



SARDINA  
SYSTEMS

A top-10 trader on the New York market decided to implement OpenStack-based private cloud, provide the Trader's internal users with a more flexible self-served computing services with an OpenStack-based private cloud that is auto-rebalanced and auto-optimized, fully complemented with operations tools including health management, and that can span multiple data centers on multiple continents. The cloud was operational within 4 months following conception.

## TOP TRADER'S CLOUD CHALLENGE

## THE OBJECTIVE

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ENGINEERED  
TO SPAN  
MULTIPLE DATA  
CENTERS

OPTIMIZED  
TOTAL COST  
OF OWNERSHIP

IMPROVE  
SERVICE  
ASSURANCE

HIGHER  
APPLICATION  
AGILITY

INCREASED  
RESILIENCE &  
FLEXIBILITY

The objective of the OpenStack-based cloud is to enable flexible, agile and scalable computing environment to meet the Trader's dynamic and rapidly changing environments. So as to ensure optimal TCO and optimal resource utilization to cater for the Trader's high value workloads, the cloud require smart resource management and service health management.

This private cloud for provides a scalable cloud platform accessible directly by the Trader's internal users, complementing their existing computational capacity. The solution design was aimed at an initial system spanning 4 globally distributed data centers, managed as a single platform, and to be horizontally scalable.

## THE CUSTOMER

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The Proprietary Trader, is one of the top-10 traders on the New York market. The privately held firm is diversified across geographies and asset classes, including equities, equity options, foreign exchange, fixed income and futures markets around the world. The trade these markets from three global offices located in Chicago, New York and London. The Trader has more than 100 employees in the US and over 20 employees in London.

# FISHOS SOLUTION

Sardina implemented a solution design, based on FishOS' operational architecture, allowing the Trader to flexibly and reliably operate the private cloud in a Service Operator role, while also taking into account integration with the Trader's broader organizational IT.

The OpenStack-based cloud integrates with the Trader's existing storage system. With FishOS' smart resource management, the OpenStack cloud was designed to track live utilization of workloads within the environment and optimize the system based on highly detailed metrics, balancing off bottlenecks, and ensure high service uptime with smart health management system.

All the management services operate in highly available (HA) mode, to the extent that entire racks of management servers can be turned off without impacting the private cloud service, thus ensuring service uptime. The solution design allowed the Trader of achieve service-assuring Zero-Downtime Upgrade with FishOS Upgrader.

## FISHOS FEATURES

**DEPLOY, OPERATE, UPGRADE** Full-lifecycle view on OpenStack cloud: confidently and predictably deploy OpenStack cloud, reliably operate and upgrade with zero-downtime.

**OPTIMAL & FAST** Driven by AI to optimize resource utilization, right-place VMs rapidly on the right host, first time and every time, and automatically rebalanced to guarantee application performance while eliminating occupied-but-idle servers.

**OPTIMIZED OPEX AND CAPEX** Right-sizes the number of servers to meet workload requirements ensures optimal energy OpEx, maximizes servers and facility CapEx utilization.

**HIGHLY AVAILABLE** Each part of FishOS has been architected to be operable in highly available mode, providing redundancy and ensuring service uptime.

**AUTOMATED FAILURE HANDLING** Advanced Machine Learning-based health diagnosis framework tracks the health of services and of the host servers, auto-migrating workload to another host server, ensuring integrity with ease and flexibility.

**HIGHLY OPERABLE** Scalably handle multitudes of operational automation that might otherwise require operator intervention, allowing a single operator to flexibly manage 1000s of servers.

## TRUSTED BY

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NEW YORK UNIVERSITY

Protagonist

## ABOUT SARDINA SYSTEMS

Founded in 2014, Sardina Systems provides awards-winning, world class, intelligent and automated virtualized systems management technology enabling corporations to greatly increase service assurance, application agility and operational reliability, reduce operational complexity and carbon footprint, coupled with increased IT operations flexibility and unparalleled efficiency of scale. Sardina Systems is a UK-based company with operations in Germany, Luxembourg, Ukraine and Russia.

**PRODUCTS** FishOS | Hyperconverged FishOS Systems

**SERVICES** Consulting | Support | Development

**INDUSTRIES** Financial | Telecoms | Automotive & Aerospace | Bioinformatics | Advertising & New Media | Government | Research

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