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MTN CYPRUS EXPANDS BROADBAND SERVICES IN CYPRUS WITH A NEXT-GENERATION NETWORK FROM JUNIPER NETWORKS

Summary

Company: MTN Cyprus

Industry: Telecommunications

Challenges: Deploy next-generation broadband network to meet subscriber demand for voice, video, and data while resolving reliability issues

Network Solution:

· Juniper Networks MX Series 3D Universal Edge Routers (MX80, MX480)

· Juniper Networks SBR Service Provider Series

· Juniper Professional Services

Results:

· Met phenomenal growth for broadband services

· Simplified provisioning of new revenue generating services

· Improved network resiliency and uptime

MTN Group is a leading communications provider in emerging markets and operates in 21 countries in Africa and the Middle East. The company had more than 182,7million subscribers as of June 2012.[1] MTN's revenue grew 17.5% from 2010 to 2011, fuelled by introduction of new revenue generating services, cost optimization, and a focus on delivering an excellent customer experience.[2]

MTN Cyprus is the second largest telecom provider in Cyprus, with 32% market share in 2012—and growing. MTN Cyprus, known for delivering innovative technology solutions, offers comprehensive services for mobile, fixed telephony and Internet connectivity. MTN Cyprus owns a fiber network and uses HSPA+, or Evolved High-Speed Packet Access, technology, which allows its customers to enjoy high quality, reliable services. With 21 stores, MTN also has the largest retail operations in Cyprus.

Challenges

MTN Cyprus needed to modernize its network to keep pace with growing subscriber demand for broadband and to deliver services more cost-effectively and reliably. The situation was challenging because MTN Cyprus had consolidated all of its digital subscriber line access multiplexers (DSLAMs) into the incumbent's central offices and relied on leased lines for the physical infrastructure, which drove up operational costs.

"Having a consistent infrastructure would simplify management of the broadband network, ease interoperability, and reduce our training requirements," says Yiannis Michaelides, Senior Manager of Switching Networks &Services Planning at MTN Cyprus. "We had a lot of equipment from different vendors in our network, and had to manage network devices with many different operating systems."

MTN Cyprus built out a fiber network across Cyprus to reduce its dependence on leased line capacity and support its rapidly growing broadband business. Then it focused on the simplicity and scale of its network infrastructure. MTN wanted to build a next-generation network that would enable it to meet customers' phenomenal demand for broadband services. It also wanted to offer new revenue generating services, such as enterprise virtual private network (VPN).

Selection Criteria

After thoroughly considering whether to deploy broadband services over Layer 2 or Layer 3, MTN Cyprus chose to replace its legacy Layer 2 network with an IP/MPLS network. "MPLS provides a more structured architecture, which provides for easier configuration and management, regardless of whether subscribers are connecting to a DSLAM or MSAN or router, via DSL, GPON or point-to-point," says Michaelides. "In addition, MPLS delivers better resiliency with lower failover times."

[1]"MTN Group delivered a satisfactory set of results to June 2012," MTN Group press release, August 8, 2012 **www.mtn.com/ PressOffice/Pages/FullContent.aspx?Pid=170**

[2]MTN Financial Statements, August 2012. **www.mtn-investor.com/reporting/interims_2012/commmentary.html**

MTN Cyprus selected Juniper Networks® MX Series 3D Universal Edge Routers for its new IP/MPLS network. Using the MX Series allows MTN Cyprus to meet the immediate need for a carrier-grade converged network and 10GbE support while scaling in three dimensions—bandwidth, services, and subscribers—as its business grows. Powerful switching and security features give the MX Series router unmatched flexibility and reliability to support advanced services.

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"When we looked at Juniper's competition, the comparable solution used four or five different operating systems, which would have been a lot more expensive to manage and maintain, and their licensing models were much more complex," says Michaelides. "We have a lot more options with Juniper Networks Junos® operating system, which is consistent across platforms and gives us greater flexibility in how we deploy and manage the network."

Solution

MTN Cyprus deployed Juniper Networks MX80 3D Universal Edge Router in 24 points of presence (POPs). The MX80 provided an affordable option that allowed MTN to aggregate multiple DSLAMs onto a 10GbE interface, without having to deploy large chassis platforms in the network. "We have to install this equipment in multiple locations where we have to pay rent and where the power may come from a generator," says Michaelides. "Juniper helps us be more efficient in using energy and physical space."

MTN Cyprus uses the Juniper Networks MX480 3D Universal Edge Router in the network core. MTN Cyprus was able to leverage the integration of the MX480 routers' native Broadband Remote Access Server (B-RAS) capability with Juniper Networks SBR Carrier. SBR Carrier is a comprehensive, standards-based, authentication, authorization, and accounting (AAA) RADIUS service provider server that supports a range of access technologies and subscriber management databases. Using SBR Carrier gives MTN Cyprus greater flexibility in managing subscriber configurations.

The MX Series routers are powered by Junos OS, which enabled MTN Cyprus to train the team on one OS for both the core and access networks. "If I compare Junos OS to competitors, it's an advantage to have one operating system from Juniper," says Michaelides. "With Juniper, each feature doesn't have to be purchased separately, as with some of the competitors. It's more cost-efficient and easier for us to design the network."

Results—Reliability, Cost-Efficiency, and Scale

The new 10GbE network from Juniper delivered a tenfold capacity increase, enabling MTN Cyprus to meet customers' growing demand for broadband services and to roll out new services such as business-class VPNs.

MTN Cyprus is now able to scale its network easily and cost-effectively as subscriber demand for voice, video, and data grows, without sacrificing its service levels. By using MX480 routers as the core and MX80 routers for service creation at Layer 2, MTN Cyprus can deploy additional IP services at the edge as needed, which gives the company a scalable business model as market competition grows.

Provisioning new revenue-generating services is quicker and easier. "With a Juniper network, we gained flexibility when designing end-user packages," says Michaelides. With the legacy network, if MTN wanted to offer a new Internet service to a customer, technicians would have to configure the DSLAMs, switches, B-RAS, and Radius servers to support the new package. "Now we just define it in the B-RAS and Radius, and we don't have to configure a lot on the access layer," he continues. "We have centralized provisioning through the Juniper broadband network gateway."

Deploying an IP/MPLS network resolved the reliability issues with the legacy Layer 2 network and eliminated troubleshooting difficulties. "We don't have to match VLANs from different locations, and we avoid the performance problems with Spanning Tree Protocol and broadcasts," says Michaelides. The carrier-class design of the MX Series has helped MTN Cyprus achieve its reliability goals. In addition, the network has no single point of failure.

MTN Cyprus also uses MX480 routers for its Internet peering point, connecting Cyprus to the MTN Group's presence in London via undersea cables.

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Juniper Professional Services as well as GCC Computers, a systems integrator and Juniper Elite Partner, assisted MTN Cyprus with project management, design, implementation, and training for both the national MPLS network and the subscriber management systems. GCC has more than 24 years of experience with information and communications technology (ICT) in Cyprus, and it contributes a strong local presence combined with deep technical expertise and a focus on quality.

"We worked closely with MTN and Juniper Networks to deliver the highest quality solution with a total focus on customer satisfaction," says Constantinos Constantinou, network and security business unit manager at GCC.

"We were very happy with the expertise and knowledge of GCC," says Michaelides. "The company was always very helpful and led advanced technical discussions that helped us evaluate and make the decision to move forward."

Next Steps and Lessons Learned

With a high-performance, reliable network, MTN Cyprus can continue to introduce new revenue generating services to serve the needs of business and consumers.

For More Information

To find out more about Juniper Networks products and solutions, please visit **www.juniper.net**.

To find out more about MTN Cyprus products and services, please visit **www.mtn.com.cy**.

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at **www.juniper.net.**

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