

Municipality consolidates IT, cuts costs, improves service

Greater availability with less support overhead



“With our new HP business technology upgrade, we easily add storage as we grow and enjoy higher data availability and IT performance. It gave our whole infrastructure a lift and improved our service delivery.”

– Bent Ole Enevoldsen, Technology Group leader,
Bornholms Regionskommune

HP customer case study: A SAN platform comprising an HP StorageWorks 8000 Enterprise Virtual Array, StorageWorks 6518 Virtual Library System, EML245e Tape Library, Data Protector Software, and HP ProLiant servers

Industry: Government

Objective:

Align business technology investments with strategic service and growth plans by improving backup efficiency, storage capability, and availability – while ensuring continuity of services

Approach:

Deploy an HP SAN and backup solution built on StorageWorks technologies; implement server virtualization using VMware on ProLiant DL380 servers and the HP BladeSystem with HP ProLiant BL25p server blades

IT improvements:

- Simplifies storage management for improved resource use and reduced labor
- Yields fast deployment of new servers and applications to meet service demands
- Accommodates growth with easily scalable storage
- Reduces backup times by 60%
- Lowers tape costs

Business benefits:

- Increases continuity and availability of resources across the Infrastructure
- Provides better information support for enhanced, real-time decision making
- Reduces IT infrastructure support costs
- Enhances storage utilization and optimizes IT investment
- Answers customer’s demands for faster, more responsive service
- Improves data protection and recovery



IT consolidation: better service, lower costs, happy island

Summer visitors flock to the beautiful Danish island of Bornholm, a Scandinavian Riviera on the Baltic, doubling its year-round population of 43,000. The regional municipality serves them all – better than ever – with enhanced capabilities provided by its recent business technology infrastructure upgrade.

Historically, Bornholm had six administrative regions of government, each with its own processes and IT infrastructure. The result? Too many employees, operational disconnects, and decisions going in the wrong directions. More than 20 different data backup schemes and many separate networks made it chaotic and difficult to store, manage, and access information. In 2003, the citizens spoke out in a public initiative to demand greater efficiency, lower costs, and better service. In response Bornholm consolidated the six regions into one, Bornholms Regionskommune (BRK), precipitating many changes.



“The first hurdle was to choose a first-rate hardware and software partner,” says Bent Ole Enevoldsen, BRK’s Technology Group Leader. “We wanted one consistent product line, so we chose HP since it offered the most comprehensive, robust solutions.” The IT group built a large data center in one of its facilities, and consolidated 150 mixed-vendor servers with mostly direct attached storage in six regions down to 80 HP ProLiant servers in one region connected to an HP SAN. This effort saved server administration time, improved efficiency, and provided savings of approximately 30 percent. BRK also reduced its multi-networks to two – one for regional city administration and one for the island educational system, which together serve approximately 3,000 municipal employees.

A clear path for shared resources

Easier, broader access to data, along with hand-held and wireless technologies, led to more traffic and higher data volumes. “We have greater volume today because almost everybody has a PC and many have two,” says Enevoldsen, “and the schools have many more PCs and other devices.”

The BRK staff sought to back up everything to the SAN – including telephony, voice, pictures, and wireless. However, due to limited capacity and an incomplete storage architecture, the Bornholms IT group began to find backups increasingly difficult. Explains Enevoldsen, “A year ago, we found we couldn’t perform complete backups of all our data because we ran out of time. It took the entire day – a huge problem.”

Working with the BRK team, HP Services designed a comprehensive enterprise storage and backup solution to promote business continuity and availability, handle

the increased storage demands, boost overall performance, and improve customer service – without sacrificing the advantages gained through centralization.

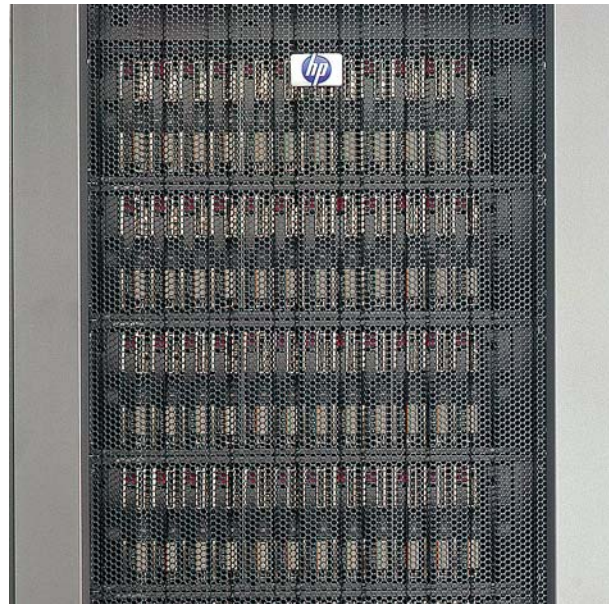
The new infrastructure centers around an HP SAN based on the StorageWorks 8000 Enterprise Virtual Array, tape libraries, ProLiant servers, and Data Protector software. “Information that used to be sequestered away in city government files is now readily available to the people,” says Enevoldsen. “They can access municipal services, view aerial photographs of their property, and consult underground cabling and pipe diagrams when remodeling their properties.” The server and storage consolidation meant not only greater operational efficiencies and improved service, but also increased information flow for better decision support in planning, coordinating, and executing municipal initiatives.

The SAN is an HP EVA8000 with 10 TB capacity – enough to accommodate storage needs for the foreseeable future – and easily expandable thereafter. The EVA8000 provides snapshot capabilities that enable immediate use of the clone copy, saving significant time. Staffers use copied data as a test platform for application changes, additional performance benchmarking, or for tape backups. Using the HP StorageWorks Command View EVA software, the business technology group monitors and configures the disk arrays from a single web-based console. This enables them to maintain high availability and disk utilization efficiency for optimal systems performance.

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on the market and it makes us highly efficient,” says Enevoldsen. “With our new storage system, we easily add storage as we grow and partition it as needed. It is simple to automate storage tasks and provision additional storage groups using Command View EVA. It literally takes minutes to perform these actions.”

Backup anytime, protect data all the time

To solve the backup challenges, Enevoldsen chose an HP StorageWorks EML245e Tape Library, a StorageWorks 6518 Virtual Library System (VLS6518), and Data Protector software. Using HP StorageWorks Ultrium 960 tape drives and the EML245e system with Ultrium3 tapes, the IT group gains high capacity at low cost and robust data protection. The VLS6518 is also a dedicated backup device that emulates a physical tape library which quickly stores backup images to disk. HP Data Protector software ties it all together, facilitating and monitoring the entire backup process – and ensuring data availability and continuous operations to meet business-driven recovery-time objectives.

Says Enevoldsen, “With nearline backup, disk backup, and our new, large tape robots, we can backup data at any time of the day. HP Data Protector software puts the data on to the VLS library in a couple of minutes and then we can copy it to the EML tape library with Ultrium3 tapes. So, backups are not a problem anymore and our data is protected at all times. With the HP Virtual Library System, we’ve made our backup activities much easier – and 60 percent faster.”

As part of the redesign, the municipality augmented the workhorse HP ProLiant DL380 servers with four HP ProLiant BL25p server blades running VMware ESX Server, which creates 50 virtual servers. Engineered collaboratively with VMware, the BladeSystem makes the most efficient platform possible, enabling the staff to increase processing power for its applications without adding to the hardware footprint and costly data center real estate. Virtualization enables BRK to run multiple applications independently, each within its own isolated partition – or virtual machine – on the same industry-standard server. Says Enevoldsen, “With VMware and the ProLiant Rapid Deployment Pack, we can install and test new servers much more speedily and easily. This enables us to roll out new services faster – with less expense and greater control.”

Tying it all together for continuous uptime and best service

By implementing an end-to-end uniform environment with HP servers and storage, BRK has gained control of present demands and established a clear path forward. Looking ahead, BRK plans include a wireless LAN, deploying more HP Blade servers, and additional application virtualization. “We have more than 300 applications,” says Enevoldsen, “and many would be good candidates for virtualization.”

The real measure is user satisfaction with the service, and there the BRK team scores high. “Many people are very satisfied with the improvements we have made,” Enevoldsen concludes. “They give me many positive responses, which lets us know we’re on the right track with our business technology upgrades.”

