Key Takeaways
Top 10 Takeaways

- **Network Management** Traditional network hardware is still most important
- **Network Monitoring** More respondents are interested in network monitoring over other network management
- **Gigabit Ethernet** Vendors should be clear about 40GbE and its uses – respondents still believe 10GbE is sufficient
- **SDN** SDN is still in the research stage. Network Virtualization is perceived differently than SDN and respondents are more likely to consider network virt over SDN.
- **Cloud Networking** Intention to buy for cloud network is flat.
- **Wireless LAN** Respondents are still investing in WLANs. Users are still not considering WiFi as primary access
- **BYOD** is the largest driver for spend
- **WAN** Audience is investing in bandwidth not WAN Optimization
- **Wireless, Security, Data Center** Top 3 Spend Drivers
- **Over Half of Respondents** 61% declared that UC is implemented with their organization
- **Budget** Networking budgets remain the same; budgets aren’t keeping up with demand so vendors should push TCO
Survey Demographics
Survey Demographics

639 Total Respondents

What is your main role in your organization?
- 35% IT Management
- 23% Network Engineer/Staff/Admin
- 11% Consulting
- 9% Line-of-Business
- 9% Professional services technical/engineering staff
- 1% Outsourced services technical/engineering staff
- 12% Other

Industry
- 15% Business Services/Consulting
- 12% Education
- 10% Manufacturing (Computer related)
- 9% Finance/Banking/Accounting
- 7% Government
- 7% Manufacturing (non-Computer)
- 6% Retail/Wholesale/Distribution
- 5% Health/Medical
- 3% Construction/Architecture/Engineering
- 3% Insurance/Real Estate/Legal Services
- 3% Media/Advertising/Marketing
- 2% Transportation/Utilities
- 2% Data Processing Services
- 2% Travel/Leisure

Role in Company’s Networking Product Purchasing Decisions
- 47% Recommend/specify products
- 36% Evaluate
- 24% Advisory role only
- 23% Authority to approve vendors
- 19% Financial decision maker
Survey Demographics

639 Total Respondents

**Employee Size**
- 35% 1-99
- 22% 100-499
- 12% 500-999
- 14% 1,000-4,999
- 6% 5,000-9,999
- 10% 10,000+

**Branch/Remote Offices**
- 22% Single location/no branch offices
- 31% 1-4
- 12% 5-9
- 18% 10-49
- 6% 50-99
- 5% 100-499
- 2% 500-999
- 1% 1000+

**What technologies do you work with?**
- 71% LAN hardware
- 64% Wireless LAN
- 58% Network Security
- 48% WAN Hardware
- 49% Virtualization
- 35% Storage Networking
- 34% Data center networks and fabrics
- 35% Mobile devices and architectures
- 27% Network virtualization
- 29% Application performance and delivery
- 32% Private cloud services
- 26% Unified communications/Collab solutions
- 22% WAN Optimization
Steady Increase for Networking Budget in the Next 12 Months

Which best describes your technology/networking budget for the next 12 months compared to the last 12 months?

- Increase 28%
- Stay the same 38%
- Decrease 18%
- Don’t know 16%

N= 446
Network security, WLANs, Data center network architecture upgrades are top networking priorities for the next 12 months

- What are the company’s top three networking priorities for the next 12 months? N=448

Network Security
Wireless LAN/Wi-Fi Networks
Data center network architecture upgrades
Remote access solutions
Network hardware upgrades
Network management tools and appliances
Unified communications/collaboration
Bandwidth and telecom services
Hybrid cloud network development/management
Application performance and delivery
WAN optimization
Converged network infrastructure
Video conferencing/Desktop video
Top technology challenges: Keeping goals aligned and budget

- What are the main technology challenges in terms of running your organization’s network?

According to the survey (N=447), the top technology challenges are:

1. Keeping IT and corporate goals aligned
2. Technology budget not keeping up with growing demand
3. Equipment interoperability
4. Moving applications to the cloud
5. Providing access and setting policy for consumer mobile devices
6. Applications deployed without IT's knowledge
7. Ensuring end-to-end visibility across the network
8. Finding engineers and developers with software experience
9. Vendor support
10. Shifting emphasis from hardware to software
11. Understand the role of new technologies like SDN
12. Lack of network programming flexibility
13. Vendor roadmap

Each challenge is represented by a bar chart showing the percentage of respondents who identified it as a significant challenge.
What business issues are the main drivers of your organization’s network investments?

- Security
- Enabling worker productivity
- Reducing costs
- Disaster recovery/compliance requirements
- Supporting mobile applications/enabling mobile corporate applications
- Supporting cloud computing
- Increase in number of remote branch offices/mobile workers
- Growing workforce
- Increased use of video conferencing to support employee collaboration
- Mergers and acquisitions
- Other

N= 445
What’s requiring more time than last year?

- In the last year, which of the following technologies/projects have required more time and networking resources than they did in the past?

<table>
<thead>
<tr>
<th>Technology/Project</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server virtualization</td>
<td>35%</td>
</tr>
<tr>
<td>Network security</td>
<td>32%</td>
</tr>
<tr>
<td>Wireless networking</td>
<td>24%</td>
</tr>
<tr>
<td>Storage networking</td>
<td>21%</td>
</tr>
<tr>
<td>Network Management</td>
<td>18%</td>
</tr>
<tr>
<td>Disaster recovery</td>
<td>13%</td>
</tr>
<tr>
<td>Mobile access compliance and security</td>
<td>12%</td>
</tr>
<tr>
<td>Application management/delivery</td>
<td>12%</td>
</tr>
<tr>
<td>Unified Communications</td>
<td>11%</td>
</tr>
<tr>
<td>Cloud computing services support (SaaS, IaaS, PaaS)</td>
<td>10%</td>
</tr>
<tr>
<td>Network virtualization</td>
<td>9%</td>
</tr>
<tr>
<td>Mobile/Handheld purchasing and management</td>
<td>8%</td>
</tr>
<tr>
<td>Network/Data center convergence</td>
<td>7%</td>
</tr>
<tr>
<td>None</td>
<td>0%</td>
</tr>
<tr>
<td>Private cloud development</td>
<td>0%</td>
</tr>
<tr>
<td>WAN optimization</td>
<td>0%</td>
</tr>
</tbody>
</table>

N = 445
Software-Defined Networking
SDN Key Takeaways

- **17% of respondents** are currently using, planning to use or evaluating SDN

- **Tackling SDN Roadblocks**
  - Respondents are craving more information about SDN
  - There is a need for more companies’ SDN use cases
  - Audience still finds they can run on traditional hardware

- **Top SDN technologies** they’re investing in:
  - Virtual switches
  - Network security
  - Specialized hypervisors or hardware for virtualization

- **Primary uses** for SDN in the public cloud:
  - To build a cloud network to offer outsourced cloud services to enterprise customers
  - To create multi-tenant networks for my external cloud customers
  - For network access control and management
Audience Slowly Warming up to SDN…

- Are you currently using, planning to use, or evaluating network virtualization or SDN?

17% Yes

83% No

N= 424
How is Network Virtualization Being Used?

How do you plan to use network virtualization? (check all that apply)

- To manage my server virtualization environment
- To build a private cloud network for my enterprise/organization
- In my data center network
- To inter-network between data centers
- In my campus LAN
- To enable shared services within my organization
- To enhance application performance/application optimization
- For security and identity management/control
- In my WAN

![Bar chart showing usage of network virtualization](chart.png)
Where does SDN rank in terms of your company’s overall networking projects?

- SDN is one of our networking projects
- SDN ranks lower than our other network projects
- SDN is not on our project landscape
- SDN is one of our highest ranked networking projects
- SDN is our top networking priority
Top SDN Benefits

- How do you think SDN can help your company? (Check up to three)

- Reduce network hardware costs
- Simplify network architecture
- Enable better network management
- Save my organization money
- Enable better management in a server virtualization environment
- Enable network virtualization
- Enable better network security management
- Provide a more programmable network
- Replace many hardware components
- Enable a flatter network architecture
- Enable me to build a multi-tenant cloud network
- Enable me to offer and monetize new services on the network
- Help deploy a better managed mobile access strategy
- Replace the need for a data center fabric
- Augment the data center fabric
- Save my organization money
- Enable better network management
- Simplify network architecture
- Reduce network hardware costs
SDN Roadblocks

Why won’t you invest in SDN in the next 12-to-24 months? (Check all that apply)

- I don’t know enough about SDN
- I can run my network with traditional hardware.
- I need to learn more about SDN through other companies’ use cases
- I am waiting for SDN standards to develop.
- Software-defined networks aren’t ready for use in production networks
- SDN is too new to be deployed
- I’m waiting for more traditional vendors to release SDN products.
- I can implement network virtualization using other technologies.
- The use cases for SDNs are limited to cloud providers only.
- There aren’t enough SDN applications available.
- I need to deploy a network fabric before I can deploy software-defined networking
Software-Defined Networking: True or False

- 62% believe SDN is primarily a network management strategy they can use with their existing network architecture
- 84% believe that SDN can be used to redesign their network
- 65% believe SDN will commoditize network switches
- 56% will use SDN to manage security
- 57% will use SDN to manage mobility
- 75% will use SDN to optimize network traffic flows
- 62% will use SDN in conjunction with a network fabric
Understanding SDN: What’s missing...

- What kind of information would help you better understand SDN? (Check all that apply)

- Case studies on how companies have deployed SDN
- SDN white papers
- News about SDN products and technology
- Advice about designing and managing SDN networks
- Opinions about SDN technology
Use of SDN in the Public Cloud

- How will you use SDN in your public cloud?

- To build a cloud network to offer outsourced cloud services to enterprise customers
- To create multi-tenant networks for my external cloud customers
- For network access control and management
- To manage network access to outsourced cloud applications for my cloud customers
- To manage and optimize traffic flows in my carrier network
- To monitor and manage my network
- For network security management
- To deploy new services in my carrier network
Who would you consider buying SDN products from for your network?

- From a vendor that specializes in SDN
- From my current networking vendor(s)
- I will consider changing my current networking vendor for one that has SDN technology
IPv6
Current and Future Plans for IPv6 Technologies

- Are you currently using, planning to use or evaluating IPv6 technologies?

- Yes 29%
- No 54%
- Don’t know 17%

N= 376
Top IPv6 Products

- What technologies will you invest in?

- Dual-stack for IPv4 and IPv6 support
- Network traffic-monitoring applications
- Don't know
- ASIC-accelerated firewalls
- IPAM appliances
- ADCs

N=490
Data Center Networking
Data Center Networking Key Takeaways

● **Unified/Converged Networking** is the #1 reason to invest in data center network fabrics

● **Top Investments to Support Cloud Computing**
  - New virtualization technologies
  - New management tools
  - Software defined networking

● **Top Data Center Networking Products** they’re investing in:
  - Virtual solutions
  - Network Virtualization
  - Cloud Application Management

● **Cloud Networking** Intention to buy for cloud network is flat.
Top Networking Technologies being Purchased to Support Cloud Computing

- Please select which network technologies you will purchase to support cloud computing.

- Network virtualization/overlay technology
- New management tools
- Specialized switches
- Software defined networking
- Network orchestration technology
- Specialized routers
- Layer 4-7 services

N= 111
Changes to Support Private and Hybrid Clouds

Will you be making changes to your network in the next 12 months to support a private cloud?

- Don’t know: 30%
- Yes: 27%
- No: 43%

Will you be making changes to your network in the next 12 months to support a hybrid cloud?

- Don’t know: 12%
- Yes: 26%
- No: 62%

N= 376
Future Plans for Data Center Network Fabrics

- Are you currently using, planning to use or evaluating data center network fabrics?

- Yes 17%
- Don’t know 27%
- No 56%

N= 367
Top Reasons NOT to Deploy a Data Center Network Fabric

- If you are not going to deploy a data center network fabric, why not?

- My existing architecture is sufficient
- I will wait and invest in SDN for unified networking
- I am concerned that data center fabric means vendor lock-in

N= 207
Are you currently using, planning to use or evaluating data center networking products?

- 20% Yes
- 56% No
- 24% I don’t know

N= 352
Wireless
Wireless Key Takeaways

● **Wireless LAN** Respondents are still investing in WLANs. Users are still not considering Wi-Fi as primary access

● **Wireless** falls into the top 3 network investment areas for the 3rd consecutive year

● **Top Wireless LAN investments:**
  - WLAN Access Points
  - WLAN Controllers
  - Integrated Wired and Wireless LAN Management

● **True or False Statements**
  - 67% My company needs 802.11ac to handle video and multimedia delivery
  - 60% My company needs 802.11ac to expand the wireless LAN as its primary access network
  - 73% My company needs 802.11ac to handle BYOD demands
Future Plans for Wireless LANs

- Is your company deploying or replacing your traditional LAN with a wireless LAN?

- **Yes**: 22%
- **No**: 70%
- **Don’t know**: 8%

N= 358
Future Plans for 802.11ac

Will your company upgrade its wireless LAN to 802.11ac for high-speed throughput in the next 12 months?

20% Yes
80% No

N= 358
Wireless True or False Statements…

- My company needs 802.11ac to handle BYOD demands: TRUE
- I don't need that kind of speed and capacity in my WLAN: FALSE
- My company needs 802.11ac to handle video and multimedia delivery: TRUE
- My company needs 802.11ac to expand the wireless LAN as its primary access network: TRUE
- 802.11ac technology is not mature enough to invest in: FALSE
- My company needs 802.11ac to handle virtual desktop: TRUE
- My current 802.11n WLAN can't be upgraded to 802.11ac: TRUE
- There are no appropriate testing tools for an 802.11ac environment: TRUE
- There are no appropriate management tools for an 802.11ac environment: TRUE
- 802.11ac will require too much power: FALSE
Network Hardware
Who are your primary network hardware providers?

- Cisco
- HP Networking
- Juniper Networks
- Dell
- IBM
- Brocade
- Avaya/Nortel
- Alcatel-Lucent
- Extreme Networks
- Enterasys
- Arista Networks

N= 353
Invest in network virtualization components
Invest in mobile device management (MDM) solutions
Investigate more advanced network hardware options
Explore less expensive network hardware options
Work to increase the budget our network equipment because our current equipment...
Invest in stand-alone Wi-Fi network access solutions
Implement open-source networking
Invest in unified wired/wireless products
Invest in SDN technology
Current hardware and software support the needs of the business

N=120
Network Management
Network Management Key Takeaways

- **$2.1 Billion Dollar** market opportunity for the Network Management market
- **Network Management** Traditional network hardware is still most important
- **Top Network Management Investment Areas**
  - Network Monitoring
  - Network Performance Management
  - Network Security Monitoring
- **Top Network Management Blind spots**
  - BYOD
  - Security
  - Wireless LAN
Who is your primary network management provider?

- Cisco: 40%
- HP: 15%
- Other: 10%
- Don't know: 5%
- SolarWinds: 5%
- Spiceworks: 5%
- Dell: 5%
- IBM: 5%
- Riverbed/Opnet: 5%
- EMC: 5%
- NetScout: 5%

N=344
Top Network Management Investments

Which of the following network management capabilities is your organization likely to invest in during the next 12 months?

- Network monitoring
- Network performance management
- Network security monitoring
- Virtualization management
- Mobile device management
- Wireless network management
- Application performance management
- Cloud network monitoring and management
- End-user experience monitoring
- IP address management
- Network automation tools
- UC/VoIP management
- Network forensics
- Integrated wired and wireless network management
- SDN management
- Visibility fabrics

N= 343
$2.1 Billion Dollar Market Opportunity

- Are you considering changing your networking management software, tools, or appliances in the next 12 months?

14% Yes
86% No

N= 344
BYOD Tops Network Management “Blind Spots”

- What technology trends are creating the biggest network management “blind spots” with your existing management solutions?

- Bring your own device/consumer devices
- Security
- Cloud computing
- Voice over IP
- Wireless LAN
- Server virtualization
- Network virtualization
- Server/storage convergence
- Enterprise video conferencing

N= 331
Top Causes of Network Downtime

- What is the main cause of network downtime in your organization today?

- Telecom provider outages: 30%
- Human error: 25%
- Hardware failure: 20%
- Power outages: 15%
- Software bugs: 10%
- Security breaches: 5%

N= 331
Application User Experience

• On a scale of 1-5 where 1 being the easiest and 5 being the most difficult please rank how difficult it is to measure the user experience for the following applications

- Email
- VoIP
- Video
- SharePoint
- ERP
- CRM
- Mobile applications
- Cloud applications
- Virtual applications
- Vertical applications

1 - Easiest
2
3
4
5 - Most Difficult
Does your current network management tool provide performance management capabilities?

- 43% Yes
- 57% No

Of those who say “yes”, 54% don’t believe these APM capabilities are adequate given the shift to a more mobile, virtual and cloud driven IT environment.

N = 331
Separate Management Tools?

- Do you run separate management tools for application and network management?

58% Yes

42% No

N= 331
WAN Management
Future Plans for WAN Infrastructure Investment

- Are you planning to invest in your WAN infrastructure over the next 12 months?

- 45% No
- 22% Yes
- 33% Don’t Know

N= 328
Who is your primary application delivery controller provider?

- Don't know (35%)
- Cisco (25%)
- Other (20%)
- Citrix / Netscaler (15%)
- Riverbed / Stingray (10%)
- F5 Networks (5%)
- Brocade (2.5%)
- Radware (0.5%)
WAN Optimization/App Performance and Delivery Products

- Will you invest in WAN optimization/application performance and delivery products in next 12 months?

- 24% Yes
- 76% No

N = 220
Top Reasons NOT to Add WAN Opt/App Performance and Delivery Products

- Why won’t you be adding WAN optimization/application performance and delivery products to your network?
  - Our WAN performance is fine
  - We do not have branch offices
  - Application performance and delivery products are not needed
  - WAN optimization is too expensive
  - We don’t have a WAN
  - We do not need to accommodate remote workers
  - We are reducing the number of branch offices

N= 167
Ethernet
Are you familiar with service called Ethernet-Dedicated Internet (Ethernet DIA) designed to add Ethernet management features to an Ethernet service?

- 13% Yes
- 87% No

N= 424
Are you currently using, planning to use or evaluating Ethernet DIA from a service provider?

- 2% Yes
- 56% No
- 42% Don't Know

N=424
Sizeable number of respondents want more Ethernet DIA Info…

- Do you need more information about Ethernet DIA and its uses?

44% Yes
57% No

N= 416
Future Plans for 40 Gigabit Ethernet

- Are you currently using, planning to use or evaluating 40 Gigabit Ethernet?

- 9% Yes
- 23% Don’t Know
- 68% No

N= 392
Top Reasons for NOT Investing in 40GbE

Majority of audience thinks 10GbE is enough

- If you are not planning to invest in 40 Gigabit Ethernet, why not?

- 10 Gigabit Ethernet is all my organization needs
- Multiple 10 GbE links are sufficient
- We will wait until 100 Gigabit Ethernet is available
- 40 Gigabit Ethernet is too expensive
- Other

N= 267
40 GbE True or False Statements…

- Migration to 40 GbE will require a rip-and-replace of my data center network
- I will only invest in 40 GbE equipment if it can be adapted to 100 GbE
- Migrating to 40 GbE will greatly improve performance of my data center
- Existing monitoring tools are not adequate for my 40 GbE environment
- There is not adequate management equipment for 40 GbE environments

N= 385
Future Plans for 100GbE Investment

Majority of respondents are undecided

- I will invest in 100GbE in the next 12 months...

- 6% Yes
- 52% No
- 42% Don’t Know

N= 391
100 GbE True or False Statements...

- I won't require such extensive bandwidth in the foreseeable future
  - TRUE: 80%
  - FALSE: 20%

- 100 GbE is too expensive
  - TRUE: 90%
  - FALSE: 10%

- I will need 100 GbE to support the growth of applications in my data center
  - TRUE: 70%
  - FALSE: 30%

- I will need 100 GbE for content delivery networks
  - TRUE: 60%
  - FALSE: 40%

- I will need 100 GbE to support a private cloud environment
  - TRUE: 50%
  - FALSE: 50%

N= 203
Unified Communications
Unified Communications Key Takeaways

- **61% of respondents** declared that UC is implemented within their organization.

- **Top deployed** UC applications:
  - VOIP
  - Audio conferencing
  - Web conferencing

- **61% of respondents** will be using Lync as their primary voice application.

- **Primary reasons** for deploying Lync:
  - It integrates into Exchange, Sharepoint and Office
  - We are a predominantly Microsoft organization
  - We want to create UC enables applications and Microsoft offers the best developer environment.
What is the status of UC in your organization?

- 23% Fully deployed across the organization
- 16% Partially deployed across the organization
- 14% Deployed to a small number of workers
- 9% We are currently testing UC within our organization
- 12% We are planning to test UC within the next 12 months
- 26% We have no immediate plans to deploy or test UC
# UC Application Deployment Plans

Which UC applications do you plan or are planning to deploy?

<table>
<thead>
<tr>
<th></th>
<th>Deployed</th>
<th>Planning to deploy</th>
<th>Consider part of UC but no plans to deploy</th>
<th>Do not consider this part of UC</th>
</tr>
</thead>
<tbody>
<tr>
<td>VoIP</td>
<td>63.9%</td>
<td>25.4%</td>
<td>10.0%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Audio conferencing</td>
<td>61.2%</td>
<td>24.5%</td>
<td>11.9%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Web conferencing</td>
<td>45.4%</td>
<td>34.0%</td>
<td>15.6%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Desktop video</td>
<td>34.0%</td>
<td>31.6%</td>
<td>23.7%</td>
<td>11.9%</td>
</tr>
<tr>
<td>TelePresence/Room Video</td>
<td>32.7%</td>
<td>32.7%</td>
<td>25.2%</td>
<td>11.0%</td>
</tr>
<tr>
<td>Call center</td>
<td>42.4%</td>
<td>26.5%</td>
<td>16.7%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Unified messaging</td>
<td>42.7%</td>
<td>34.5%</td>
<td>16.9%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Presence</td>
<td>36.4%</td>
<td>27.6%</td>
<td>22.4%</td>
<td>15.8%</td>
</tr>
<tr>
<td>Mobile UC</td>
<td>21.9%</td>
<td>42.1%</td>
<td>26.4%</td>
<td>12.0%</td>
</tr>
<tr>
<td>Social Media</td>
<td>23.3%</td>
<td>28.0%</td>
<td>20.7%</td>
<td>29.3%</td>
</tr>
<tr>
<td>UC enabled applications</td>
<td>13.3%</td>
<td>43.8%</td>
<td>28.3%</td>
<td>15.9%</td>
</tr>
</tbody>
</table>
61% will be using Lync as their primary voice application
54% will be deploying Lync enabled applications
57% will use SIP Trunking as part of their deployment
61% believe SIP trunking can save them significant money
53% believe Microsoft Lync interoperates easily with other UC solution providers
Primary Reasons for Deploying Lync

- If you have deployed or are planning to deploy Lync, what are the primary reasons? (Please select top 3)

- It integrates into Exchange, Sharepoint and Office
- We are a predominantly Microsoft organization
- We want to create UC enables applications and Microsoft offers the best developer environment
- It’s the lowest cost solution
- We feel Lync is the best UC solution available today
- It’s the most secure