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Nimble Solves Storage Capacity and IOPS Problems For Tasmania Police

Tasmania's Department of Police and Emergency Management (DPEM) brings together the State's critical emergency and disaster management competencies — including Tasmania Police, the State Emergency Service, Forensic Science Service Tasmania and the Tasmania Fire Service – under one umbrella. The Department is also home to a dedicated Information Technology Services (ITS) team that looks after the infrastructure, computing and the application needs of each component organisation.

A New Data Centre

In early 2013, one of ITS' priority projects was to increase storage capacity for three of its four sub-agency users. DPEM was in the process of commissioning an external, second data centre as part of its disaster recovery contingency planning. Both the existing and new centres would primarily contain VMware virtual servers, plus a number of stand-alone LINUX and Solaris servers. They would be backed up by a Storage Area Network (SAN) and connected by dark fibre. The only problem was Tasmania Police's existing SAN was already stretched to capacity.

The SAN had been in place for three years and had outgrown its capabilities, primarily from a disk capacity and IOPS (input/output operations per second) perspective. One of the organisation's biggest issues was that it was disk-bound as a result of trying to backup multiple jobs. It was time to go to market, to find another product to solve the problems and future proof the organisation.

ITS approached four organisations with a list of essential storage requirements including an increase in capacity, the ability to resolve IOPS concerns, plus a shift from fibre channel to iSCSI. One of the companies approached was Staples, an integrator that ITS has worked with on numerous occasions over the years. In turn, the integrator introduced ITS to Nimble Storage, the vendor behind Staples' own storage solution.

Solid State Cost Benefits

The ITS team says that one of the key differences between Nimble and the others is that the traditional vendors have been slow to take up solid state technology within their arrays. To compensate for this, they often put in more disk to achieve a similar level of IOPS. This of course means they either have to heavily discount their prices or they aren't price competitive.

Another feature of dealing with Nimble is they offered up their hardware on a trial basis so that ITS could demonstrate that it would be fit for purpose.

After considering the responses from the four vendors, the ITS team settled on the Nimble Storage CS260G, a solution designed for enterprise as well as mid-sized IT organisations. The array would be deployed immediately within the new data centre and become responsible for the organisation's virtual machines and Windows environment including SQL, Active Directory, Exchange and a variety of hosted policing applications.

Meanwhile, at the original data centre, the old SAN would continue to manage legacy workloads. Eventually, when budgets permit, the ITS team plans to replace this SAN with another new solution that will enable replication between the two data centres.

Support on the Ground, When You Need It

Deployment in April 2013 proceeded without a hitch taking no time to configure and install.

Storage Profile: Tasmania Police

Customer Challenges

- Existing SAN had outgrown its capabilities due to insufficient disk capacity and IOPs capacity
- Regular disk-bind as a result of trying to backup multiple jobs

Solution

- Nimble Storage CS260G

Business Benefits

- Dynamic allocation of workloads
- Ease of management and maintenance. Firmware upgrades can be conducted on the job during operation
- Small rack unit requirements resulted in space and cost savings in external data centre
- Effective support for disaster recovery contingency planning

Nimble provided the organisation with a tech support person on the ground. Right from the start, ITS never had any trouble getting responses to its queries.

IOPS Problems Solved

With the new storage in place, the IOPS problems at DPEM have disappeared. The organisation now has plenty of headroom and has been able to solve those pain points that it previously had. This is due to Nimble's use of solid-state drives and its architecture, which enables dynamic allocation of workloads.

The team also like the ease of management and maintenance offered by the device. Firmware upgrades can be conducted on the job during operation.

Nimble's automatic job resolution has proven to be a time-saver, with ITS able to rely on Nimble's alerts regarding potential problems and their recommended solutions. The IT team has found that Nimble pretty much tells it what they need to do every time there is a problem. This compares to previous practices where the team would have to diagnose a problem and then wait for advice to resolve it.

Finally, size was a major factor in the ITS team's selection of Nimble. With an external data centre, the organisation now pays for rack space so it needs to accommodate as much as it can in as small a space as possible. The small number of rack units is a feather in Nimble's cap.