

# Digital TV Software Company Powers Applications with Secure Network

Nagra - OpenTV relies on Catalyst Switches to deliver security and multiscreen user experience to customers worldwide.

## EXECUTIVE SUMMARY

**Customer Name:** Nagra - OpenTV  
**Industry:** Software  
**Location:** San Francisco, CA  
**Number of Employees:** 3,100 worldwide

### BUSINESS CHALLENGE

- Support Nagra - OpenTV's growth with limited IT resources
- Quickly and cost-effectively adapt to serve needs of company's 3,000 employees spread across diverse geographic locations
- Help ensure 24-hour system availability for development teams collaborating around the globe

### NETWORK SOLUTION

- Comprehensive Cisco environment, ranging from switching and routing to wireless across the internal network
- Extensive network of Cisco support resources to serve Nagra - OpenTV's operations worldwide

### BUSINESS RESULTS

- Provided flexible and scalable switching environment with simple, unified management and a pay-as-you-grow stacking solution
- Delivered reliable system that reduced troubleshooting time by over 80 percent
- Maximized value of investment by enhancing existing access switching equipment with new capabilities such as Flexible NetFlow

### INTEGRATION PARTNER

- Skyline Advanced Services

## Challenge

Nagra-OpenTV serves some of the world's top digital television providers, securing content delivered to 144 million smartcards and enabling advanced television services such as electronic program guides, on-demand video, personal video recording, and advanced advertising. Millions of subscribers around the globe rely on the company for their visual entertainment.

Nagra - OpenTV leverages network engineering expertise from its U.S. headquarters in San Francisco, California to support operations at its offices worldwide. The highest priority for Network Architect Andrew Gray is providing customers with a rich, compelling user interface, and helping ensure that service access is always fast, reliable, and secure.

Given Nagra - OpenTV's rapid growth and its lean IT staff, the company needed a switching environment that would minimize management and troubleshooting time while providing high scalability to maximize growth potential. In addition, 24-hour service availability was a high priority. "We have developer groups in China, India, and the U.K. working on the same projects all the time, so if access goes down, our core development work comes to a standstill," says Gray. "Our comprehensive Cisco environment helps drive our success by keeping our teams collaborating without interruption."

## Solution

Nagra - OpenTV chose to deploy a comprehensive Cisco environment across its internal network, incorporating Cisco® switching, routing, wireless, and security technologies to support its vital internal operations and customer-facing services. In doing so, Nagra - OpenTV benefited from the ease of managing the integrated solution (Cisco Catalyst® 3750-X and 6500 Series switches for access and core, respectively, with Cisco Aironet® 1250 Access Points to enable wireless connectivity) with the reliability and scalability to match the organization's growing needs.

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The single-pane management of the switching environment, enabled by Cisco Catalyst Smart Operations and Cisco StackWise® Plus technology, is a huge benefit. "From here in San Francisco, I can log into one console and figure out what's happening across an array of switches," says Gray, who manages the company's extensive network on his own. "It dramatically cuts down on my management and troubleshooting time and delivers real savings in IT administration."

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Finding skilled outside support resources for Nagra - OpenTV's integrated Cisco environment has proven to be simple, which is particularly important given the huge demands on the company's network and relatively small IT team. "With Cisco, we can choose among the best of the best when it comes to service and support. It's easy to find experts who are trained and certified to address our growing and changing requirements," says Gray.

## Results

For Nagra - OpenTV, key benefits of Cisco Catalyst 3750-X Series switches include ease of management, ongoing reliability, and excellent scalability. "Once you configure the [Cisco Catalyst fixed access] switches, you can just walk away," says Gray. "If an issue comes up, I can now easily resolve it in a couple minutes. When you're dealing with hundreds of switches, the efficiencies quickly add up."

The ability of the Cisco environment to scale smoothly with the growing business has proven critical to Nagra - OpenTV and has helped the company accelerate time to market for new products. "We have a pre-IPO mentality, so sustained growth and scalable systems are priorities. We have to be able to adapt and expand services at a moment's notice, which is why we went with the Cisco 3000 Series switches," says Gray. "With Cisco, we can ramp up quickly and don't have to worry about whether we have another blade slot open."

The management stack configuration, with price points that did not require a large upfront investment, made getting buy-in from the company's CEO easier, especially when Nagra - OpenTV was operating with tighter capital budgets. "With such a broad range of solutions, Cisco can deliver the right type of solution at the right price," says Gray. "In our case, it was easy for us to buy a couple of Catalyst 3000 Series Switches and just keep stacking them as needed."

Beyond the scalability and manageability of the Cisco solutions, Nagra - OpenTV is realizing further benefits from the Catalyst 3000 Series switches with Power over Ethernet Plus (PoE+). Nagra - OpenTV powers a segment of its phone system in Asia and its wireless access points through PoE. "We can deliver more reliable power to our systems, while simplifying management," says Gray. "Given the scope of our operations, this is critical."

## PRODUCT LIST

### Routing and Switching

- Cisco Catalyst 3750-X Series Switches
- Cisco Catalyst 6500 Series Switches
- Cisco Nexus® 5010 Switches
- Cisco Nexus 2248TP GE Fabric Extenders
- Cisco Nexus 1000V Series Switches
- Cisco 2800 Series Integrated Services Routers
- Cisco 2800 Series Integrated Services Routers
- Cisco 3800 Series Integrated Services Routers
- Cisco 3900 Series Integrated Services Routers

### Wireless

- Cisco Aironet 1250 Series Access Points
- Cisco 2600 Wireless LAN Controllers

### Voice and IP Communications

- Cisco Unified IP Phones

## Next Steps

Nagra - OpenTV is currently beta testing Cisco Catalyst 3750-X switches with service modules with support for Flexible NetFlow. "We need to see where the biggest bandwidth demands are coming from, so Flexible NetFlow is integral to our work," Gray says.

The ability to intelligently monitor the IP traffic from the edge of the network helps ensure that all flows are monitored and that oversubscription issues are avoided at Nagra - OpenTV's aggregation and core switch levels. NetFlow helps Gray understand what applications are running on the network, identify undesired behavior, detect security anomalies, enforce remediation policies, and analyze traffic patterns for capacity planning.

Gray concludes, "We keep working with Cisco because the solutions align with best practices. We can get our labs up and running faster

and keep delivering new services to our customers. With Cisco, we have a platform for supporting efficient, agile product development."

## For More Information

To find out more about the Cisco Catalyst 3750-X Series Switches, visit: <http://www.cisco.com/en/US/products/ps10745/index.html>.

To learn more about Nagra - OpenTV, visit: <http://www.nagra.com>.



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