve the Broncos staff.” With a comprehensive, reliable business continuity plan, the Broncos can protect vital training, medical staff, video team, media relations, advertising, financial, and other operations. They also secure critical, confidential data such as player medical records, playbooks, staff salaries, and corporate e-mails related to trade negotiations.

#### Early adoption and ongoing innovation

The flexible, secure NetApp storage environment and advanced storage management capabilities continue to support Broncos technology initiatives. For example, Broncos IT and video staff members recently collaborated to deploy Apple iPads to more than 130 mobile players, coaches, managers, and support staff. The iPad-accessible data resides on virtual servers running on NetApp. Via WiFi, the Broncos team can view clips of plays and opponent game footage within hours of a game or practice, whether in the locker room or training facility or at home.

The Apple iPads can also access collaboration and itinerary tools, as well as a digital playbook that is always current via the PlayerLync application. The online playbook eliminates the cost and complexity of producing 500-page hard-copy playbooks that required manual updates and reprinting several times per week. The online playbook stored on NetApp storage also gives players more time to review plays before and after games.

The IT staff has a clear understanding of their vital impact on operational efficiency and, most important, Broncos team success. “We’re both early adopters of new technology and effective at

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**Chris Newman**

IT Architect, Denver Broncos Football Club

leveraging proven technologies,” says Trainor. “With a flexible, dynamic NetApp environment supporting innovative tools such as Apple iPads running PlayerLync with digitized playbooks and video, the entire Broncos organization can better support the Broncos team in taking on the opposition while we attract and retain fans for years to come.”

#### SOLUTION COMPONENTS

##### NetApp Products

NetApp FAS2240 storage systems  
Data ONTAP 8 operating in 7-Mode  
OnCommand Unified Manager  
Snapshot and SnapRestore technology  
SnapManager for Microsoft Exchange and SQL Server  
Virtual Storage Console  
SnapMirror  
SnapVault  
Deduplication

##### Protocols

CIFS  
iSCSI  
Fibre Channel

##### Third-Party Products

VMware vSphere  
Cisco Nexus 7010 series switches  
Cisco 3750 series switches  
Cisco 2504, 5508 wireless controllers  
Cisco 3500 and 3600 series access points  
Microsoft Great Plains  
ThirdLight  
Citrix  
PlayerLync

##### Partner

Peak Resources  
[www.peakresources.com](http://www.peakresources.com)

##### Environment

Applications: Microsoft Exchange 2007, 2010

Database: Microsoft SQL Server 2005, 2008

Server platform: Microsoft Server 2003, 2008



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