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CISCO

Connecting data centers around the world

GRIFOLS

Size: 16,000 employees | Industry: Pharmaceutical | Location: Barcelona

Grifols is a global healthcare company working to improve the health and well-being of people around the world. The company produces life-saving protein therapies for patients and provides hospitals, pharmacies, and healthcare professionals with the products they need to deliver expert medical care. Grifols has been working in the fields of transfusion, blood banking, protein therapeutics, and laboratory analysis for more than 70 years and distributes products in 90 countries.

Challenges

- Increase IT efficiency and agility to support business growth
- Connect four data centers in Spain and the U.S.
- Standardize network configurations as well as application and security policies

Solutions

- Application-centric, software-defined network with:
  - Multisite capability
  - Centralized, automated infrastructure management

Results

- Deployed agile network fabric that can be logically connected to additional fabrics
- Transformed network operations with define-once, deploy-everywhere automation
- Improved security posture with tenant and workload segmentation

For More Information

- Cisco ACI solution details
- Cisco ACI partner ecosystem

Challenge: Increasing IT efficiency and agility to support business growth

After decades of company growth, the IT team at Grifols was having difficulty meeting the needs of the business. Maintaining existing systems and bringing new services online took too long, and the IT staff was spending more time reacting to problems than proactively driving the company forward.

"We used to configure everything box by box, switch by switch," says David Martinez, IT communications manager at Grifols. "We needed to be faster and more agile."

In addition to speed and efficiency, the company wanted better IT scalability and security. And it sought greater consistency and alignment of its core operations in Spain and the United States. So Grifols built a new data center in Sant Cugat, just outside Barcelona, to establish the foundation of a globally connected IT infrastructure.

With the help of Acuntia, a technology service provider based in Madrid, Grifols deployed Cisco® Application Centric Infrastructure (Cisco ACI™) as the network underpinning of its new data center, and eventually, its worldwide IT operations. According to José Antonio Alvarez, business development manager at Acuntia, it was the first production implementation of Cisco ACI in Spain.

"We tested, verified, and deployed the network fabric for Grifols," he explains. "With traditional networks, you spend less time with the design and more time with implementation and ongoing management. With Cisco ACI, it's the opposite. You define everything upfront—the logic models,

the security policies, the application policies—and then implementation and administration are very fast and easy."

"The technology was new to us and Acuntia, so we anticipated more problems and delays," Martinez adds. "But the implementation and migration were much simpler and faster than we expected. It was surprising."

The software-defined networking (SDN) fabric in the Sant Cugat data center includes two spines, 16 leaves, two load balancers, and two firewalls. Everything is managed from a single console, which provides visibility of the entire network and the endpoints connected to it.

"The fabric is working very well," Martinez reports, "and it will get better over time as we implement more automation."

Connecting multiple data centers

Cisco ACI was never intended for just the Sant Cugat data center. It was chosen in part for its ability to connect and standardize all four of Grifols' data centers—two in Spain and two in the United States. With a small network operations team separated by the Atlantic Ocean, the company wanted the ability to manage all four sites collectively and uniformly.

Acuntia is preparing to deploy Cisco ACI fabrics in Grifols' three remaining data centers, and will logically connect them using the solution's multisite capability. Because Cisco ACI works with any vendor's hypervisor, it can easily accommodate the differences of the systems in each location.

"For us, standardization isn't about having the same physical systems," says Martinez. "It's about having the same network configuration, the same policy, the same security."

Once the data centers are connected, Grifols' network operations team will be more synchronized and efficient. Configurations, policies, and changes can be easily pushed from one data center to the others. Services and workloads can also be effortlessly replicated or moved among the sites.

"Everything will be connected and consistent, but also highly resilient," Martinez explains. "If we have an outage in one data center, our services can failover to the others. It's good for security and business continuity."

From manual to automated

In addition to orchestrating the deployment and integration of three additional Cisco ACI fabrics, Acuntia is helping Grifols develop scripts for greater automation and efficiency.

"We're developing scripts for provisioning new resources, making network changes, and adjusting application and security policies," says Alvarez. "It's intuitive and uses language that is easy to understand. You don't have to have a deep knowledge of data centers or network technologies."

"Configuring physical and logical components manually takes time and can introduce errors," Martinez adds. "With Cisco ACI, we can define groups, interfaces, and policies once, and then push them everywhere from a central console. Once the scripts are developed and the button is pushed, no human intervention is needed."

Grifols will soon be able to deploy a full application—across physical and virtual environments in all four data centers—with just a few clicks. That includes the physical host, logical client or application, policies, interfaces, contracts, and virtual routing and forwarding (VRF) protocols.

The company's security posture is also improving with Cisco ACI, Martinez notes. It's easy to segment and insulate workloads and tenant environments, which is beneficial for business teams, test and development tasks, and forthcoming acquisitions. And the company is using service graphs to incorporate third-party solutions, such as a Layer 7 security appliance.

"We have better visibility and control of the data flows," Martinez explains. "We can control which kind of traffic passes from one bridge domain to another, for example, using contracts and service graphs."
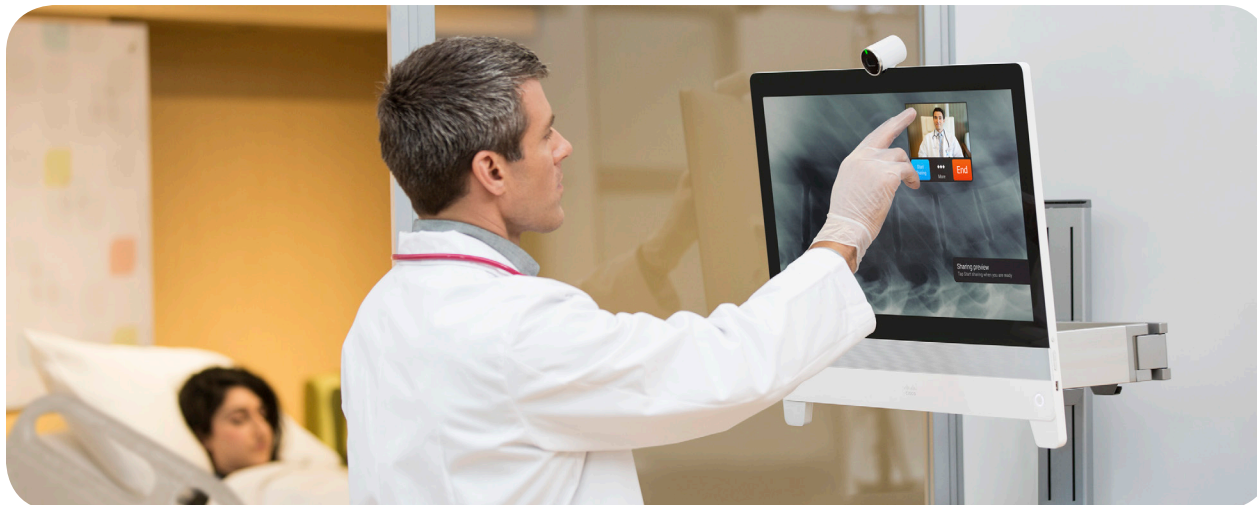
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José Antonio Alvarez
Business development manager, Acuntia

Looking ahead

Once its four data center network fabrics are deployed and logically connected, Grifols will continue to expand its network footprint, increase automation, and integrate new devices with the network.

"We plan to test Cisco ACI integrations with Palo Alto Networks, Radware, and F5," says Martinez.

Integration with Cisco ACI Ecosystem Partner solutions enables additional L4-7 automation, he adds, as well as more granular security and load balancing control. And it further increases the agility, consistency, and capability of a globally connected network environment.

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Product

· Cisco Application Centric Infrastructure (Cisco ACI™)