



# City of Mandurah refreshes storage to improve performance

## Fast, reliable HPE SAN provides expandability

### Objective

Replace Ageing Storage Area network which had reached the end of its life, and was failing to provide required performance

### Approach

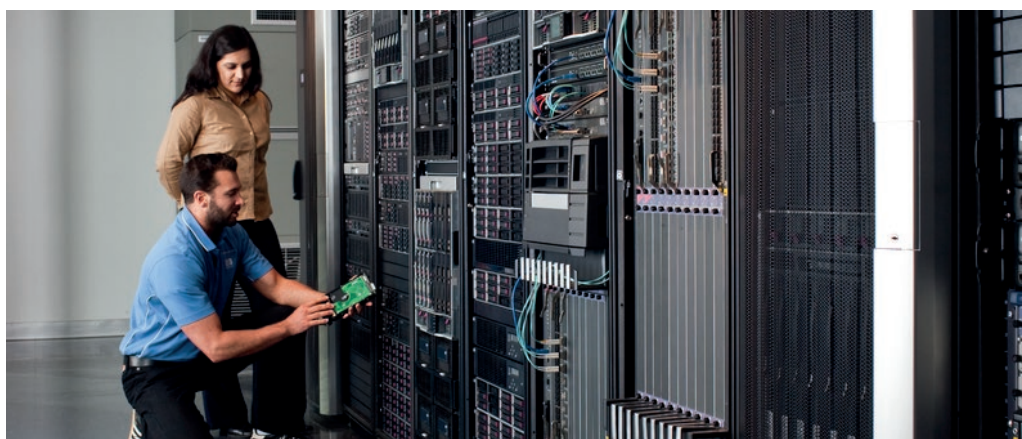
Issued request for quotes, and compared proposals received from storage vendors

### IT Matters

- Delivered reliable system with 100% uptime
- Saved time due to fast, hardware-based thin provisioning
- Increased flexibility, with option to add more controllers as required

### Business Matters

- Boosted performance, improving responsiveness of applications and business efficiency
- Provided the expandability and flexibility needed to cope with future demands, including potential move to a Virtual Desktop Infrastructure (VDI)
- Supplied the SAN on a four-year lease funded by HPE Financial Services



When its existing SAN was ageing and needed replacing, the City of Mandurah chose HPE 3PAR StoreServ Storage. The new SAN boosts performance and improves application responsiveness. It provides an expandable, reliable solution that will cope with future growth.

### Challenge

#### Meeting the demands of a growing population

For local and regional governments around the world, IT is an essential tool. Whatever the size of a town or city, having the right technology helps ensure the quality of service delivery is as high as possible.

Located on the Western Australian coast, the local government of the City of Mandurah provides a broad range of services, with a total annual budget of around USD94 million. The city has around 73,000 inhabitants in an area of more than 170km<sup>2</sup>, and often handles large numbers of visitors and tourists. Mandurah expects its population to double by 2031.

The city's IT infrastructure needs to keep pace with this growth. Concerned with its ageing Storage Area Network (SAN), the city's IT team began the search for a replacement.

“It all comes down to performance. The old storage array couldn’t cope with the day-to-day load and was always slow. With the new Hewlett Packard Enterprise system, staff really appreciate how fast everything is. Business efficiency has improved tremendously.”

– David Janiec, team leader, Infrastructure, Communications and Technology, Systems and Technology, City of Mandurah

“The previous SAN was well overdue for replacement, and it was kept for five years when it really only had a lifetime of about three,” says David Janiec, team leader, Infrastructure, Communications and Technology, Information Services at the City of Mandurah. “The storage system wasn’t performing well enough.”

Janiec conducted an in-depth analysis of the city’s needs, and looked for a solution that would provide high availability, high performance, disaster recovery features, and the ability to support a Virtual Desktop Infrastructure (VDI).

## **Solution**

### **Cost, support – and the flexibility to expand**

The city issued a request for quotes, and having reviewed the proposals it received, it chose HPE 3PAR StoreServ 7400 Storage.

“There were various reasons for choosing Hewlett Packard Enterprise (HPE),” says Janiec. “The HPE SAN was competitive on cost, and provides room for expansion as well as relatively easy replication. This may become important as we consider adding a disaster recovery site.

“We already had a good relationship with HPE, and were using HPE servers – and the support we received had been excellent,” continues Janiec. “Also, we leased the SAN through HPE Financial Services on a four-year agreement, which was helpful.

“The 7400 series can be a quad controller but we’ve bought a dual controller with the option to expand later,” says Janiec. “This was a selling point, as I’m not aware of any other vendor offering this option. We’re considering moving to a VDI, so we wanted a solution that will step up to the plate if we need it.”

### **Storage for all business applications**

The HPE 3PAR StoreServ is a single, standalone storage system for all of the city’s servers, and provides storage for all operational applications, database servers and archives. The city has a virtualised environment running on VMware®, with over 150 virtual machines on 14 HPE ProLiant BL460c server blades.

The servers run business applications for the city’s 600 employees, including finance, property systems, document management, point of sale, email and collaboration.

It also hosts the city’s website which provides services such as leisure centre bookings. Janiec comments, “Everything hangs off the storage, so you can’t use our network without touching the SAN.

“3PAR can do all of this because of its tiering features provided through the HPE 3PAR Adaptive Optimization software,” says Janiec. “This means we can have the fastest, most expensive flash disk in the same system with the slowest, most cost-effective disk. This reduces our administrative load because we don’t have to move items around between different cost structures.”



The city also uses two HPE P2000 Disk Arrays as a backup system with CommVault software. Janiec says, “They’re very affordable, very fast and very reliable – you don’t normally get all three features in one product.”

HPE Technology Services designed the solution for Mandurah, and handled the implementation of the new SAN. Janiec comments, “The implementation took three days, including HPE Technology Services providing training and knowledge transfer such as showing me how to migrate items – it was all well-orchestrated.

“The transition was straightforward and easy, with no problems,” he adds. “We did the changeover in the middle of the day with zero downtime, and the users only noticed when their applications ‘magically’ started getting faster.”

## Benefit

### Fast performance improves business efficiency

“In terms of benefits, it all comes down to performance,” says Janiec. “The old storage array couldn’t cope with the day-to-day load and was always slow. The new HPE system is faster, and we have not pushed it near its limits yet.

“People noticed how slow everything was with the old system, and were tearing their hair out,” says Janiec. “They really appreciated how fast everything was with the new storage, and it was very much welcomed – and business efficiency has improved.”

According to Janiec, the interface for the 3PAR management console is intuitive and works well. This is important as he is one of a team of only three people handling ICT. He comments, “I was having to look at the old system every day because it couldn’t keep up, and I was constantly putting out fires – I don’t need to do that anymore.

“I don’t need to do anything with the SAN, and it just continues to work. The system practically manages itself.”

Mandurah uses the SAN’s thin provisioning features to improve utilisation. Janiec says, “The 3PAR system does thin provisioning better than other vendors’ products, which was one reason we picked it. The zero detect is quicker, and HPE runs thin provisioning in hardware which is faster than the software alternative provided by some systems.”

The SAN has a small form factor, and fits into only about two feet of space compared to the full height cabinet of the previous system.

### 100% uptime

According to Janiec, the 3PAR system has been reliable, and has delivered 100% uptime to date in the first five months of usage. He comments, “The SAN is a mission-critical bit of equipment, and is designed to not go down.”

## Case study

City of Mandurah

## Industry

Local government

## Customer at a glance

### Application

Business applications including finance, property systems, document management, point of sale, email and collaboration

### Hardware

- HPE 3PAR StoreServ 7400 Storage
- HPE P2000 Disk Array
- HPE ProLiant BL460c server blades

### Software

- HPE 3PAR Adaptive Optimization
- CommVault backup software

### HPE services

- HPE Technology Services installation
- HPE Proactive Care Services
- HPE Financial Services

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HPE Technology Services provides Proactive Care support, and includes remote monitoring of the status of the system. For example, if there was a disk failure, HPE would be notified automatically and organise a replacement. Plus, HPE will help prevent problems from occurring with personalised reports with data analysis and advice.

Janiec comments, “HPE has been helpful, and from past experience with HPE servers I know the support is fantastic and they’ll drop everything 24x7 to get problems sorted.”

For the future, the city is looking to add full disaster recovery features, which will be helped by the remote copy software it purchased with the HPE SAN. It also plans to buy more disks to increase capacity, and potentially add extra controllers.

“With the planned VDI project, there’s no straight linear metrics that predict the performance required in the SAN,” says Janiec. “So we need a system that will give us as much headroom as possible.

“I’ve been here 11 years and the staff numbers have grown from 220 to 600, and the population of the city continues to grow, putting more demands on our IT systems,” says Janiec. “That was one of the reasons we chose the HPE SAN, we know it’s expandable and it’s good to know we’re not going to hit constraints within the system any time soon.

“With the 3PAR, we can just add a single disk and the system rebalances to incorporate that disk,” he adds. “Most, if not all, other SANs require you to rebuild the group, and you can’t just add a single disk – but because of the way the HPE system breaks the data down, it’s just so easy to expand it.

“The HPE SAN is cost-effective and very high performance, and enables us to just pay for what we need and then expand it when required,” concludes Janiec.

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