

Total powers Digital Transformation across Energy Production with Nutanix

Global Firm relies on Nutanix solutions to support an Agile Architecture

BUSINESS BENEFITS

For a massive energy company like Total S.A., keeping exploration and production processes available and agile is critical. To ensure that the 7000 applications in use across this global organization would continue to consistently deliver high performance, Total chose to move its operations to a Nutanix hyperconverged infrastructure (HCI) solution. Designed to scale and evolve as needed, it allows Total to support its business applications from a single manageable environment. The Nutanix solution enables the firm to ensure the reliability and performance its users expect, while ensuring the necessary flexibility for the company to adapt to a fast-changing Oil & Gas world.

“Over the past few years, we have migrated our operations to several clusters throughout North America. These 11 clusters are 100 percent Nutanix, with no other infrastructure. Standardizing on the Nutanix solution has enabled us to dramatically reduce TCO, while helping us make our operations more efficient.”

- Guillaume Brocard, Senior Operations Advisor at Total

INDUSTRY

Energy

BENEFITS

- Reduced TCO significantly through standardization of the solutions and their management
- Provided flexibility to rapidly deploy and allocate computing resources to new energy production Sites and Services
- Enabled dependable IT operations for three years without service outages to the customers

SOLUTION

- Nutanix hyperconverged infrastructure
- Nutanix AHV hypervisor
- Nutanix Prism Pro management solution
- Nutanix Flow
- Nutanix Files
- Xi Frame

PARTNER

- Microsoft SQL databases
- Oracle databases
- SAP HANA
- Microsoft Office productivity applications
- HashiCorp Terraform

CHALLENGE

One of the largest energy producers in the world, Total S.A. is a French multinational company whose businesses cover the entire oil and gas supply chain. Its global operations encompass everything from crude oil and natural gas exploration and production to power generation, transportation, refining, petroleum product marketing, and international crude oil and product trading.

To support all these operations, Total's IT environment is running a wide variety of applications on premises. Aside, the organization also has extensive public cloud and private cloud environments, including Microsoft Azure. In the cyclic energy industry, cloud technology gives Total the flexibility to support services for a limited amount of time, then move on to new projects.

Total needed to provide consistent platform and management for all of the company's sites, regardless of size. Some offices contain as few as three people, while others may support up to 1000 employees. The organization needed a strategic solution that would position the organization to respond to any need. The company was also seeking to dramatically minimize the size of its data center footprint as part of its environmental initiatives to reduce greenhouse emissions.

SOLUTION

The first phase of the Total's transformation focused on modernizing its siloed data center. The company was an early adopter of the Nutanix HCI solution and is now continuing to extend its environment across its global sites. Total is a long-time Nutanix customer and participant on the Nutanix technical advisory board. The Nutanix HCI solution lets the organization avoid the time and costs associated with managing multiple OEM environments, while providing both flexibility and support for standardization. If a group in the company has deployed a service or application on another environment, Total can still provide the resources they need to support it.

Total employs a full range of Nutanix solutions across its sites, including all of its North American operations. Over the next three years, the company will continue to ramp up its Nutanix environment to enable additional sites and services, optimizing costs using the solution together with other solutions. Total's goal is to deploy AHV and Nutanix Files to support its environments, reduce hypervisor costs, and simplify administration under a single, unified dashboard. Consolidating multiple siloed resources onto the single hyperconverged environment lets Total minimize its data center size, to consume fewer power and cooling resources and support greener, more energy-efficient operations.

Ultimately, Total intends to support every function of its infrastructure on its Nutanix solution, with the exception of some large storage applications. In the U.S., Total is running a full set of refinery operations on the Nutanix HCI solution and is also building a joint venture in Marseille. The organization has completed or started 18 distinct projects based on the Nutanix infrastructure for its affiliates around the world. Its goal is to be able to provide a standardized solution for everyone, and extract information from any environment or technology, whether it is SAP HANA or Oracle databases. The organization has also partnered with Dell to take advantage of pre-configured hardware platforms that also streamline deployment, with a plug-and-play solution.

RESULTS

Deploying Nutanix solutions together with technologies from other vendors contributes to provide IT efficient solutions to the Total Group, by ensuring the reliability and performance of IT services required to maintain its business leadership in the challenging energy production space. Availability of the services is critical in this industry. With the Nutanix infrastructure solution in its facilities in North America, Total has experienced no loss of services for its affiliates in the past three years.

Nutanix solutions also enable Total to quickly deploy resources at will, to keep pace with dynamic needs. The flexible, standardized solution gives Total the ability to roll in and roll out systems and grow and repurpose as needed. The IT organization may have a cluster running at a site one week, and when it is no longer required it can be taken down and deployed somewhere else in a few days. The hyperconverged environment makes it easy to move resources depending on changing needs. The Nutanix solution also alerts administrators about potential support and compatibility issues in advance, giving them plenty of time to proactively upgrade nodes and other components before operations are impacted.

Streamlining administration and enhancing automation has also enabled Total to optimize operational costs, including maintenance and resources required to support its operations. Nutanix solutions also help enhance change control management, which is especially important in the energy industry, because a simple configuration error can ripple out across the system to impact thousands of users.

To maintain the security and integrity of sensitive industry data, Total also utilizes the solution's built-in data protection and one-click security upgrades. Nutanix data protection is in place at every site. All of the company's operations have specific sets of rules and policies, and the Nutanix solution helps the organization to stay in compliance.

NEXT STEPS

With Nutanix solutions steadily powering its key infrastructure operations, Total now has an extensible foundation that can bring new efficiencies to its operations. For example, by activating Nutanix Flow, the company could automate common networking operations, while applying application-centric protection from network threats. The organization is preparing to introduce more automation capabilities with Nutanix Flow, as well as collaboration with HashiCorp Terraform. Total is in the process of developing a playbook to support all of its systems, and automation plays a major role.

Nutanix solutions also let Total easily extend its resources to support new sites and applications, without requiring highly technical personnel to deploy them. By enabling Total to standardize how it creates and deploys new services, Nutanix solutions help make project management more efficient.



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