



Service Provider Adopts New Architecture

hellas online furthers its mission to become the number-one Greek service provider with Cisco data center solution.

EXECUTIVE SUMMARY

Customer Name: hellas online



Industry: Service provider

Location: Athens, Greece

Company size: 766 employees

Challenge

- Support growth while reducing costs
- Offer new, differentiated services

Solution

- New data center architecture based on Cisco Nexus 7000 Series Switches

Results

- Reduced operating costs and capital expenditure
- Improved service availability due to more efficient data center design
- Enhanced ability to differentiate services and support growth

Challenge

Greek service provider hellas online is on a mission to become the country's top provider of retail services, not just by revenue and number of customers, but also quality and value for money.

The most dynamic challenger in its home market, hellas online (HOL) provides all types of fixed-telecom services to more than 350,000 retail customers and businesses of all sizes. It also offers value-added services such as hosting, storage, and email to corporate customers. Rapid growth is making huge demands on the organization and its IT, as HOL increases its penetration in the retail market and focuses more on differentiating its services.

"As the business grows, we have to expand our data center to serve all the new customers," says Dimitris Gorgias, Director, Network Engineering & Operations. "We also need a cost-effective way of creating new services for niche segments of the retail market and value-added services for corporate clients."

Previously HOL had grown by adding new IT resources whenever they were needed. The company had accumulated a lot of equipment in its two data centers,

including 100 racks of 300 servers with multiple interfaces and blades. This accumulation made the data centers difficult to manage and expensive to operate, due to increasing requirements for cabling, space, labor, and power. Consolidating these "islands" of systems would help simplify management and reduce costs, laying the foundations for important service improvements.

Capacity was another issue. HOL needed 10 Gb interfaces on its switches because of the 10 Gb links in its network and customers' growing demand for such high-speed throughput. However, the core systems in the data centers were running out of ports and, in any case, the cost of 10 Gb interfaces on the existing switches was too high. "We needed an architecture that was more scalable and resilient," says Orestis Karadimitriou, Senior Manager, Access, IP & Transport. "But we also wanted to enable interaction between the core switches, the servers, and our storage systems, so that we could deploy services more quickly and create a platform for virtualizing our resources."

Solution

HOL decided to adopt a new data center architecture based on the Cisco® Nexus 7010 Switch, one of the [Cisco Nexus 7000 series](#) of ultra-fast switches. The Cisco Nexus 7000 platform was designed around three principles:

- **Infrastructure scalability:** using virtualization, power and cooling efficiency, density, and performance to support efficient data center infrastructure growth
- **Operational continuity:** integrated hardware, software, and management design to support zero downtime environments
- **Transport flexibility:** engineering foresight to enable the adoption of new technologies in an incremental, cost-effective manner.

HOL has installed two Cisco Nexus 7010 Switches in the data center that is used to provide hosting, storage, and email services to corporate customers. The high port density of the switches gives HOL the scalability that it needs, providing a future-proof platform that the service provider can extend at minimal cost.

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—Orestis Karadimitriou, Senior Manager, Access, IP & Transport, hellas online

The switches also combine greater throughput and performance with a much smaller footprint, enabling HOL to begin the process of consolidating its IT resources. "Having two larger systems in a stronger core is a more efficient design," says Karadimitriou. "We're creating a common platform that will allow us to consolidate a lot of different functions, and that's a crucial project, because it will really speed up our operations."

HOL chose a Cisco solution for several reasons, starting with the fact that Cisco has a holistic view of data center design, embedded in its [Cisco Data Center 3.0](#) strategy. By addressing the data center as a whole, Cisco Data Center 3.0 acts as a roadmap for infrastructure transformation based on three phases: consolidation, virtualization, and automation. The end result is tighter integration of servers, networks, and storage systems, leading to operational improvements.

HOL discovered that its own data center vision was similar to the Cisco vision, and, as a long-standing Cisco customer, the service provider was excited by what Cisco could offer. "We saw that Cisco had a clear and comprehensive data center vision that could help us build a better infrastructure," says Karadimitriou. "We also know that working with Cisco is a good experience; they deliver what they promise, and their deployment services are of the highest quality."

In future, HOL intends to utilize the virtualization capabilities that are built in to all Cisco Nexus 7000 Series Switches in the form of virtual device contexts (VDCs). VDCs support many levels of virtualization, including management, data segregation, and the partitioning of software into groups of modular processes dedicated to specific virtual devices. Each Cisco Nexus 7000 Series Switch can be segmented into four VDCs, which HOL could use to allocate resources flexibly and securely to different services according to business need.

Results

The new architecture has enabled HOL to simplify its data center setup by reducing the number of devices and introducing common management tools. This step, in turn, is improving operational efficiency by reducing:

- **Power consumption:** due to fewer devices and more effective cooling in the Cisco Nexus 7010 Switches
- **Space requirements:** due to the smaller footprint of the Cisco solutions, in spite of their higher capacity and port density
- **Cabling:** future support for unified fabric in the Cisco Nexus 7010 Switches will enable data, storage, and server traffic to be consolidated on to one network.

Time savings are expected to become an increasingly important source of cost efficiencies, because staff are spending less time on tasks ranging from routine management to installing equipment and developing new services. In future, HOL anticipates that operating costs will continue to fall and capital expenditure will also drop significantly.

"Consolidation and virtualization allow us to utilize our resources more efficiently, and this will save us a lot of money in future," says Karadimitriou. "We're also going to benefit financially from the flexibility of the Cisco platform because we no longer have to keep buying more equipment on a regular basis."

"We're creating an environment that is very similar to cloud computing. This consolidates our position to further differentiate our services while we continue to control costs."

—Dimitris Gorgias, Director, Network Engineering & Operations, hellas online

Not only is it easier to manage operations on the new architecture, it is also easier to locate problems and solve them. This capability has had an immediate effect on service levels to customers. "It used to be difficult to have a clear picture," says Gorgias. "Now that we have a common platform, our operation is more transparent, and we can work proactively to increase the availability of the services that we're providing."

Such service improvements are critical to HOL's continued success, helping to increase customer satisfaction, reduce churn, and prevent HOL from incurring penalties related to service-level agreements.

HOL's new data center architecture is not only transparent but also fast and reliable, which are characteristics that will be important for the company's future strategy. "Using Cisco Data Center 3.0 technology is helping us to fulfill our mission of becoming number one in the Greek market," says Gorgias. "We're creating an environment that is very similar to cloud computing, where we no longer have to do a completely new design to meet every specific need. This consolidates our position to further differentiate our services while we continue to control costs."

Next Steps

One option is for HOL to use its Cisco Nexus 7000 Series Switches to interconnect its two data centers and create a common, distributed platform over an existing Cisco DWDM (dense wavelength-division multiplexing) network. Another option under review is to incorporate HOL's storage infrastructure into the new environment, using Fibre Channel over Ethernet (FCoE). HOL is also currently redesigning the infrastructure that it uses for corporate hosting services, and the provider is considering the business case for building the new platform around Cisco Nexus 7000 Series Switches.

PRODUCT LIST

Routing and Switching

- Cisco Nexus 7010 Switches



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