ALGOSYSTEMS
THE PATH FORWARD

Cisco and Algosystems

Unified Computing System Case Studies

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Unified Computing Realized

Today, IT organizations assemble their data center environments from individual components. Their administrators spend significant amounts of time manually accomplishing basic integration tasks rather than focusing on more strategic, proactive initiatives. The industry is in a transition away from the rigid, inflexible platforms that result and moving toward more flexible, integrated, and virtualized environments.

The Cisco Unified Computing System™ is a next-generation data center platform that unites compute, network, storage access, and virtualization into a cohesive system designed to reduce total cost of ownership and increase business agility.

Algosystems owns the expertise, experience and pre and after sales resources to fully support your unified computing project. In the following pages, you may enjoy some of our latest Cisco Unified Computing case studies, to find some inspiration for your next data center project.

greek yellow pages

DATA CENTER REFRESH OPTIMIZES SERVICES

Greek Yellow Pages adapt to market developments and needs and boosts productivity with Cisco Unified Computing

ABOUT THE ORGANIZATION

Greek Yellow Pages is the most trusted and complete business directory in Greece. For over 45 years, it provides the most accurate information to millions of users who are searching for business information, while it also offers integrated digital advertising solutions for Greek businesses. Being Google Premier Partner since 2012, Baidu exclusive partner in Greece and by using cutting edge digital marketing platforms, Greek Yellow Pages is ensuring that great performance and business needs are met with success for any Digital Advertising service provided.

ORIGINAL CHALLENGE

The Greek Yellow Pages IT staff realized that its current server and network infrastructure would require considerable manpower and significant equipment expansion to meet anticipated growth. The network and server teams were already operating at near capacity, had performance issues, very significant data room footprint and considerable power consumption.
So, the need for Virtualization, Server Consolidation and a Scalable infrastructure was more than urgent.

WHY ALGOSYSTEMS

To help ensure a successful upgrade, Mr. Chronopoulos felt it was convenient to cooperate with a single integrator to design a fully compatible solution. Greek Yellow Pages evaluated several companies, but in the end, decided to go with a trusted source: Algosystems, proposing Cisco equipment for the core switching, the Fabric Interconnects and Servers.

THE DEPLOYMENT

The company thought about installing 2U rack-mounted servers. However, having determined that 2U servers would not deliver enough of a reduction in maintenance costs in an integrated virtual environment of moderate size or larger, the company changed its mind and made plans to install blade servers instead and to adopt Cisco UCS.
The networking and server teams worked to begin closing the gap between the network and server infrastructures. They created a new network and server plan based on a Cisco Unified Computing System and Cisco Nexus Series Switches. Greek Yellow Pages preferred the Intel Xeon E5 v3 processor platforms, because the Intel platform was best suited to the company's development needs and offered versatility across diverse workloads.
The new network infrastructure replaced the existing central switches with minimal disruption to services and a fully transparent way for the users and the management team.
Finally, the new storage infrastructure was part of a new SAN, interconnected over to the new unified core switches and was available both to the new computer infrastructure and the existing one.

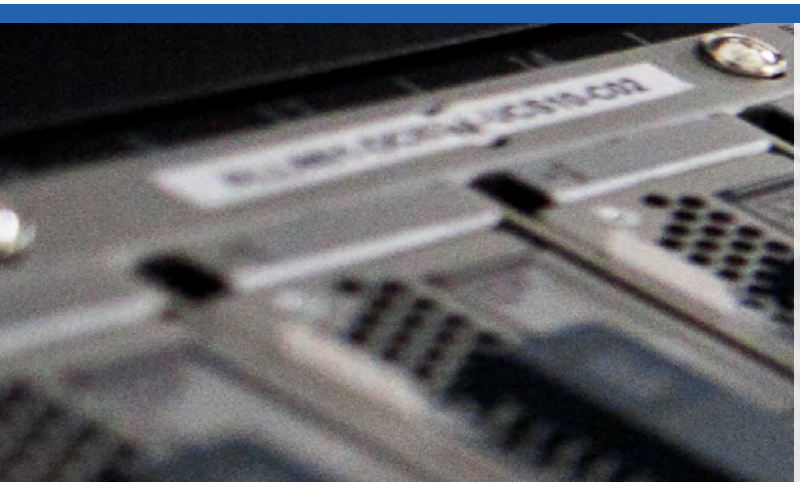
For this purpose, the following equipment was selected:

- A pair of Nexus 5596UP switches with the necessary L3 and storage options for network & storage
- A pair of Cisco 6248UP Fabric Interconnect
- UCS 5100 Blade system with 4 Blade servers B200 for computing infrastructure
- EMC VNX series storage for the storage infrastructure.

The interconnection of Fabric Interconnect with Nexus was based on multiple 10G connections overall B / W 40Gbps per Fabric Interconnect. The management of all systems was achieved through Cisco UCS Manager.

RESULTS

With a standardized, fully integrated data center solution in place, Greek Yellow Pages was well equipped for rapid expansion.
Datacenter footprint was reduced and operations were simplified, with room for future growth.
They achieved nearly a 25 percent reduction in operating costs, because their environment simply performed more efficiently.
A consolidated, virtualized UCS environment offered further benefits in terms of disaster recovery and business continuity.
The network was carried by the Fabric Interconnect, so there were very few cables. The storage network could also be integrated with the Fabric Interconnect, so fewer SAN switches and storage connection cables were needed. Finally, UCS Manager could be used for integrated management of the whole system.



> We are now able to deal with the business challenges that we know are coming. We continue to see benefits in network, server, and OPEX savings every year, which further enhances IT's agility, efficiency and responsiveness.

Elias Chronopoulos, IT Director, Greek Yellow Pages

TECHNOMAR SHIPPING INC

DATA CENTER WITHOUT LIMITS

Technomar Shipping Inc builds next-generation solution Data Center

ABOUT THE ORGANIZATION

Techomar Shipping Inc. is an international shipping company based in Athens, managing a 62 mixed vessel fleet of containers and bulk carriers.

ORIGINAL CHALLENGE

Techomar Shipping Inc. wanted to build a new Next Generation Datacenter, scalable and efficient to cover their present and expanding future need and able to support the company's quick path for growth.

The goal was to have a scalable and high performance infrastructure able to provide both network and storage functionality with simple and centralized management for both. High availability and predictable behavior for both physical and virtual environments were also very important aspects of the new solution.

Moreover, Technomar Shipping wanted to have the minimum time required to deploy server infrastructure. The majority of staff time was dedicated to managing server requests and server-related application projects, and each new server or VM host required several man-weeks to be placed into production.

WHY ALGOSYSTEMS

Technomar Shipping had an established relationship with Algosystems, a Cisco Gold Certified Partner, for providing technical support and expertise. As Technomar Shipping prepared for its first Cisco Unified Computing System deployment, it engaged Algosystems to provide planning, implementation and support services.

"There is a great partnership between Algosystems and Cisco as they teamed to help ensure the success of our initial implementation," says Michael Anastasakis, IT & T Independent Consultant at Maritime Sector.

THE DEPLOYMENT

After comprehensive diligence, which included a thorough review of various offerings, Technomar Shipping chose the Cisco Unified Computing System. Technomar's data center now run on Cisco UCS C-Series Servers and Cisco Nexus 5500 Series Switches with storage on the EMC VNX 5100 Series and virtualization on the VMware vSphere Hypervisor. Twelve rack mount Cisco UCS C-Series Servers were chosen that were used either as a Host for multiple Virtual Machines, or as physical servers, depending on the usage scenario.

Two Nexus 5548UP were also selected with necessary L3 modules and storage options and Cluster Virtual Port Channel topology (VPC) was implemented to achieve maximum availability and performance. VSAN isolation and Zoning configuration held at Nexus, eliminated the need for additional FC switches and FC cards use, reducing the complexity and the cost of the implementation.

RESULTS

With a fully integrated data center solution in place, Technomar Shipping is well equipped for rapid expansion and provisioning, enabling uninterrupted business growth.

A consolidated, virtualized UCS environment offered further benefits in terms of disaster recovery and business continuity. If a server goes down, we can redistribute the load to any available server. It's essentially an autonomous system.

> We didn't only see steady performance from Cisco UCS, but we were also impressed by how it yield to virtualization. It's surely designed for a virtual environment.

Michael Anastasakis,
IT & T Independent Consultant,
Maritime Sector

HELLENIC AMERICAN UNION
An educational public charity

NEXT-GENERATION DATA CENTER

Hellenic American Union builds next-generation Solution Overview Cisco Data Center.

ABOUT THE ORGANIZATION

The Hellenic American Union, founded in 1957, is a public-service institution with an international focus and strong community commitment, dedicated to providing opportunities for a diverse range of audiences to encounter and benefit from innovative educational programs and cultural events.

The institution is a not-for-profit association with historic ties to the United States and program links to Western European, American and Balkan institutions but is wholly autonomous and self-financing.

Since its establishment, the Hellenic American Union has encouraged the creation of a multicultural atmosphere in all its activities, welcoming students and visitors from all over the world. It is estimated that to date 2,700,000 persons from approximately 75 countries have enjoyed its services.

ORIGINAL CHALLENGE

HAU's IT staff realized that its current server and network infrastructure in their Main Site had serious limitations, consequently requiring significant expansion. The network and server equipment was operating at near capacity with cabling infrastructure and network port exhaustion, a very considerable equipment footprint and high power consumption.

In addition to a move towards virtualization of its entire server infrastructure, HAU wanted also to implement a high performance and scalable unified network and storage infrastructure.

"Though we were meeting our customer needs, the infrastructure needed to be more scalable and flexible to handle the upcoming demand" says Alexis Tagaris, Information Technology Manager of HAU.

WHY ALGOSYSTEMS

Algosystems is HAU's trusted advisor for many years. Our longtime cooperation is based on Algosystems' experience and capacity in proposing the latest technological features that apply to our customers' needs and on implementing and supporting demanding projects.

THE DEPLOYMENT

The HAU IT staff worked together with Algosystems engineers to complete the design and engineering work for the equipment before it was ordered. They created a new network and server plan based on UCS Blade Mini with B200 blade servers powered by Intel E 5-2650 v3 Xeon processors, Cisco Nexus 5500 Series Switches and EMC FC storage. With Algosystems' team assistance, a proof of concept was implemented. With the Intel Xeon processor and Cisco Unified Computing System, HAU achieved a visible improvement in the number of VMs deployed per core for record-breaking scalability.

HAU also chose Cisco Nexus 5548UP switches. The Cisco Nexus switches were installed as VPC cluster allowing HAU to aggregate Cisco Unified Computing System links efficiently and achieve a 10GB-capacity backbone.

The Cisco Nexus Switches were interconnected with the integrated Fabric Interconnects with 8 total 10G interfaces providing an overall network and storage capacity of 80 Gbps B / W with the UCS blade servers.They were configured to operate as Data Center Access Layer 2 switches without replacing the existing distribution / core switches.

Finally, the new EMC storage infrastructure was interconnected using multiple FC connections to the new unified fabric switches and was made available to the new computing infrastructure using FCoE over the existing 10G Ethernet connections.

RESULTS

Cisco UCS is designed for extreme architectural simplicity and high-performance infrastructure. Thus, it enabled the company to respond rapidly to new business needs. Great savings in operating costs were achieved.

Specifically:

- Significant savings on space, cabling, power and cooling requirements
- 50 percent savings in total support hours
- 30 percent savings in total power (kW) and cooling costs
- 35 percent savings in total data center floor space
- No new cabling infrastructure required.

The new environment simply performed more efficiently and the operation management was simplified.

A converged infrastructure has brought the networking, server and storage teams together to help HAU stay on track to meet its goals over the next years.

> The Cisco Unified Computing System not only minimizes costs, but primarily helps our business operate better, faster and more efficiently.

Alexis Tagaris,
Information Technology Manager, HAU

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