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## SERVICE PROVIDER

# **Brocade Next-Generation Broadband Network Solutions**

### **HIGHLIGHTS**

- The demand for more bandwidthintensive services like Internet Protocol television (IPTV), fiber to the home (FTTH), video on demand (VoD), and high-speed Internet represents a significant revenue growth area for service providers
- Brocade® offers next-generation Carrier Ethernet enterprise solutions for converged networks
- Brocade offers leading-edge nextgeneration broadband solutions for delivery of reliable, scalable media services

### Figure 1.

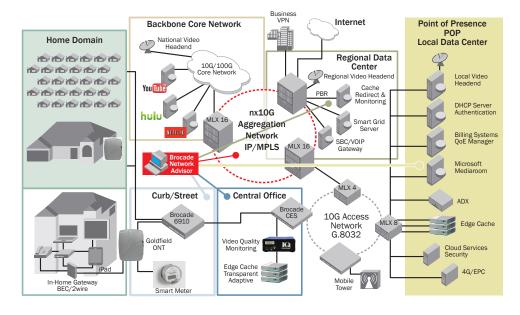
The next-generation broadband service provider architecture illustrates the end-to-end Brocade solution offering fiber to the home (FTTH) services using the Brocade 6910. This architecture has been fully tested in the Brocade broadband lab to ensure interoperability.

The Brocade 6910 Ethernet Access Switch connects the home domain to the broadband providers' network and central office using 1GB Ethernet uplinks. The providers CO can contain one or more Brocade CES Carrier Ethernet Switches for connectivity to a local 10GB access ring network.

#### **OVERVIEW**

Service providers have found that with increased competition and consumer demand, they need to offer a rich suite of broadband services in order to retain high-value customers. Service providers need an IP-based network that is scalable for mass deployment, reliable for a guaranteed level of service, and flexible to meet service changes and new applications. However, current networks, which are made up of disparate products, do not provide the kind of flexibility, scalability, and cost-effectiveness that are needed to offer differentiated

services and to achieve higher margins. These legacy networks are not designed to support multiple services and running them on separate networks has become operationally and cost prohibitive. In addition, they lack the throughput to handle the bandwidth demand from users who want access to media-rich applications anywhere from any device. In order to support these new service requirements, service providers need to transform their networks to a Carrier Ethernet–based infrastructure that provides greater reliability, scalability, and guaranteed QoS.



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### **SOLUTION**

Brocade Next-Generation Broadband Solutions can help transform service provider networks to deliver highly scalable and profitable services. The solution is comprised of a converged Carrier Ethernet and Internet Protocol/Multi-Protocol Label Switching (IP/MPLS)-based services portfolio, as well as a comprehensive management solution for end-to-end management.

### CONVERGED NETWORKS FOR COST-EFFECTIVE DEPLOYMENT

Brocade Next-Generation Broadband Solutions enable service providers to offer a full range of broadband services, including business-class, broadband, Internet access, and virtual private network (VPN) services. This allows service providers to deliver a

consistent set of feature-rich services on a converged network. The Brocade solution includes the Brocade 6910 Ethernet Access Switch, which is optimized for Ethernetbased access and-along with the Brocade NetIron® CES 2000 Series, Brocade NetIron CER 2000 Series, and Brocade MLXe Series routers-which provides market-leading port density on 10/100 Mbps, 1 Gbps, and 10 Gbps interface cards for high-speed broadband offerings. Service providers can simplify their operations with these products, since they reside on a converged network with a common operating system (OS). In addition, service providers can deploy new services more efficiently and cost-effectively as their customer requirements increase. The Brocade solution provides compelling economics driven by lowest total cost of

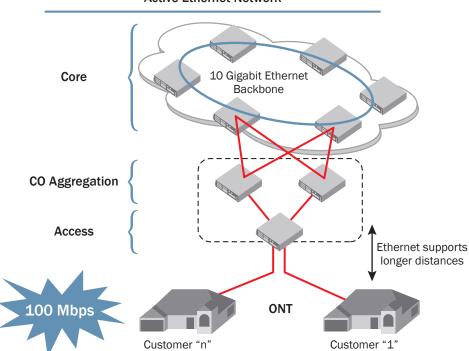
ownership (TCO) and maximum investment protection. (For more information, see the white paper titled, "The Business Case for the Brocade Carrier Ethernet IP Solution in a Metro Network.")

### SERVICE DIFFERENTIATION WITH ADVANCED QOS

Brocade provides advanced QoS features that that will ensure that the user Quality of Experience ( QoE) is met for premium services like real-time streaming video or Voice-Over-IP (VoIP). Features such as color marking, traffic policing, and committed information rate are included so that services can be offered from best-effort to high-priority traffic with reliable delivery.

For more information, visit www.brocade.com.

### **Active Ethernet Network**



### Figure 2.

This architecture illustrates the Brocade solution utilizing the Brocade NetIron CES 2000 switch in a typical metro ring, aggregated by the Brocade MLXe router. Service providers who want to offer broadband services via Ethernet can utilize the Brocade 6910, which provides end-user access that supports key applications like VPNs, VoD, and high-speed broadband access.

### **Corporate Headquarters**

San Jose, CA USA T: +1-408-333-8000 info@brocade.com

### **European Headquarters**

Geneva, Switzerland T: +41-22-799-56-40 emea-info@brocade.com

### Asia Pacific Headquarters

Singapore T: +65-6538-4700 apac-info@brocade.com

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