

Tiscali Gains a Competitive Advantage in the Cloud with NetApp Clustered Data ONTAP

In March, Tech OnTap brought you the first in a series of interviews with NetApp customers on their clustered Data ONTAP® migrations and the benefits to their organizations.

This month we bring you the fifth installment, a discussion with Tiscali S.p.A.

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For cloud service providers, choosing the right storage is key to meeting service-level agreements (SLAs) with customers. Many cloud providers are moving to NetApp® FAS storage systems running the clustered Data ONTAP® operating system to support: nondisruptive operations, secure multi-tenancy, and new cloud services.

Building on its expertise in telecommunications and managed IT services, Tiscali pivoted quickly to break into the business-to-business (B2B) market with enterprise-class cloud services. To do that, it modernized its data center, becoming the first adopter of clustered Data ONTAP in Italy.

Today, Tiscali offers a number of revenue-generating B2B services, including cloud-based infrastructure, disaster recovery, backup, billing, archiving, mobile services, and managed e-mail. It uses NetApp storage to support these customer-facing services and several essential internal business applications for financials, customer relationship management, and other areas.

Tech OnTap sat down with Andrea Stefano Sardu, storage infrastructure manager, to discuss why Tiscali—the only independent telecommunications operator in Italy—chose to base its cloud on clustered Data ONTAP, the upgrade process from 7-Mode, and the benefits for Tiscali and its customers.

| About Tiscali | |
|-------------------------------|--|
| Industry | Telecommunications / Cloud Service Provider |
| Corporate Headquarters | Cagliari, Sardinia, Italy |
| Employees | 1,000 |
| Facilities | Three locations in Italy |
| Storage Environment | <ul style="list-style-type: none"> ▪ NAS: 10-node FAS8040 cluster for general-purpose applications; 8-node FAS8040 cluster for e-mail services ▪ SAN: 4-node FAS8040 cluster for critical applications; NetApp® EF560 systems for Tiscali Mobile Services (with synchronous replication) |
| Total Data Volume | 1.5PB |
| Main Applications | Siebel, Tibco, Oracle Financials, and NetCracker Rating and Billing Manager |

TOT: Tiscali was the first NetApp customer in Italy to migrate to NetApp clustered Data ONTAP. Why did you choose to upgrade?

Andrea: We immediately saw the value of nondisruptive operations, especially as we transition to a service provider model. Our dream was to have all of our data in a single, unified, scale-out architecture with a single management point, with the ability to move data at any time, for any reason. As a service provider, we need to quickly provision new customers without downtime, and without ripping and replacing infrastructure. We also wanted to improve our storage utilization and eliminate storage silos to reduce costs and improve efficiency. Moving to clustered Data ONTAP was the obvious choice.

TOT: How did you upgrade from 7-Mode to clustered Data ONTAP?

Andrea: We wanted to upgrade as quickly as possible, so we used a combination of the NetApp 7-Mode Transition Tool (7MTT)—which we learned about last year at NetApp Insight—and NetApp SnapMirror replication to migrate data from old systems. The 7MTT is an excellent tool, and once we started using it, we were able to move faster. It helped us accelerate time to value by automating portions of the migration and by performing prechecks to verify transition readiness.

I highly recommend using it [the transition tool]. However, there are some limitations with older NetApp systems. If the source 7-Mode controller is running Data ONTAP 7.3.7 or earlier, you must first upgrade to 8.1.4 P4 and expand the 32-bit aggregates to 64-bit in order to use the 7MTT. Some of our older controllers could not be upgraded to this release, so we had to do a workaround. We ended up moving our 7-Mode 32-bit aggregates to 7-Mode 64-bit aggregates by replicating qtrees with SnapMirror. We then performed qtree breakout to volumes, and finally created volume SnapMirror relationships between the 7-Mode 64-bit aggregates and clustered Data ONTAP.

TOT: What advantages do you and your customers get from NetApp clustered Data ONTAP?

Andrea: We're using clustered Data ONTAP to host both internal and customer-facing cloud services, so the benefits are many. Our customers benefit from robust service-level agreements and high performance for their enterprise applications. For Tiscali, it gives us a clear competitive advantage—we've been able to accelerate our cloud strategy and be responsive to new customer requirements.

We've also improved efficiency. Better storage utilization has allowed us to cut our physical storage footprint in half, and we're using 60 percent less power and cooling to support it. We have only four people on our storage team. Without clustered Data ONTAP we would need to hire at least six more people.

Extreme scalability is also an advantage, especially in competing with hyperscalers and other cloud service providers. Our data is growing by up to 30 percent annually with no signs of slowing down. With clustered Data ONTAP, we can scale out to accommodate 60 times the data we have now, so we have no worries from a scalability perspective. We're not going to hit a wall.

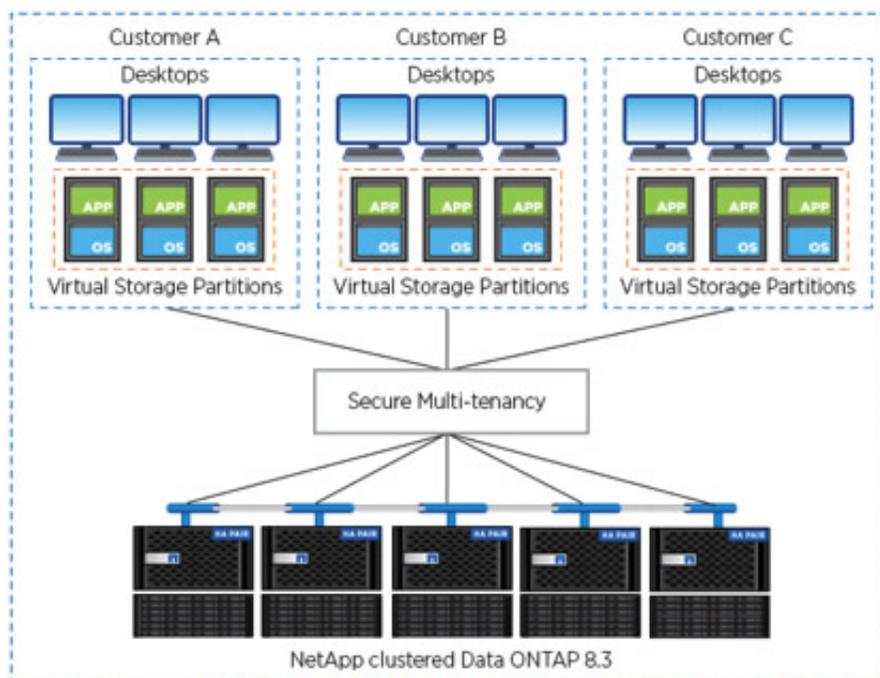
TOT: How does clustered Data ONTAP help you meet your SLAs?

Andrea: Downtime windows are unacceptable in today's world of cloud services, and clustered Data ONTAP allows us to perform maintenance and upgrades without taking storage offline. This allows us to offer 99.999 percent availability for customer applications and data. We can offer predictable, consistent performance, because we're free to move workloads between storage tiers nondisruptively, at any time. We can make strategic use of flash storage to keep latency low. As we add more customers, we will use storage quality-of-service policies in clustered Data ONTAP to keep service levels consistent.

TOT: How do you keep your customers' data safe and secure while hosting the data on shared storage?

Andrea: As a cloud service provider, the ability to provide end-to-end security is a must. Clustered Data ONTAP lets us use Storage Virtual Machines—an updated, improved version of Vserver technology—to isolate customers at the storage layer. Basically, NetApp has provided a layer of virtualization between the clients and the network ports that makes it very convenient to have portable, secure customer environments.

Figure 1) NetApp SVMs within Tiscali's secure multi-tenancy environment helps Tiscali isolate customer data, even across shared storage resources.



Source: Tiscali, 2015

TOT: What advice would you give IT teams looking to upgrade to clustered Data ONTAP?

Andrea: Don't hesitate, but have a solid migration plan. We worked with NetApp Professional Services to design, configure, and implement the clustered environment, which was well worth it because it takes out an element of risk. If you're upgrading from 7-Mode systems, use the 7-Mode Transition Tool because it simplifies what can be a complex process. Finally, try to keep your 7-Mode controllers up to date because the upgrade to clustered Data ONTAP will go more smoothly and you won't need to use an intermediate step as we did.

To learn more about Tiscali, read the NetApp success story, [Unlocking the Efficiency of the Cloud](#).

Get an update on last year's [NetApp Insight™](#) technical conference.

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