



whg safeguards data with reliable backup

HPE StoreOnce Backup uses deduplication to extend retention from three weeks to six months

Objective

Safeguard critical data and eliminate wasted time by implementing a new backup solution

Approach

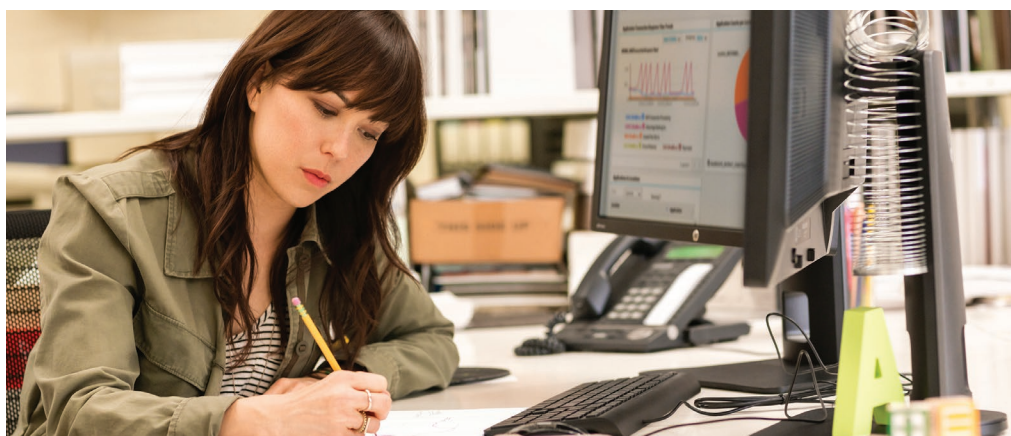
Contacted its existing provider HPE and decided on a Virtual Tape Library solution following extensive consultations and product demonstrations

IT Matters

- Uses deduplication technology to achieve a data consolidation rate of 16:1
- Delivers backup speeds of up to 7GB per minute
- Increases backup period from three weeks to six months

Business Matters

- Eliminates routine troubleshooting, freeing IT staff for more business critical work
- Provides reliable backup of business critical data
- Reduces expenditure on disks, energy, space and cooling



Growing data volumes and ageing backup systems were a challenge for leading Midlands housing provider whg. Capacity was insufficient and staff spent too much time troubleshooting the failing systems. The organisation needed a new and more reliable backup solution and found the answer with HPE StoreOnce Backup and HPE StoreEver Tape Libraries.

Challenge

Daily problems

Changes in the provision of social housing have seen most of the UK's council-owned properties transferred to non-profit housing associations and whg was formed in 2003 following such a transfer from Walsall Council. Having invested more than £350 million in the 19,000 properties it owns and manages, whg is now one of the largest and most successful housing providers in the West Midlands area. It houses 40,000 people who make up one fifth of the local population.

whg's 19-strong IT team is divided into three groups who provide first line, system and technical support for 700 employees with 600 devices and are also responsible for the production and disaster recovery data centres.

“The peace of mind, reliability and trust we have in the HPE StoreOnce Backup has really revolutionised the way we do our backups.”

— Andrew Fox, IS technical architect, whg

The organisation is a long-time customer of Hewlett Packard Enterprise, starting with ProLiant DL servers and recently moving to high density HPE c7000 chassis with BL460C blade servers. Its storage infrastructure was founded on an HPE StorageWorks EVA 4400 disk array and when demand increased, a further EVA 6550 array was added.

whg implemented VMware virtualisation five years ago to cope with a growing number of applications and to provide more virtual machines for test and development. Now the majority of systems are virtualised with 62 physical machines removed in a recent recycling collection and another 25 due to go soon.

“Efficient backup is vital to support the file server, email servers, main corporate systems, accounting systems and a multitude of others. It includes the archiving system which is growing considerably because old paperwork for things like tenancy agreements is being scanned and stored on an archive server. For all of that, we need about 15TB of backup capacity,” says Andrew Fox, IS technical architect at whg.

whg runs staged backups using CA Arcserve software. Data is backed up to an HPE ProLiant DL380 G7 server and when the backup is finished, it's migrated to two HPE Storage MSL6060 tape libraries with a total of eight HPE Ultrium LTO4 drives.

However, as data quantities increased and the equipment got older, backup problems started to occur resulting in extra work for the IT staff.

Solution

Deduplication technology

Andrew's first plan was to replace the tape libraries with more up to date models featuring LTO6 drives that are faster and more reliable but HPE specialists suggested Virtual Tape Libraries (VTL). They produced a design based on the HPE StoreOnce 4420 Backup disk-based storage appliance, backing off to a two-drive HPE Storage MSL2024 Tape Library which gives whg the ability to migrate certain jobs to physical tape and have them taken off site.

It also provides the option to access data on all archived backup tapes from a compliance perspective.

HPE StoreOnce Backup systems are designed to deliver daily onsite backup, rapid data restore and reliable off site disaster recovery. They feature HPE deduplication technology which can reduce the amount of backup data you need to store by up to 95 per cent and can deliver industry leading backup speeds of up to 100TB/hr.

“HPE provided a webinar overview of the virtual tape library, gave us access to HPE Labs and also sent in two technical specialists to talk through the product, demonstrate it and answer all our questions,” says Andrew.



“However, what swung the deal for us was that we were able to have the kit on loan for up to three months.

“If you don’t like it HPE come and remove the kit. If you do like it you just pay for it and keep it. That was brilliant because I didn’t want to go through the process of buying something and then find it didn’t operate in the way we wanted or was incompatible with certain backup software. It shows HPE’s confidence in its systems.”

HPE offered as much or as little support as whg required so Andrew and the team did the implementation themselves. It was checked over by an HPE engineer and signed off in two weeks. HPE provides support with a nine to five next business day callout.

Benefit

Reliability and speed

“One of the main things we were looking for was reliability and HPE StoreOnce has just not failed. It’s less mechanical so it’s writing to hard drives and we’ve had no problems with it whatsoever during the year we’ve been using it,” says Andrew.

“The migrations just work and it’s saved us so much time as well because we don’t have to troubleshoot the migrations every day. We were spending two hours a day on troubleshooting and our other work was getting delayed so it’s made us much more efficient because we can trust it.

“We know that those migrations are going to happen and that’s taken a weight off a lot of peoples’ minds, particularly those running our out of hours services. Now people have been freed up to do other tasks.”

whg was creating so much data that even with two huge libraries and over 100 tapes, it only had the capacity to keep backups for three weeks. With deduplication on the virtual tape library it’s now achieving a compression ratio of 16:1 which means it can keep the backups for six months. Deduplication also reduces the number of disks required which reduces space, energy and cooling costs.

Since the staged backup happens in the background there is no impact on the network so backup times are not an issue for whg.

However, even with the added work of deduplication, HPE StoreOnce 4420 is delivering a transfer rate of up to 7GB/min.

As a not-for-profit organisation, whg has so far not computed the amount of money saved but efficiency and service standards have certainly increased. Previously, if someone lost a file it could take 10 minutes to locate and load the appropriate tape. Now, the restore time is around five seconds.

Scalability and compatibility are other benefits as Andrew explains: “HPE StoreOnce 4420 came with two additional enclosures to put the drives in and you can add another one.”

Customer at a glance

Hardware

- HPE StoreOnce 4420 Backup
- HPE StoreEver MSL2024 Tape Library

HPE services

- HPE support with nine to five next business day callout

“We now have a reliable and fast backup solution. The recovery times are really quick and we are able to keep backups for much longer.”

— Andrew Fox, IS technical architect, whg

“We ordered the additional enclosure, it arrived, we racked it up, connected it into the VTL and ran a command to say ‘recognise this enclosure - expand to this enclosure’ and it just did it. You don’t lose anything because the data that is on the existing enclosures just spreads out across the new enclosure.

“It also integrates very well with our backup software. Creating a new VTL is very easy. You just go into the system and create the new library saying what kind of emulation you want, how many drives and how many tape cartridges and it creates it. It has a whole range of emulation types and most backup software will support one of the emulations that HPE StoreOnce 4420 will use.”

Among many future plans, whg intends to implement HPE 3PAR StoreServ Storage system and currently has this solution on test.

“We want to use best practice and new technologies and always work with HPE on that,” concludes Andrew. “We’re told about their roadmap for the future, HPE come to visit us and we have conference calls, presentations and demonstrations. That is the kind of interaction we’re getting with HPE.”

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