

“SimpliVity has allowed us to dramatically improve the critical infrastructure on our ships by saving space, power, cooling while satisfying our critical applications.”

– Infrastructure Manager at major Oil and Gas Company

## Introduction

The fourth largest Oil and Gas Company in the world as well as integrated energy company with a presence in 29 countries was faced with a major problem: their legacy infrastructure could no longer service all their mission-critical applications. Applications such as Microsoft SQL server, Remote Desktop servers, applications to monitor buoys and wave patterns, and other third-party applications were not running in an optimized or secure state. For disaster recovery, the company used tape backup which was extremely slow and provided no solution for off-site backups for their ships, 200 miles off-shore. Also the existing infrastructure was taking up too much space in the limited room onboard the ships. This Oil and Gas Company sought a technology refresh and a solution that could deliver best-in-class DR capabilities.

## Business Challenge: Technology Refresh, Backup and Disaster Recovery, and Data Center Consolidation

The Oil and Gas Company had been using six HP servers, NetApp storage, and VSAT connectivity to host ten VMware VMs. The infrastructure was consuming two full racks on the resource-constrained Floating, Production, Storage, and Offloading (FPSO) ship where power, space, and cooling were premiums. This design had been in place for six years. Not only was the rigid, legacy infrastructure inefficient, the architecture also lacked the capabilities and agility needed to support new application requirements their business demanded.

Both a refinery with 100 VMs that replicated to a site in Texas and the FPSO ship in the Gulf of Mexico replicating to another data center in Texas were budgeted for refresh. Their NetApp appliances used snapshots and tape-based backups for local RPOs. This protection model was complex, unreliable and non-optimal. The goal of having off-site backups was unachievable because of the ship-to-shore connectivity. Because data recovery and data protection processes were lacking and not delivering acceptable SLAs in terms of RPOs and RTOs, with recovery times taking upwards of several hours to a day, the Oil and Gas Company knew it was time for a change.

Largest Energy Company in the Southern Hemisphere experiences cloud economics with enterprise-class performance from SimpliVity’s hyperconverged solution when compared to other virtualization infrastructure.

 **Industry:** Energy Acquisition

 **Business Description:** Oil and Renewable Energy acquisition firm

 **Locations:** Located globally

 **Challenges:** Update legacy infrastructure, Reduce space, cooling and power consumption, rollout new apps, simplify IT infrastructure, improve offsite backup and disaster recovery, reduce costs.

 **Key Applications:** Microsoft SQL Server, Windows Remote Desktop, mission-critical applications to monitor buoys and wave patterns, client-server applications, third-party applications

 **Solution:** 3 OmniCube CN-2000s (2+1), two on ship 200 miles off-shore and one in central data center in Texas

 **Benefits:**

- Best of both worlds: cloud economics with enterprise-class performance, protection, and functionality
- Integrated data protection and DR capabilities
- Globally-unified management
- Hyperconverged infrastructure
- Inline deduplication, compression, and optimization
- Data center consolidation
- Improve operational efficiency

In the confined environment of the FPSO ship, space, cooling, and power was extremely restricted. Every time a new app or server was requested, it was a challenge to budget and satisfy the new demands. Also, there were no IT personnel on the ships which made coordination of day-to-day management difficult and maintenance, or field replacement of components, a problematic challenge. Therefore, in addition to improving the poor recovery-time and availability objectives, a technology refresh of their legacy infrastructure was required.

While improving these issues was a top priority, the Infrastructure Manager at the Oil and Gas Company saw the opportunity to leverage a new solution to reduce annual maintenance and operating expenses. Their IT team decided to look for a hyperconverged solution that would reduce hardware footprint, lower power consumption, drastically improve the slow RPO and RTO times, provide off-site app and data protection, and totally overhaul their legacy architecture. The Oil and Gas Company discovered the perfect solution while attending VMworld 2013 and recognized the simple, powerful solution SimpliVity provided for their ships and data centers.

### OmniCube Solution

The Oil and Gas Company met SimpliVity during VMworld 2013 where they first heard the term “Hyper-convergence.” During that time, they also considered Riverbed Granite and EMC Isilon. After testing with Granite, however, complications in the initial design were brought up and the originally proposed configuration kept increasing in complexity until their solution was just as complicated as the one the Oil and Gas Company was trying to simplify! “It was just too much and too complicated, and we never got it to work,” remarked the IT Manager. Isilon, by comparison, lacked broad scope of functionality including server, hypervisor, inline data efficiency and VM-centric management; and Isilon did not meet the required performance criteria including latency response times.

After evaluating SimpliVity OmniCube, they discovered that its Data Virtualization Platform (DVP) was the solution to their DR and critical infrastructure needs.

### Benefits

Realizing that operations onboard their FPSO ship would benefit from OmniCube’s DVP that optimized data flow, the Oil and Gas Company bought 3 CN-2000s. Two resource-efficient OmniCubes in 4RU were placed on the ship, and one OmniCube was stationed at the central data center in Texas. Installation and onboarding was completed within a couple of hours—with all ten VMs on the ship non-disruptively moved over to the OmniCubes. Their two full racks were reduced to one, reducing their power and cooling costs. With this unique setup, the Oil and Gas Company effectively leveraged the OmniCube systems to decrease space, complexity and cost while increasing productivity and efficiency.

The Oil and Gas Company has been able to fully experience the best of both worlds: cloud economics with enterprise-class protection, data efficiency, performance and global unified management. Not only have they been able to migrate all their Tier-1 applications onto the OmniCube with no downtime, but also the IT Manager and his team have been able to drastically improve the application RPOs and RTOs from several hours to just a few minutes. The OmniCubes dramatically improved the entire DR and backup process.

The OmniCube’s ability to deduplicate, compress, and optimize data has eased the Oil and Gas Company’s data center workloads. The unique capability is foundational to enhancing backup and off-site data protection—a pressing concern for a remote oil refinery with limited access to IT support. The end users have been very satisfied with the performance and response times of the critical applications running on the OmniCubes, and the IT team is very satisfied with the availability service levels provided by SimpliVity.

Because of OmniCube’s Global Unified Management that enables a single administrator to oversee operations from within a single vCenter interface, the Oil and Gas Company’s administrators can easily and efficiently deliver remote management onboard the FPSO ship.

Key benefits include:

- Cloud economics with enterprise-class protection, data efficiency, performance, and global unified management
- Integrated data protection and DR capabilities
- Improved RPOs including off-site protection
- 10X Improvement in Recovery Time Objectives (RTOs)
- Hyperconverged infrastructure
- Inline deduplication, compression, and optimization
- Data center consolidation to save space, power and cooling
- Data center refresh on ship 200 miles off-shore and at central data center
- Reduction in CAPEX
- Improve Operational Efficiency

**For more information, visit:**

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