



Broadband Network Technology Evolution

Top Priorities and Challenges

A Calix survey of **broadband service providers (BSPs)** uncovered the top **priorities** and **challenges** for network and technology professionals as they look to meet current and future subscriber needs.



BSPs Know That Success Lies In...

Network reliability and the **subscriber experience** are the top two issues keeping BSPs up at night.

They can't win in the current business environment without resolving both challenges. Solving just one is not enough.

Network availability and reliability are absolute requirements to ensure a subscriber experience that's second to none.



61%

of survey respondents view **network reliability and availability** as their most significant challenge

54%

of survey respondents view **improving the subscriber experience** as their most significant challenge

36%

Network scalability

32%

Meeting growing network capacity requirements

29%

Network security

The Time is Now to Upgrade Network Capacity

BSPs recognize that the day has arrived to increase capacity in the network from 10 to 100 Gigabit Ethernet. They've seen the ever-growing demand for bandwidth and are acting on it now.

86%

of survey respondents are moderately, very, or extremely concerned about their ability to deal with network capacity issues and bottlenecks in their networks.

83%

of BSPs are upgrading their network to 100 Gigabit Ethernet to address this concern.

BSPs Also Taking Steps Proactively to Optimize Their Networks

45%

are increasing network segmentation

48%

are reducing broadcast domains and flat Layer 2 networks

41%

are leveraging Layer 3 multi-path routing techniques



BSPs are "Going with the Flow" to Track Network Capacity

They view visibility and analytics as indispensable for managing network capacity. In particular, flow analysis is seen as increasingly important for understanding what people are doing with the network.

Flow analysis is the top choice of

79%

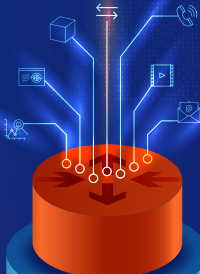
of respondents for gaining insights into network capacity issues

72%

are using MIB-based node and interface metrics

17%

are using probe-based approaches



The Biggest Threat Vector Is From The Subscriber Premises

When it comes to security, the majority of BSPs recognize that the subscriber is their biggest threat. Subscriber and IoT wireless devices are viewed as the most vulnerable area in the network.

Areas of the Network Most Vulnerable to Security Threats

66% customer and IoT wireless devices

55% residential gateways

41% application servers

27% core network

Phishing Attacks the Most Common Cyber Threat

50%

phishing attacks on subscribers

21%

phishing attacks on employees

14%

malware attacks

59%

of respondents are upgrading and adding security patches to subscriber home networking equipment to address the subscriber-based threat vectors



Network Security Is a Top Priority

BSPs continue to take steps proactively to protect the network.

65% are insourcing security protections using commercially available security tools

52% are insourcing security protections using commercially available security tools

43% are engaging a third party to conduct an end-to-end security audit



BSPs Still Searching for Answers on the Right Services for Subscribers

When it comes to new services, BSPs are considering a wide variety of value-added services for monetizing their networks, with no clear winner emerging.

Top Value-Added Services for Businesses

40% **40%** **33%**

OTT video streaming

Managed Wi-Fi

Mobile backhaul, UCaaS, IPTV, Layer 2 VPN services

Top Value-Added Residential Services

50% **44%**

home network cybersecurity services

OTT streaming services, IoT-based managed home security, and subscriber-enabled app-based content filtering



Majority of BSPs Being Proactive on IPv4 Exhaustion

50% believe that finding a solution is important and...

44% are already addressing the issue or planning to within 6 to 12 months

Top Strategies for Addressing IPv4 Exhaustion

50%
purchasing additional IPv4 address blocks

46%
migrating to IPv6

32%
leveraging existing internal resources to address IPv4 exhaustion or adding additional resources





Contact Us To Learn More

Contact Calix today to learn more about how we can help you design your network to meet the challenges of tomorrow.

Schedule a Network
Design Consult