

## Case study

# Cloud hosting company saves its customers money with HP storage



**Data Intensity uses HP 3PAR StoreServ Storage to manage rapid and unpredictable storage growth with minimal downtime**

**Industry**  
Technology

### Objective

Provide flexible storage platform to handle growth of individual customer applications, such as Oracle ERP, with minimal downtime with low operating costs

### Approach

Test storage systems from five different vendors to find a solution that is easy to administer and provides thin provisioning, snapshots, and rapid provisioning

### IT matters

- Reduce administration by 75 percent
- Provision new customers 50 percent faster
- Overprovision customer environments to facilitate growth
- Expand storage environment with minimal downtime

### Business matters

- Only charge customers for the storage they are using
- Reduce service downtime
- Minimize data center space required for storage

HP recommends Windows.®

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– Marc Caruso, VP of Enterprise Architecture and Applications, Data Intensity

### Intense ERP systems

Oracle ERP systems are often the most critical IT applications an organization has. Any missteps in administration or hardware configuration can be very costly to a business. Given the complexity of the tasks they perform, the Oracle applications require the correct hardware configuration in addition to specialized expertise for setup and administration.

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Because many customers lack the expertise to deploy and manage Oracle ERP systems cost-effectively, Data Intensity saw a business opportunity in hosting Oracle deployments as a cloud service. It currently hosts 15 different Oracle applications for customers, in addition to hosting more than 200 non-Oracle applications. Data Intensity goes beyond hosting to offer application management and other functional services as well. It will even manage an Oracle environment remotely for a customer.

For its customers, Data Intensity offers a clear value proposition. “Not only are they getting our expertise from an application standpoint, they don’t have to worry about the hardware refresh cycle,” says Marc Caruso, vice president of enterprise architecture and applications at Data Intensity.

## About Data Intensity

Data Intensity is an enterprise cloud services provider focusing on Oracle applications. Founded in 2001, it currently has 240 employees and operates two data centers with about 1,200 virtual servers.

## HP recommends Windows.®

### A demanding environment

Data Intensity requires high performance from its IT infrastructure. “Our business depends on being able to provision our solutions rapidly, ensuring that they are redundant, and controlling our costs so we can save our customers money,” says Caruso.

Data Intensity hosts about 1,200 servers in its environment. Most of the servers are running Oracle E-business Suite and applications associated with it. They run on Oracle Linux and are virtualized using Oracle VM 2.2. Data Intensity also hosts additional types of applications that typically run on Microsoft® Windows Server and are virtualized using VMware vSphere 5.

Given the demands of its environment, Data Intensity has standardized on HP 3PAR StoreServ Storage. It bought its first HP 3PAR StoreServ Storage system in 2008 when it was building its second data center. It evaluated five storage vendors during the selection process and considered capabilities such as thin provisioning, snapshot technology, and the flexibility to move data in real time. “Provisioning storage was a much simpler task with HP 3PAR StoreServ Storage than with the other solutions we considered,” says Caruso. “We could more easily do capacity planning and performance management with HP 3PAR StoreServ and it saved us from asking our customers for downtime because we could do a lot of the work while the storage system was still up and running.”

### Getting into production

Data Intensity first deployed HP 3PAR S400 Storage with two controllers. Next it purchased HP 3PAR F400 Storage with two controllers for its data recovery site. Most recently, it deployed HP 3PAR T400 Storage with two controllers to replace the 3PAR S400 as part of a rolling upgrade utilizing the Remote Copy feature. It also recently upgraded the 3PAR T400 to four controllers.

Data Intensity relied on HP Deployment Services to install all of the equipment. “HP Services do a great job,” says Caruso. “They come in and get everything set up, and when they hand it over to us, it’s ready to go.”

### Expanding on the fly

Data Intensity has seen a lot of demand for its services and has grown by more than 30 percent per year. It has expanded HP 3PAR StoreServ Storage from the moment it deployed them in production. “We like how we can easily expand the systems. As we get more disks or controllers, we can add capacity with the systems running,” says Caruso.

**“We spend about 75 percent less effort managing HP 3PAR StoreServ Storage versus other storage solutions we have used.”**

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Data Intensity has many customers who are growing quickly as well, so it must ensure the performance of their applications as they grow. With HP 3PAR StoreServ, the company can easily handle customers’ growth. “Often we don’t receive much notice when customers need more storage, so having a flexible system like 3PAR StoreServ is important to us,” says Caruso. “When we provision new disks, we must ensure we provide the right level of I/O and that the disks are striped appropriately. With 3PAR StoreServ we can easily manage that. We just put the new disks in the chassis, click a couple of buttons in the management console, and we’re done.”

### Saving customers money

With HP 3PAR StoreServ Storage, Data Intensity can offer its customers lower costs for the services they receive. Data Intensity uses HP 3PAR Thin Provisioning to size a customer’s database storage between 50 to 100 percent larger than currently required so the customer can grow into it over time. “We gain a competitive advantage from the flexibility 3PAR StoreServ provides with thin provisioning and snapshots because we can charge customers only for storage they are actually using,” says Caruso.

## Customer at a glance

### Hardware

- HP 3PAR S400 Storage System
- HP 3PAR F400 Storage System
- HP 3PAR T400 Storage System

### Software

- HP 3PAR Operating System Software
- HP 3PAR Management Console
- HP 3PAR Dynamic Optimization
- HP 3PAR Thin Provisioning Software
- HP 3PAR Virtual Copy Software
- Oracle E-business Suite
- Oracle VM 2.2
- VMware vSphere 5

### Operating system

- Oracle Linux 5.8
- Oracle Linux Unbreakable Enterprise Kernel 5.8
- Microsoft Windows Server 2008 R2 Operating System

### Network protocol

- 4 GB Fibre Channel

### HP Services

- HP Deployment

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Data Intensity also sees another cost advantage by using HP 3PAR Virtual Copy Software to clone customer' non-production environments. Customers can use the snapshots for testing or deploying new applications. "Because we can load the snapshots quickly as customers require them, we don't have to keep non-production environments in storage and our customers only pay for one set of their data," says Caruso. "Some of our customers have a dozen non-production environments, so they can save quite a bit of money and we don't have to allocate additional SAN [storage area network] space for those extra environments."

## Keeping costs low

With HP 3PAR StoreServ, Data Intensity can reduce costs by minimizing the data center space required for storage and by enabling efficient management and operations. Because it uses the 3PAR Virtual Copy and Thin Provisioning software, it uses fewer disks, which reduces both the density of the units and number of chassis required. "We don't want to occupy valuable data center real estate with multiple storage chassis," says Caruso. "We get a lot of storage in a small footprint with 3PAR StoreServ."

Data Intensity finds that the HP 3PAR Management Console and the HP 3PAR Operating System make provisioning and management easy. Only one storage administrator manages three HP 3PAR StoreServ systems. To help ease administration, Data Intensity uses HP 3PAR Dynamic Optimization Software to rebalance storage volumes to help ensure optimal volume distribution and continuous performance. "We spend about 75 percent less effort managing HP 3PAR StoreServ versus other storage solutions we have used," says Caruso. "With older storage solutions, the administrator spent a lot of time planning where to move things when customers needed additional storage and then coordinating with customers to plan downtime to implement changes. With HP 3PAR StoreServ, we can use Dynamic Optimization software to manage the storage with no downtime."

The storage administrator no longer spends hours planning a new storage environment for a customer. "With the HP 3PAR StoreServ it takes about 50 percent less time to provision a new customer," says Caruso. "Now our storage administrator can focus on tuning the system to improve performance rather than on provisioning storage."

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Data Intensity has also reduced administration by tying its automation platform to HP 3PAR StoreServ, through the HP 3PAR StoreServ APIs, to create snapshots automatically. "When we are cloning a customer environment, we don't have to involve the storage team. The automation takes care of all of the provisioning through the HP 3PAR APIs," says Caruso. "We can clone a complete environment in a couple of hours." Creating a non-production environment with other storage technology would take a lot longer because it would have to make an actual copy.

## Continuing to expand

Data Intensity expects its business to continue to grow rapidly and will require more storage as a result. It will order an HP 3PAR StoreServ 10400 system to handle that growth and expects to have it in production in a few months.

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