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Success Story

Tiscali Achieves 99.997% Availability for Hosted E-Mail Service, 80% Storage Utilization with NetApp



tiscali:

KEY HIGHLIGHTS

Industry
Communications

The challenge
Grow revenues by offering hosted e-mail services, provide business continuity, and increase competitiveness by minimizing IT costs.

The solution
Storage infrastructure 100% on NetApp®, deployed on a full range of NetApp software for storage efficiency, ease of management, and DR.

Benefits
- Achieve 99.997% uptime for e-mail services
- Achieve 80% storage utilization rate
- Manage 1PB of storage with 4 FTEs
- Accommodate 60% annual growth with no increase in IT staff
- Reduce storage by 48% with deduplication

CUSTOMER PROFILE

Tiscali Italia S.p.a. (Borsa Italiana, Milan: TIS, *www.tiscali.it*) is one of the largest telecommunications companies in Italy. Tiscali supplies a wide range of services to its customers, both private individuals and companies, including Internet access through dial-up and ADSL, voice, VoIP, media, and added-value services, and other technologically advanced products. As of December 2009, Tiscali had about 704,000 customers in Italy, of which more than 570,000 were ADSL customers.

THE CHALLENGE

Grow revenues through hosted e-mail services
Salvatore Pulvirenti, chief information officer for Tiscali, sums up his company's strategic imperative with a single word: "Grow." Over its 12 years of existence, Tiscali has grown steadily—both organically and through acquisitions—to become one of the leading alternative telecommunications operators in Europe. When Pulvirenti joined the company in 2000, he and his team immediately began building a scalable, flexible IT infrastructure to help the Sardinia-based service provider meet aggressive revenue and subscriber targets.

A key revenue source is Tiscali's public e-mail service, which includes about six million mailboxes for both businesses and consumers in Italy and the United Kingdom. Attracting and retaining these customers require a highly reliable service with extremely low downtime. To deliver this level of high availability demands both the most technologically advanced infrastructure components and superior service from trusted vendors.

Provide business continuity
Sardinia's geology is stable. The island lacks the active volcanoes found on the eastern edge of the Tyrrhenian Sea, including Mount Etna, Stromboli, and the legendary Mount Vesuvius, and hurricanes are relatively rare. Nevertheless, Pulvirenti cannot take chances with the company's computing infrastructure. "If a disaster should happen, my group must do everything we can to keep the company running," he says. "Business continuity is something we think about—and plan for—constantly."

As the repository for the company's valuable information, the storage system has to be protected with comprehensive and proven disaster recovery tools and processes. Tiscali's management looks to its IT team to provide fast and reliable recovery of business-critical information in case of any disruption to operations—whether natural or human made.

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>
> **Michele Fadda**
> IT Manager, Tiscali Italia S.p.a.

Manage internal costs to increase competitiveness

Adding to the challenges that confront Pulvirenti's team is the mandate to control expenses. The European telecommunications market is highly competitive, and consumers are quick to shift their service to another carrier if they find a better deal. Controlling costs everywhere in the organization, including the IT infrastructure, allows Tiscali to offer competitive pricing—and contributes to its success in the marketplace.

Storage accounts for about 40% of Tiscali's overall IT budget. Minimizing expenses in this area is crucial, both in capital outlays and in ongoing operating costs. Increased efficiency in storage avoids outlays for additional storage and has a positive effect on the company's competitiveness and bottom line.

THE SOLUTION

Develop a trusted partner relationship with NetApp

You might say that Tiscali and NetApp grew up together. From its founding in 1998, Tiscali had purchased storage systems from NetApp as well as other storage vendors. When Pulvirenti decided to consolidate its vendor pool in 2001, his team evaluated all the incumbent storage vendors and recommended that the company migrate to a 100% NetApp storage infrastructure.

Michel Fadda, IT manager for Tiscali Italia S.p.a., explains why. "NetApp has a culture of commitment to the success of its customers," he says. "NetApp storage systems are highly reliable and flexible and provide great value for Tiscali."

Consolidate with NetApp systems and services

Tiscali's operations now are supported by an extensive NetApp storage subsystem. The systems range from eight FAS6000 and five FAS3000 series to a variety of smaller NetApp systems—more than 40 total with a combined capacity in excess of a petabyte of raw storage. Nearly 60% of the Tiscali storage footprint is devoted to its e-mail service. A key advantage to Tiscali is the flexibility to mix and match storage on a single NetApp system to meet a range of needs within the data center.

Tiscali has standardized on Data ONTAP® 7 for operational systems and is evaluating Data ONTAP 8 Cluster for specific high-availability needs in the future. The company has deployed a wide range of NetApp software, including NetApp SnapManager® solutions, NetApp FlexClone®, NetApp SnapMirror®, NetApp SnapVault®, and NetApp SnapDrive® for UNIX®.

Fadda's group is highly competent and self-reliant, but on occasion must reach outside for specialized skills and technical support. A NetApp SupportEdge Premium agreement and targeted engagements by NetApp Global Services provide the help Tiscali needs at a cost the company can afford.

Deploy disaster recovery architecture and software

Disaster recovery (DR) involves more than backup, but it builds on a robust and reliable data protection system. NetApp SnapVault software and Symantec™ NetBackup™ provide that foundation, implementing a disk-to-tape system that backs up as much as 100TB of data every day.

Tiscali is currently upgrading its disaster recovery capabilities by adding a remote DR site in Rome, about 300 km from Sardinia. NetApp FlexVol® and FlexClone, as well as the SnapManager products, create copies of all data, including Oracle® and SQL Server® databases, which are then copied to the DR site using SnapMirror. Fadda's team is currently testing the new DR process.

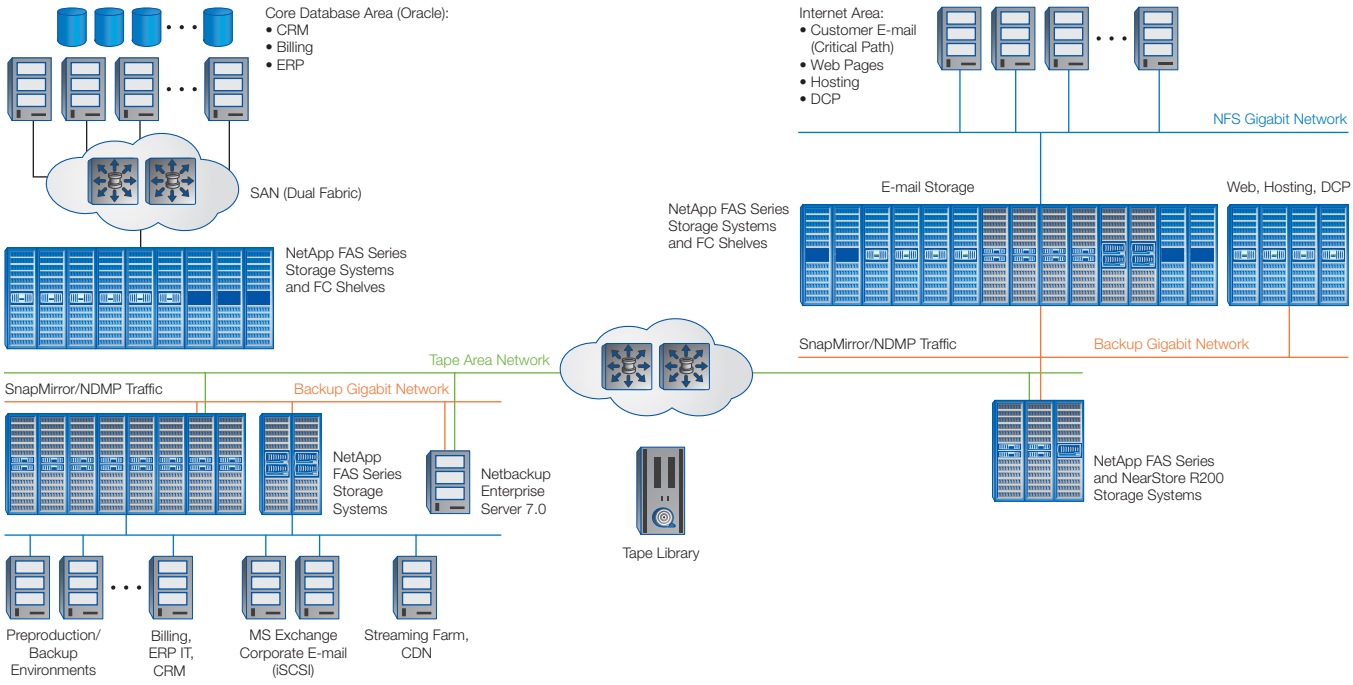


Figure 1) Tiscali Italia S.p.a. storage infrastructure.

BUSINESS BENEFITS

Offer customers superior-quality e-mail services

With the explosion of video on the Internet, today's e-mail customers expect large mailboxes. Thanks to a high degree of storage efficiency and ease of provisioning with FlexVol and other NetApp technologies, Tiscali can offer each customer a 10GB mailbox—a clear competitive advantage.

Tiscali's e-mail platform based on NetApp storage and server clustering using Veritas™ Cluster Server, a Symantec product, is exceeding customers' expectations for availability. A recent audit pegged the service provider's uptime at 99.997%, less than 16 minutes downtime per year. Tiscali cites NetApp's flexibility with products such as FlexVol and SnapDrive for UNIX as contributing to the superior uptime numbers.

Achieving high reliability depends in part on fast and effective response to problems. In Fadda's eyes, NetApp's support has been excellent. "About a year ago, we had performance issues with our U.K. e-mail service, an intermittent problem that was very difficult to troubleshoot," he remembers. "NetApp immediately sent two service engineers on-site. Over a two-week period, they carefully and painstakingly isolated the cause to a memory cache that was not properly solved. They quickly resolved the problem, and we are once again meeting our service-level agreements."

Boost storage efficiency and utilization

Maintaining control of storage spending requires maximizing storage utilization while minimizing data duplication. Deduplication, a built-in feature of Data ONTAP 7, has reduced Tiscali's storage needs by 48%. Using other NetApp solutions such as FlexVol and FlexClone, the IT team has boosted storage efficiency, achieving a utilization rate of 80%. "We continue to push for higher rates of utilization," notes Fadda. "Every percentage point represents 80TB of storage that we don't have to purchase."

Minimize storage operating costs

When Tiscali decided to standardize on NetApp storage, the IT team considered the different approaches to support, upgrades, and maintenance. Other vendors required outside professional services for changes, a costly approach that limits the flexibility of the storage infrastructure. With NetApp, Fadda's team is more in control. "We can change a faulty disk or add storage as we need it, just using our in-house talent," he explains.

Storage management has been greatly simplified by NetApp's unified architecture. While the company's storage has been growing rapidly—60% per year—staff size has not. "Tiscali has been able to scale its storage to meet the rising demand without adding any additional staff for storage management," Fadda says. Tiscali manages over a petabyte of storage with just four full-time equivalents (FTEs).

Meet corporate business continuity goals

Thanks to NetApp technology and an improved DR architecture, Tiscali's IT team is currently meeting corporate targets for business continuity. The company can recover vital information from archives within 30 minutes (recovery time objective, or RTO). With daily comprehensive backups, the average data loss in case of a catastrophic event would be about 12 hours (recovery point objective, or RPO).

Innovate for the future

Despite its significant accomplishments in consolidation and efficiency, Tiscali's IT team is not standing still. The company has a number of strategic initiatives under way, including virtualizing the server infrastructure with VMware® ESX software and upgrading the internal e-mail system using Microsoft® Exchange Server and Microsoft SQL Server.

“We see NetApp as more than a vendor. They are a true partner to our business.”

Salvatore Pulvirenti
Chief Information Officer, Tiscali Italia S.p.a.

Tiscali has already begun to deploy the corresponding storage components, in particular NetApp SnapManager for Microsoft SQL Server, SnapManager for Microsoft Exchange, and SnapManager for Virtual Infrastructure.

Pulvirenti expects NetApp to continue to play a pivotal role as Tiscali continues to improve its world-class infrastructure. “We see NetApp as more than a vendor,” he says. “They are a true partner to our business.”

ABOUT NETAPP

NetApp creates innovative storage and data management solutions that deliver outstanding cost efficiency and accelerate performance breakthroughs. Discover our passion for helping companies around the world go further, faster at *www.netapp.com*.

SOLUTION COMPONENTS

NetApp products

NetApp FAS6080, FAS3050, and FAS960 storage systems

NetApp Data ONTAP 7G operating system

NetApp deduplication

NetApp FlexVol

NetApp SnapManager for Virtual Infrastructure, SnapManager for Microsoft Exchange Server, SnapManager for SQL Server software

NetApp FlexClone

NetApp SnapMirror, SnapVault, and SnapDrive for UNIX

Protocols

NFS, Fibre Channel

Third-party products

VMware ESX

Oracle Database

Microsoft Exchange Server 2007

Microsoft SQL Server 2008

Symantec NetBackup

Veritas Cluster Server

Environment

Critical Path Memova Messaging software

Siebel CRM software

Oracle Finance software

Sun™, Dell, HP, and IBM servers running Solaris™, Linux®, and Windows®

Bizanga e-mail security appliances

NetApp®

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