

Service Provider Successfully Addresses Significant Growth

MobiTV designed a scalable data center architecture for revenue-generating services, using Catalyst Switches.

EXECUTIVE SUMMARY
MobiTV, Inc. <ul style="list-style-type: none"> • Mobile Media Technology • Emeryville, California • 230 Employees
CHALLENGE <ul style="list-style-type: none"> • Scale for business growth • Deliver excellent video and audio quality • Contain data center costs
SOLUTION <ul style="list-style-type: none"> • Provided server access using Cisco Catalyst 4948-10GE Switches • Built network core on a Cisco Catalyst 6509 Switch • Simplified fault isolation by deploying Cisco Catalyst 4948-10GE Switch in front of firewall
RESULTS <ul style="list-style-type: none"> • Reduced administrative time by 20 percent • Shortened time to expand architecture from 30 to 5 days • Increased availability by simplifying fault isolation

Challenge

You can use your mobile device to receive live television programming, video-on-demand, and satellite and digital music services. MobiTV manages mobile media services for more than 7 million subscribers worldwide, including through its MobiTV[®], and MobiRadio[®] services. The company has partnerships with wireless network operators, broadband providers, handset manufacturers, and content providers, and received an Emmy Engineering Award for being the first company to enable live television over wireless.

Service volume has quadrupled year over year. By 2008, MobiTV had outgrown its data center cage in Sacramento, California and needed to build a new one. “The previous switching architecture would be too expensive to scale as we added more customers and content,” says Cedric Fernandes, Vice President of Technology, MobiTV. “For the new data center cage, we wanted a modular architecture that we could expand quickly and with lower costs.”

Requirements for the new data center solution included:

- Support for unpredictable traffic spikes from media-streaming servers
- Way to monitor the quality of video and audio streams at different points in the network
- Low administrative costs
- Scalability to support future growth without high upgrade costs

Solution

MobiTV built its new data center cage with Cisco[®] solutions. “We chose Cisco because of the reliable technology and our confidence in Cisco TAC [Technical Assistance Center],” says Fernandes. “The Cisco gear complements MobiTV’s optimized delivery server, an industry-leading streaming server technology built with full redundancy and telco-grade reliability.”

MobiTV uses rack-mounted servers to stream media to customers over wireless networks. The new data center architecture is as follows:

- Each video server rack connects over Gigabit Ethernet to a pair of Cisco Catalyst[®] 4948-10GE Switches. “Video traffic is dynamic and variable,” says Fernandes. “The Cisco Catalyst 4948 provides the traffic shaping we need, as well as high bandwidth and a large buffer size.”

- These aggregation switches connect over 10 Gigabit Ethernet to a Cisco Catalyst 6509 Switch. Another Cisco Catalyst 4948-10GE Switch provides a demarcation point between the Cisco Catalyst 6509 Switch and the firewall, which is a Cisco Adaptive Security Appliance. “Using the Catalyst 4948-10GE in this way enables us to monitor stream quality as it exits our network, and to quickly isolate faults,” Fernandes says.

MobiTV implemented the system using its own staff. Cisco Services helped to fine-tune the configuration.

“Cisco network solutions enable us to grow modularly, without having to purchase all new equipment. The multiblade chassis makes our costs more predictable, and we can align our costs more closely to revenue opportunities.”

— Cedric Fernandes, Vice President of Technology, MobiTV, Inc.

Results

Lower Operational Costs

“We spend 20 percent less time managing the Cisco rack than the rack built from other vendors’ solutions,” says Fernandes. “And we can scale the Cisco rack in five days instead of 30.” The lower management burden allows MobiTV’s network engineers to devote more time to strategic projects. It also enables the company to begin offering new content more quickly, accelerating revenue.

High Media Quality

No one can predict how many subscribers will tune into breaking news and live events. Some vendors’ switches tend to drop packets during traffic spikes, resulting in poor video or audio quality. “Cisco gear can manage the traffic spikes in our media,” says Fernandes. “We attribute that to the sophistication of the Cisco IOS Software, the way we can tune buffers, and the advanced ASIC [application-specific integrated circuit] design.”

Another way that MobiTV helps ensure high video quality is by monitoring stream quality as content flows through the network. To sample packets just as they exit the network, MobiTV deployed a Cisco Catalyst 4948-10GE near the network edge. “We’ve reduced the time to isolate faults by about 50 percent,” Fernandes says.

Competitive Advantage

“Our customers trust the availability of our service and media quality because we use Cisco gear,” says Fernandes. MobiTV designed the network so that customers will receive uninterrupted service if a network device should fail. All servers and network devices have at least two connections, and some have four.

PRODUCT LIST

Routing and Switching

- Cisco Catalyst 6509 Flagship Switch
- Cisco Catalyst 4948-10GE Switch

Storage Systems

- Cisco MDS 9509 Multilayer Director Switch

Security

- Cisco Adaptive Security Appliance

Simplified Growth

As the business continues to grow, MobiTV can scale its existing Cisco switches to support more servers and content, simply by adding port modules. “Cisco network solutions enable us to grow modularly, without having to purchase all new equipment,” says Fernandes. “The multiblade chassis makes our costs more predictable, and we can align our costs more closely to revenue opportunities.”

For More Information

To find out more about Cisco data center solutions, visit:

<http://www.cisco.com/go/datacenter>.



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV
Amsterdam, The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

CCDE, CCSI, CCENT, Cisco Eos, Cisco HealthPresence, the Cisco logo, Cisco Lumin, Cisco Nexus, Cisco Nurse Connect, Cisco Stackpower, Cisco StadiumVision, Cisco TelePresence, Cisco WebEx, DCE, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn and Cisco Store are service marks; and Access Registrar, Aironet, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, EtherFast, EtherSwitch, Event Center, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, iQuick Study, IronPort, the IronPort logo, LightStream, Linksys, MediaTone, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, Network Registrar, PCNow, PIX, PowerPanels, ProConnect, ScriptShare, SenderBase, SMARTnet, Spectrum Expert, StackWise, The Fastest Way to Increase Your Internet Quotient, TransPath, WebEx, and the WebEx logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0903R)