



COMPANY:

A leading provider of mobile business process solutions

INDUSTRY:

Software

PLATFORM:

Microsoft® Windows® 2003, Red Hat® Linux

APPLICATIONS:

Oracle9i, 10g, DataGuard; Microsoft SQL Server, Exchange; VERITAS® NetBackup™ Enterprise; VMware®

CHALLENGES:

Needed high-performance storage environment for growing highly transactional database requiring 5-9s availability

SOLUTION:

Tiered EqualLogic environment: PS3800XV arrays (15K RPM SAS drives) support high transaction data, PS100E arrays (7200 RPM SATA drives) support e-mail, files, and other databases

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AIRCLIC® BUILDS TIERED STORAGE ENVIRONMENT WITH EQUALLOGIC® SAS AND SATA ARRAYS

AirClic, Inc., headquartered in Newtown, Pennsylvania, develops software and provides mobile information services to more than 500 customers worldwide. The company was founded in 1999, and today its 50 employees are primarily focused on developing mobile handset solutions that provide a simple, cost-effective means for a mobile workforce to capture and exchange information using wireless devices. Captured customer data flows back through AirClic's hosted Oracle®-based middleware application from which customers can access data through a simple network request. With AirClic archiving their data for up to 30 days and making it available to them, customers avoid having to manage infrastructure that directly integrates to the handsets.

PERFORMANCE AND SCALABILITY FOR RAPID GROWTH

Customer data in AirClic's Oracle database must be available 24 x 7, requiring a dependable, high performance storage infrastructure. It was clear to Vice President of Technology Andy Monroe that AirClic's direct attached storage was not a viable long-term solution in terms of performance or scalability for the rapidly growing business. His original perception was that only a Fibre Channel SAN would support the performance requirements of his highly transactional database, but being in a wireless business where everyone understood TCP/IP, he decided to take a look at iSCSI solutions after evaluating mid-range arrays from EMC Corporation, Network Appliance, Inc., and others.

EQUALLOGIC SIMPLIFIES ENTIRE OPERATION

According to Monroe, selecting EqualLogic was an easy decision. He particularly remembers the sales representative saying that he would have an array up and running in 20 minutes – Monroe assumed it was just a sales gimmick, but was thrilled to discover it was true. Another vendor had taken six hours to get an array up and running, and even then Monroe's staff spent a great deal of time setting up a volume. "I have a very intelligent staff," he says, "and the fact that it wasn't obvious how to create a volume and get it to the server just boggled our minds." EqualLogic's ease of administration is a big benefit. It allows Monroe to use existing knowledge assets and not have to hire or train staff on Fibre Channel. The architecture of the EqualLogic PS Series arrays enables him to scale easily without downtime. The other vendors could not offer this, and for an organization that is growing rapidly and requires "five nines" availability of customer data, non-disruptive scalability is key.

"Tiered storage is a really big win for us – we just plug it in, and anything we need will migrate there automatically. We can scale independently according to our needs."

– AirClic's Vice President of Technology,
Andy Monroe

Monroe originally purchased two PS100E arrays to provide a networked storage environment only for the Oracle database supporting the mission-critical middleware. Oracle is run with two servers, a primary and standby that can be used for load balancing and failover. To ensure safe and easily recoverable data, Monroe then connected two other sets of primary/standby Oracle servers to the EqualLogic array for data mart and reporting applications. Realizing that simple management and scalability could change his entire operational infrastructure, Monroe decided to virtualize as many servers as possible using VMware and EqualLogic, ultimately consolidating 25 standalone servers for applications ranging from pre-production testing, e-mail and corporate accounting onto 5 servers running VMware. Says Monroe, "We would never have done that without the EqualLogic SAN – that's what really motivated our server consolidation."

MULTIPLE EQUALLOGIC TIERS MATCH ARRAYS WITH SERVICE LEVELS

Monroe was able to build a tiered storage environment by purchasing two additional EqualLogic arrays, this time selecting the new high-performance PS3800XVs. Because the hosted middleware data is turned over very quickly with large amounts of random I/O, AirClic needs very fast, high-performance storage rather than lots of space. The 15K RPM SAS disk drives in the arrays deliver that, outperforming Fibre Channel arrays from larger vendors in apples-to-apples testing Monroe set up. To ensure support the performance levels needed for his Oracle databases. He conducted benchmark tests with Oracle's Orion Calibration utility using small random I/O workloads to simulate transactions. On an EqualLogic PS3800 and an EMC® CX-500i, both with the same number of disks running at the same speed – 15K RPM, Monroe says, "We were seeing about 4,000 IOPS on the EMC unit and about 4,200 IOs per second (IOPS) on the EqualLogic unit."

"Tiered storage is a really big win for us – we just plug it in, and anything we need will migrate there automatically. We can scale independently according to our needs." Other non-transactional data including Exchange, engineering designs, other Oracle databases, and VMware servers reside in another storage tier, using the PS100E arrays with 7200 RPM SATA disk drives. "Anything of value we now put on the SAN, including source code, documentation, everything," says Monroe.

Databases are protected with Oracle DataGuard asynchronous replication to an off-site location. Snapshots using EqualLogic's built-in capabilities are completed for extra protection in addition to standard backup to tape. Says Monroe, "We hadn't thought about using snapshots before, but now I'm pretty much addicted to it. We take a snapshot before doing any kind of maintenance – the other night a server upgrade failed, so we restored to a snapshot and were back up and running in a matter of minutes."

Monroe says the EqualLogic SAN's impact on AirClic has been dramatic. The system is simple, fast to set up, and easy to scale and manage. Monroe and his staff no longer worry about the impact of the company's success on storage infrastructure – knowing they can scale easily without disruption is a tremendous relief. Says Monroe, "Storage is something we don't have to think about any more – so we can focus more on our customers and less on infrastructure. It's taken a big load off of our operations."

SIMPLIFYING NETWORKED STORAGE

EqualLogic PS Series solutions deliver the benefits of storage consolidation in an intelligent, enterprise-class storage system that is easy to install, manage and grow. Let us show you what simplifying networked storage can mean for your business, visit our web site at www.equallogic.com.



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