Italgas energizes its Oracle investments by switching to Azure NetApp Files

NetApp

Big performance improvements and shortened backup times are the payoff

Italgas is the leading gas distribution company in Italy and the third largest in Europe. It has a market share of more than 34% for domestic gas distribution in Italy, through an extensive and geographically diversified distribution network that serves more than 1,800 municipalities. The company manages 7.5 million live meters.

As part of a technology initiative, Italgas migrated their entire data center to the cloud in 2018. The company selected Microsoft Azure for 55 large Oracle database instances that support mission-critical application, such as finance, metering, and billing. Although the data center cost and management benefits of the migration were immediate, performance demands were not being met.

Azure NetApp Files to the rescue.

Italgas

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Giuliano Caglio
Cloud Services and Infrastructure, Italgas

Volatile markets need cost control

In the highly volatile energy market, forces such as shifting consumer demand, the patchwork of government, environmental, and industry regulations, and geopolitical instability are often outside of an enterprise's control. What can be controlled is cost.

For Italgas, it made sense to shift expenses from hard capital costs of data centers to a cloud strategy using Microsoft Azure operating expenditures.

The problem for Giuliano Caglio, IT administrator for Cloud Services and Infrastructure, was that native Azure disk storage capacities were directly related to database and virtual machine performance. For the heavy lifting required of an Oracle application environment, the only solution to improve performance was to add storage, leading to wasted space that was difficult to remove after peak demands.

"We experienced a negative impact on infrastructure costs and operations, because we could only add a predefined number of discs to each virtual machine, and changing discs created service interruptions," Caglio said.

Too big, too slow

Performance suffered, and virtual machines and storage had to be overprovisioned. Backup and recovery times jumped to unacceptable levels, as long as 15 hours, demanding an alternative approach.

After a proof-of-concept project, Italgas chose Azure NetApp Files because it allowed greater control of database performance and network traffic. Working together, NetApp and Microsoft teams helped Italgas develop testing scenarios that would meet targeted performance metrics under the stringent

cost considerations. They found that Azure NetApp Files could enable a storage response that supports application demands with high-performance responses and low latency.

"With Azure NetApp Files you can overcome the limitations," Caglio said. "You can hot-resize the volume to match size and performance needs, perform instant snapshots or volume clones, and change the volume tier dynamically, without service interruption, interactively or by automation"
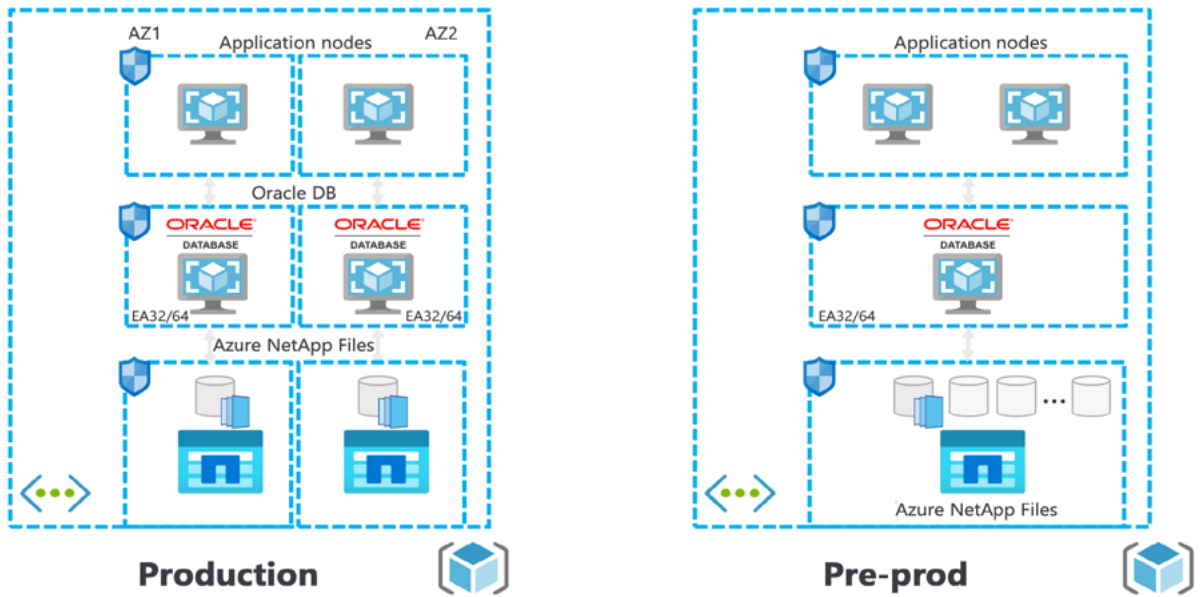
Hello, supply? Meet demand.

Today, both production and development environments are on Azure NetApp Files. This is generating overall savings in storage costs by making it possible to downsize virtual machines, high utilization of the resources in place, and more dynamic provisioning and volume management. Italgas maximizes utilization by purchasing only the storage volumes it really needs. Supply meets demand.

"Since storage performances demands are very dynamic during the day, we have also implemented what we can call 'volume shaping,' enlarging or shrinking the volume dynamically, to match storage performance and database engine demand peaks."

As a result of the optimization and manageability, Italgas has achieved new service level agreements. Today, the company has moved from classic disk-based backup to snaphost-based consistent backup. Backups were reduced from 15 hours to 15 minutes.

The use of snapshots instead of backups and cloning for full copies means that Oracle application refresh operations are now faster as well, moving production databases to nonproduction in a matter of hours rather than days.

Production

Pre-prod

Cloud is enabling innovation strategies
In addition to the projected cost savings, IT is now more responsive to the business. Instead of protecting applications from change, the speed of snapshots and recovery means that more testing can be done. New application features can be tested and rolled out more frequently. Data storage and backup and recovery become an enabling strategy for innovation, not a bottleneck.

"Sometimes we're asked to quickly provide a database clone for problem determination or to test procedures and batch operations," Caglio said. "With Azure NetApp Files, we can back up or clone a database in seconds through snapshots. When fully adopted and automated, this methodology is a great game changer."

With the success of the core database migration, Caglio is planning additional use of Azure NetApp Files for other workloads, including virtual

applications and desktops and containerized development environments. The bottom line for the energy company is high-performance storage with control of costs – and a more competitive response to a volatile market.

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