Maritime & Port Authority of Singapore drives greater sustainability with Nutanix

Operator of the world's largest transshipment and bunkering hub delivers business-critical applications with less hardware to make shipping more sustainable

Singapore is the world's largest transshipment and bunkering hub. As part of MPA's digital transformation strategy, MPA migrated to Nutanix, a business-critical application for managing vessel clearances. MPA officers can now access the data more flexibly to improve productivity and sustainability of the IT infrastructure management and operations. With the application, IT management is now simplified and it improves the recovery time objective for MPA technology systems.

Transformation Journey

MPA was established on 2 February 1996 with the mission to develop Singapore as a premier global hub port and international maritime centre, and to advance and safeguard Singapore's strategic maritime interests. MPA is responsible for the overall development and growth of the maritime domain and Port of Singapore. In 2022, Singapore remained one of the world's busiest transshipment hubs, with a container throughput of 37.3 million 20-foot equivalent units (TEUs). MPA is digitally transforming services to make operations more efficient and to increase sustainability as per its Green Initiative, which aims to promote greener and more sustainable shipping.

As part of the transformation process, MPA re-architected a business application for a Just-in-Time Planning and Coordination platform (JIT Platform), which adopted a customer service journey perspective to optimise port stay for ships that call at the Port of Singapore. The carbon footprint generated by the vessels will be reduced as a result of shorter port stays and better voyage planning. In addition, it looked to streamline the application's underlying three-tier infrastructure, making it easier to manage and more energy efficient in line with the port's sustainable working goals.

Industry
Transportation Logistics

Location
APJ

Applications
Just in Time Planning and Coordination Platform

Key Benefits
Boosts operational sustainability
- Consolidated hardware to support critical application

Simplifies management
- Increased productivity and efficiency of IT administrators

Minimises downtime
- Achieved faster recovery time objective

Products
Nutanix Cloud Infrastructure
- AOS Storage
- AHV
- Nutanix Disaster Recovery

Nutanix Cloud Manager
- Intelligent Operations

Nutanix Unified Storage
- Files Storage

Solutions
- Business Continuity & Disaster Recovery
- Business Critical Apps
- Private Cloud

Use Case

MPA had chosen a Nutanix hyper-converged infrastructure (HCI) for a modernised on-premises solution offering private and hybrid cloud capabilities. With Nutanix, MPA could fast-track the redevelopment of the vessel clearance application on a highly flexible private cloud environment while maximising the efficiency and sustainability of infrastructure management.

MPA deployed Nutanix HCI nodes to provide the application's development and production environments. The nodes include AOS Storage and the AHV hypervisor for management simplicity as well as Intelligent Operations to automate administration tasks. Nutanix Disaster Recovery supports business continuity, preventing data loss. Additionally, Files Storage allows the IT team to manage, scale and adapt to changing file storage requirements.

Customer Outcomes

Enables mobile access for better efficiency

With Nutanix, MPA can deliver its strategic goals of digital transformation. Redeveloping the JIT Platform to run on Java inside a highly flexible Nutanix private cloud creates new opportunities to access the data using mobile devices. This will give port users and MPA staff secure access to the information they need while on the move, supporting greater efficiency.

Simplifies IT management, freeing up time for strategic tasks

The move from a three-tier infrastructure to HCI has significantly simplified management. Now just one IT team member can manage and scale the computing, storage and networking behind the application to meet the business need. Furthermore, MPA can redirect the saved resources to high-value tasks such as modernising other legacy applications. Chief Information Officer of MPA, Mr Koh Chin Yong, says, "MPA has an ambitious roadmap for maritime digitalisation where there are many projects competing for compute resources. It's now easier for us to scale our Nutanix infrastructure to support project requirements, allowing MPA to proactively meet business needs."

Minimises possible disruption to operations

Besides simplicity, MPA has reduced the possible impact of any disruption to the vessel clearance application. Hence, MPA can achieve a faster recovery time objective, so port operations will be much less affected in case of any application outage.

> "Nutanix is helping us to modernise our datacentre, align our IT processes with MPA's Green Initiative, thereby reduce the environmental impact of shipping while delivering better service to our customers.

Mr Chiam Choon Yee
Deputy Director of IT
Infrastructure and Services,
MPA

Boosts sustainability, reducing hardware

MPA is also delivering on its Green Initiative around sustainability, with the Nutanix solution enabling MPA to consolidate the hardware for its vessel clearance application. Using Nutanix, MPA is able to lower its impact on the environment while still driving growth in the economy.

Learn more at https://www.nutanix.com/one-platform

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