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## Success Story

# Pierce County Cuts TCO for Storage, Improves eDiscovery and Compliance with NetApp and NearPoint



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### KEY HIGHLIGHTS

#### Industry

Government

#### The challenge

Improve storage utilization and data recovery capabilities; archive e-mail to comply with state requirements.

#### The solution

Deploy NetApp® storage at data center and disaster recovery site. Use Iron Mountain's Mimosa NearPoint™ to archive e-mail and NetApp SnapMirror® to replicate critical data.

#### Benefits

- Projected 70% reduction in TCO for storage for unstructured data
- \$1.9 million over 5 years in projected savings by consolidating direct-attached storage from distributed file servers
- 26 hours of staff time reclaimed per week formerly spent handling e-discovery requests

### CUSTOMER PROFILE

The second most populous county in the state of Washington with just over 800,000 residents, Pierce County encompasses the greater Tacoma area and is home to Mount Rainier, one of the highest mountains in the continental United States. Pierce County Information Technology Department provides IT services to the county's 3,100-plus employees, with the continued goal of centralizing and standardizing technology resources among the various departments to optimize processes and reduce costs.

### THE CHALLENGE

One of the IT department's primary goals was to improve storage utilization and eliminate storage silos. To make sure servers had enough storage capacity, the team overprovisioned them with all the direct-attached storage they were projected to need over their useful life, resulting in significant up-front capital expenditures. In many cases data was duplicated across departments, especially on file servers that also doubled as e-mail post office servers, wasting capacity.

Since each department managed its own storage, data protection tasks—including backups and restores as well as off-site tape

management and rotation—were performed by 30 to 40 non-IT employees across the organization in a decentralized fashion.

"We did a cost analysis and estimated that, with our distributed model, we were dedicating the equivalent of three to four full-time employees' time to managing storage and backups," says Russ Tena, systems engineer supervisor, Pierce County Information Technology Department. "We knew we had to centralize storage to be more efficient, but we had to make sure it would be something the departments would actually use."

Pierce County had past experience provisioning SAN storage using an EMC CLARiiON system, but that decade-old project was unsuccessful due to the comparative high cost. "When it was budget time and departments had to choose between going with space on the EMC SAN or direct-attached storage, it always looked so much cheaper to just keep doing things the way they always had with direct-attached storage," says Tena.

Disaster recovery (DR) and compliance presented additional challenges, as changes in state law regarding records retention now required governments to archive e-mail and other important documents, and protect that data with off-site backups.

“The challenge for municipal governments is that we’re being asked to retain much more electronic data for longer periods of time. We needed dynamic, cost-effective, resilient, redundant fast storage, and NetApp is proving itself in those areas.”

**Russ Tena**

Systems Engineer Supervisor, Pierce County Information Technology Department

“We had tapes going off site before for disaster recovery purposes, but recovering e-mail and other data for users was very challenging,” says Tena. “We had a Groupwise environment with around 40 distributed post offices. When an e-discovery or public information request came in for digital information that wasn’t in our print files, we used to be able to say that we don’t keep that data by policy, but the new state directives changed that. It was becoming very onerous for IT to respond to e-discovery requests from HR and legal, and we spent many hours every week doing that.”

#### **THE SOLUTION**

Pierce County Information Technology Department responded to the challenge by consolidating its Groupwise post offices into a Microsoft® Exchange Server 2007 environment and centralizing application, database, and file storage on NetApp systems.

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Because NetApp’s unified storage platform accommodates a variety of connectivity protocols, Pierce County is able to use the NetApp systems for all of its tier-1 storage

needs. “We can use Fibre Channel, iSCSI, NFS, CIFS—whatever is the best fit for a particular application or server,” says Tena.

A NetApp FAS3140 cluster now supports the county’s Sybase and Microsoft SQL Server® databases, as well as its Microsoft Exchange infrastructure, via Fibre Channel LUNs.

The county is in the process of upgrading its VMware® environment to VMware vSphere™ 4, and will utilize NAS-NFS connectivity instead of dedicated LUNs to conserve storage space in its virtual environment. To combat departmental data silos, Netware file servers are gradually being consolidated onto the NetApp as well and are accessed via NAS-CIFS.

For e-mail archiving, Pierce County selected Iron Mountain’s Mimosa NearPoint for Microsoft Exchange software. NearPoint provides complete capture of Exchange information for compliance and e-discovery purposes. Continuous Application Shadowing captures Exchange log files the instant they are committed to disk, and all e-mail content extracted from the log files is indexed and stored with single-instance storage.

The county uses NetApp Snapshot™ technology to take nightly point-in-time copies of the NearPoint archive and index data, as well as its VMware environment. NetApp SnapMirror software then replicates the

incremental changes over the WAN to a NetApp FAS3020 cluster at a DR site four miles away. “We’re replicating all unstructured data, including consolidated file server data and a large repository of scanned images used by imaged-enabled applications,” says Tena.

#### **BUSINESS BENEFITS**

##### **NearPoint enhances e-discovery**

NearPoint e-discovery allows Pierce County to prepare complex e-mail search requests for legal, public information, media, and internal investigations much faster. “Comprehensive searches that used to take days to craft prior to NearPoint can now be accomplished much quicker, sometimes in less than an hour,” says Tena. “Assurance and validation of a complete and accurate search result can be obtained with far less effort using the NearPoint e-discovery application against the archive as compared to the very time-intensive processes we used in the past.”

##### **Recovering e-mail in minutes instead of days**

NetApp SnapMirror in conjunction with NearPoint is allowing the county to achieve a full NearPoint archive recovery point objective of 24 hours. “SnapMirror gives us the peace of mind of knowing that our

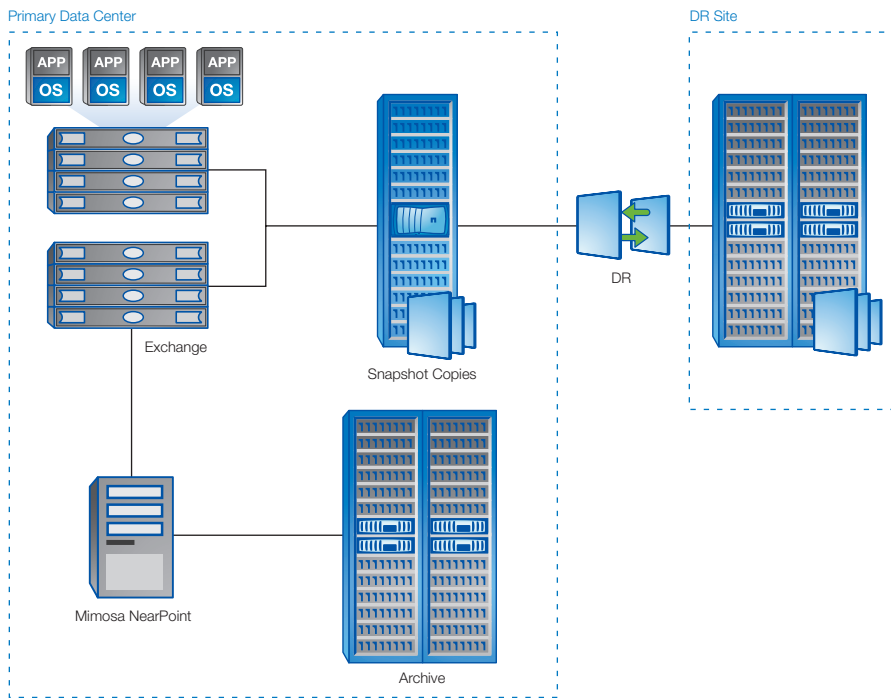


Figure 1) Pierce County, Washington storage infrastructure.

NearPoint archive, scanned images, and virtual machines are replicated to the DR site every night,” says Tena.

Since the county has not experienced a disaster, the most significant benefit has been the ability of users to retrieve e-mail from the NearPoint archive on their own. “Even if a user requires assistance from our help desk, it still takes a maximum of 15 to 20 minutes,” says Tena. “But NearPoint is very easy for non-IT employees to use, which was one of our requirements. Most of our users are able to recover e-mail themselves in less than five minutes. In our old world, it took days to recover even a single e-mail by the time we located the tape, found space to restore, and restored the Groupwise post office.”

#### **Saving 26 hours of staff time a week**

By having self-service archive search capabilities for e-discovery, Pierce County is saving 26 hours of staff time across the county per week. And once the file server consolidation and data migration are complete, the county expects to save an additional 83 hours of staff time every week on directory management, hardware deployment and maintenance, storage management, and data protection tasks.

NetApp SnapManager® for Virtual Infrastructure automates the Snapshot and replication process for the county’s VMware environment, saving further IT staff time. “We were able to eliminate a third-party backup and recovery software package because of the rich functionality of SnapManager for Virtual Infrastructure,” says Tena.

#### **Projected 70% reduction in TCO for storage**

By using NetApp FlexVol® to create “just-in-time” virtual volumes that can be managed and moved independently from physical storage, Tena’s team can defer capital investments in storage until additional capacity is actually needed, instead of overprovisioning from the start. “This is a quantum leap for us,” says Tena. “We can meet storage needs today and monitor how volumes grow, and dynamically add capacity when and where we need it.”

The immense staff time savings coupled with a threefold improvement in storage utilization is drastically reducing the county’s total cost of ownership (TCO) for storage.

“Our recent cost analysis indicates that we will see at least a 70% reduction in total cost of ownership as we consolidate our distributed file server data onto NetApp storage

systems. We also have vastly improved delivery of all e-mail compliance via NetApp and Iron Mountain NearPoint,” says Tena. “And that’s due entirely to better resource utilization.”

The county projects that it will save \$1.9 million over 5 years by consolidating direct-attached storage from the distributed file servers onto the NetApp systems, Tena reports.

#### **Zero downtime since deployment**

The county has not experienced any downtime since deploying the NetApp systems, and NetApp SupportEdge Premium with Premium AutoSupport™ keeps availability high by “phoning home” and alerting NetApp support staff of any problems with the storage. “NetApp has excellent support, and they’ve always been there for us,” says Tena. “We’ve called them in the middle of the night before, and they stayed on the phone with us until the issue was resolved.”

Future plans at Pierce County include using NetApp deduplication, which complements NearPoint single instance storage, to make even more efficient use of storage capacity. NearPoint customers who utilize NetApp deduplication can realize storage capacity savings for e-mail from 30% to 70%<sup>1</sup>, while file shares and virtual environments are also

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prime candidates. The county's testing of NetApp deduplication showed a 44% space recovery on an unstructured data repository.

“We're very satisfied with NetApp and NearPoint, and I can confidently recommend the combination to other municipal governments that are dealing with similar challenges,” Tena concludes.

#### SOLUTION COMPONENTS

##### NetApp products

NetApp FAS3140 active-active system

NetApp FAS3020 active-active system

Data ONTAP® 7.3.2 operating system

NetApp FlexVol software

NetApp SnapDrive® for Windows® software

NetApp SnapManager for Virtual Infrastructure software

NetApp SnapMirror software

NetApp Snapshot software

##### NetApp Global Services

SupportEdge Premium with Premium AutoSupport

##### Protocols

FC SAN, iSCSI, NAS-CIFS, NAS-NFS

##### Environment

Applications: Microsoft Exchange Server 2007; Iron Mountain NearPoint for Microsoft Exchange

Databases: Sybase, Microsoft SQL Server 2005

Server Platform: HP ProLiant servers running VMware ESX Server and Microsoft Windows Server

Users: 3,100+ mailboxes

##### NetApp partner

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NetApp creates innovative storage and data management solutions that deliver outstanding cost efficiency and accelerate performance breakthroughs. Discover our passion for helping companies around the world go further, faster at [www.netapp.com](http://www.netapp.com).

1. *Mimosa NearPoint on NetApp—A Complete Solution for Email Archiving, Disaster Recovery, and Cost-Effective Storage:* [www.mimosasystems.com/docs/partners/Mimosa\\_JPWP\\_NetApp\\_3.pdf](http://www.mimosasystems.com/docs/partners/Mimosa_JPWP_NetApp_3.pdf)

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