Research Report

Abstract

Trends in Data Center Networking

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Introduction

Research Objectives

ESG conducted an in-depth survey of 306 IT professionals responsible for evaluating, purchasing, and managing campus and data center networking technologies for their organizations. Survey participants represented midmarket (100 to 999 employees) and enterprise-class (1,000 employees or more) organizations in North America (United States and Canada). A broad cross section of verticals is represented in this sample.

The survey was designed to answer the following questions:

- Which IT initiatives and general technology meta-trends will have the greatest impact on network infrastructure over the next 12-18 months?
- Specifically, what impact do organizations anticipate IoT will have on network architecture?
- What impact has server virtualization and virtual switching had on data center network infrastructure plans and strategy?
- How would respondents classify their organization's data center network Ethernet switching architecture now and in the future?
- What approach do organizations take with regard to network infrastructure technology standards?
- What are the biggest challenges facing networking teams?
- Other than the networking group, which group has the most influence in making network infrastructure strategy decisions?
- What technologies are used for network performance monitoring and diagnostics? Is a best-of-breed approach preferred when it comes to these types of tools?
- What plans do organizations have to leverage white box switching?
- What drives white box switching usage and interest? Conversely, what elements are viewed as adoption impediments?
- How do organizations define software-defined networking (SDN)?
- What plans do organizations have to leverage SDN technology?
- What drives SDN usage and interest? What concerns do organizations have?
- Do organizations use or plan to use open source systems as part of their networking infrastructure?

Survey participants represented a wide range of industries including financial services, manufacturing, business services, communications and media, and government. For more details, please see the Research Methodology and Respondent Demographics sections of this report.

Research Methodology

To gather data for this report, ESG conducted a comprehensive online survey of IT professionals from private- and public-sector organizations in North America (United States and Canada) between July 7, 2015 and July 21, 2015. To qualify for this survey, respondents were required to be IT professionals responsible for evaluating, purchasing, and managing campus and data center networking technologies for their organization. All respondents were provided an incentive to complete the survey in the form of cash awards and/or cash equivalents.

After filtering out unqualified respondents, removing duplicate responses, and screening the remaining completed responses (on a number of criteria) for data integrity, ESG was left with a final total sample of 306 IT professionals.

Please see the *Respondent Demographics* section of this report for more information on these respondents.

Note: Totals in figures and tables throughout this report may not add up to 100% due to rounding.

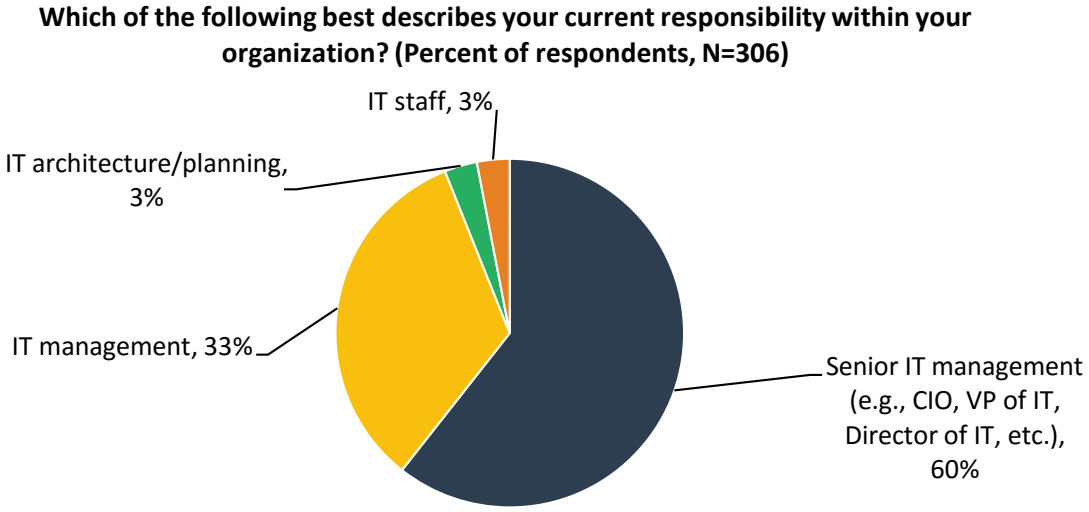
Respondent Demographics

The data presented in this report is based on a survey of 306 qualified respondents. Figures 19-26 detail the demographics of the respondent base, including individual respondents' role, as well as respondent organizations' total number of employees, primary industry, and annual revenue.

Respondents by Role

Respondents' current role within their organization is shown in Figure 1.

Figure 1. Survey Respondents by Current Role

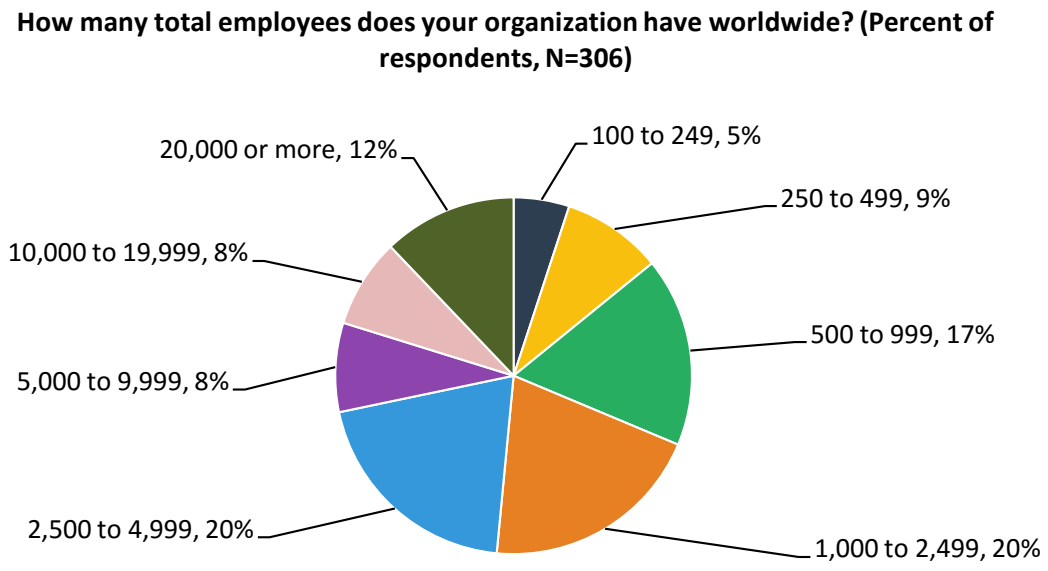


Source: Enterprise Strategy Group, 2016.

Respondents by Number of Employees

The number of employees in respondents' organizations is shown in Figure 2.

Figure 2. Survey Respondents by Number of Employees

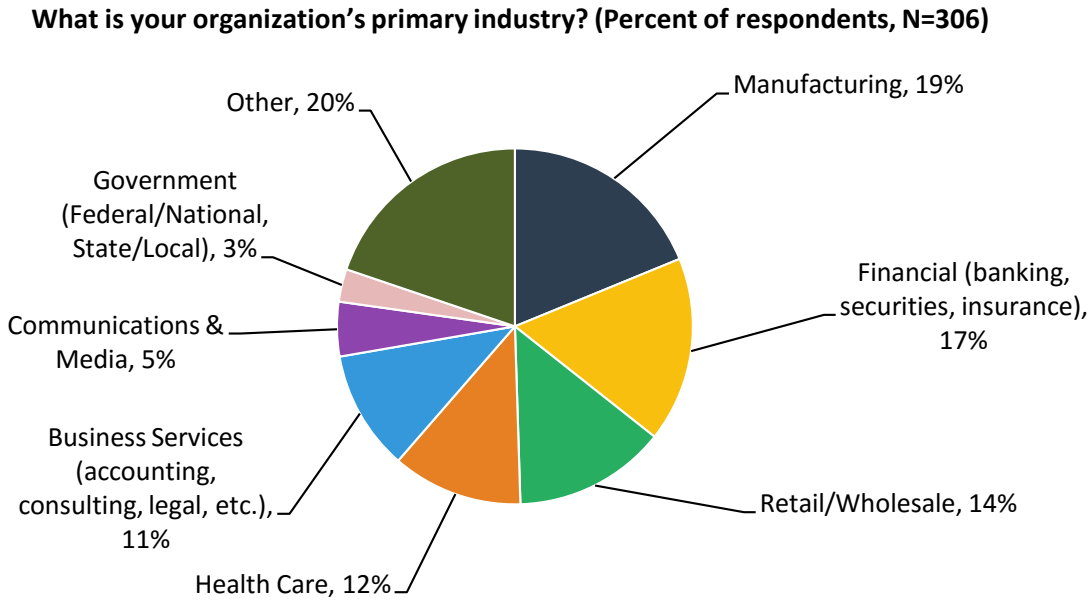


Source: Enterprise Strategy Group, 2016.

Respondents by Industry

Respondents were asked to identify their organization's primary industry. In total, ESG received completed, qualified respondents from individuals in 19 distinct vertical industries, plus an "Other" category. Respondents were then grouped into the broader categories shown in Figure 3.

Figure 3. Survey Respondents by Industry

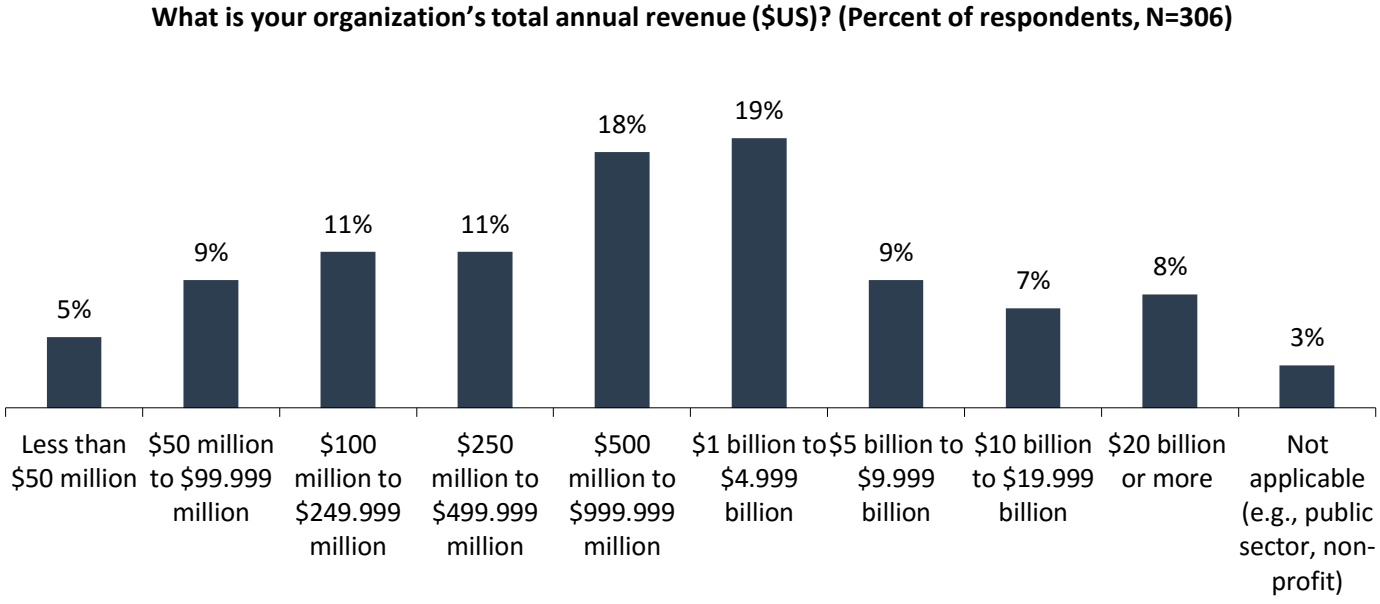


Source: Enterprise Strategy Group, 2016.

Respondents by Annual Revenue

Respondent organizations' annual revenue is shown in Figure 4.

Figure 4. Survey Respondents by Annual Revenue

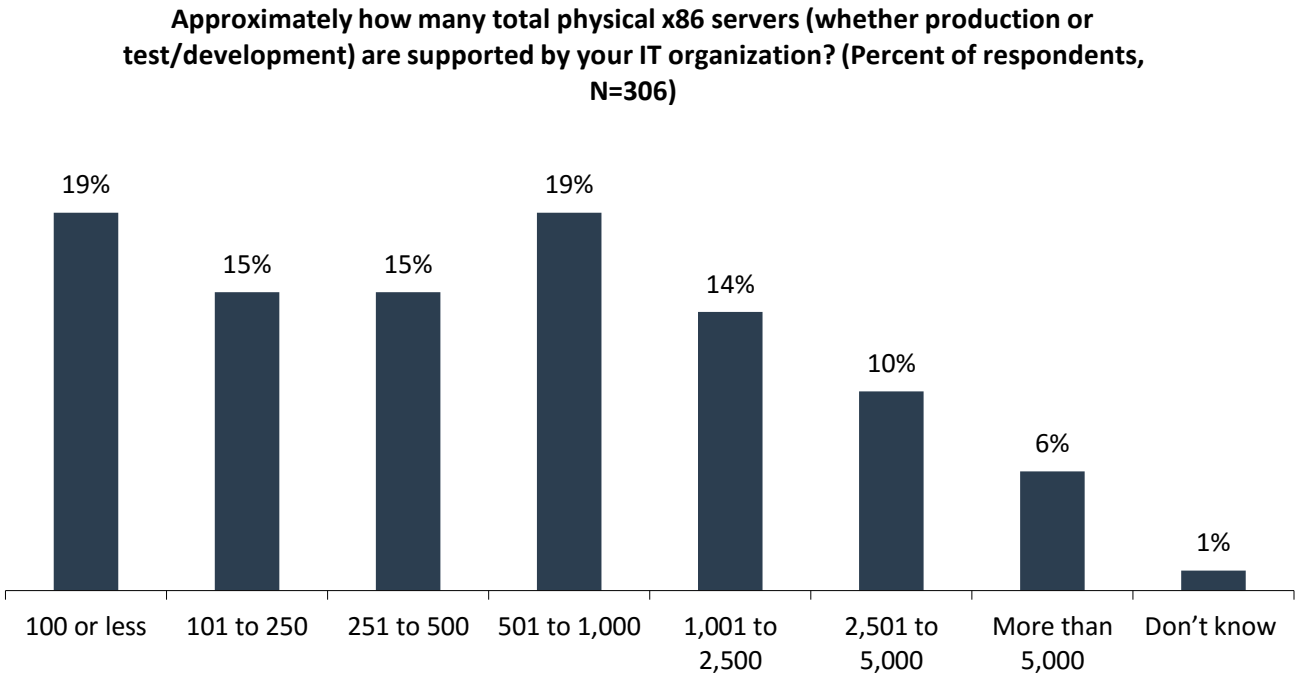


Source: Enterprise Strategy Group, 2016.

Respondents by Number of Physical Servers

Respondent organizations' number of physical servers is shown in Figure 5.

Figure 5. Survey Respondents by Total Number of Physical Servers

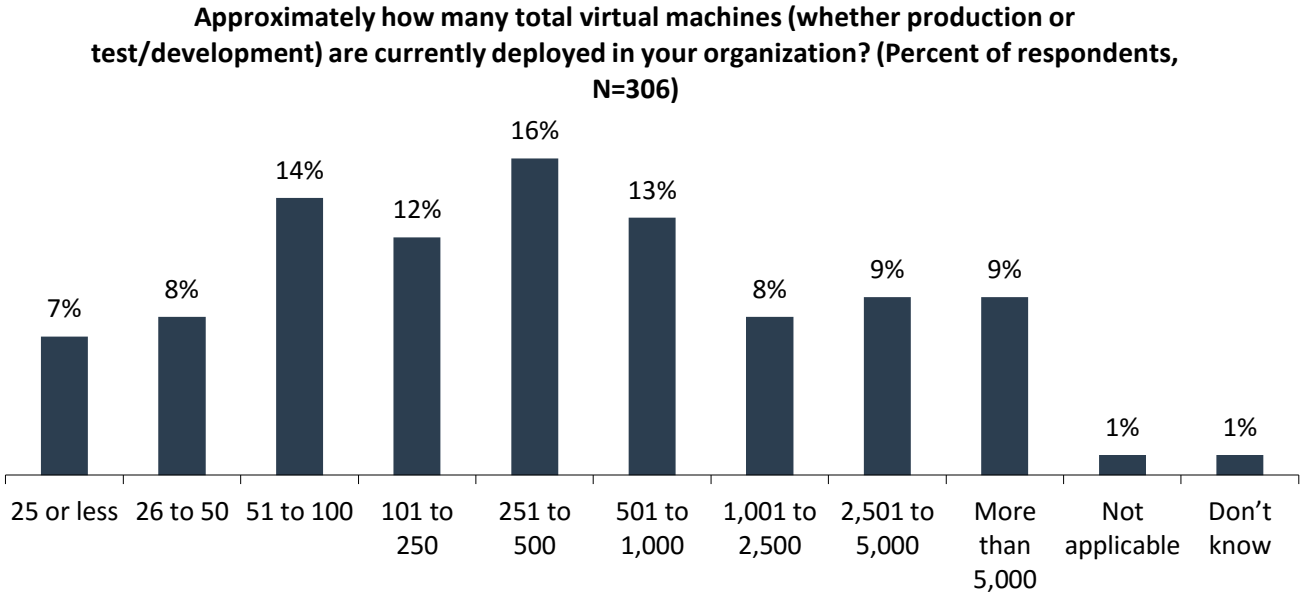


Source: Enterprise Strategy Group, 2016.

Respondents by Number of Virtual Machines

Respondent organizations' number of virtual machines is shown in Figure 6.

Figure 6. Survey Respondents by Total Number of Virtual Machines



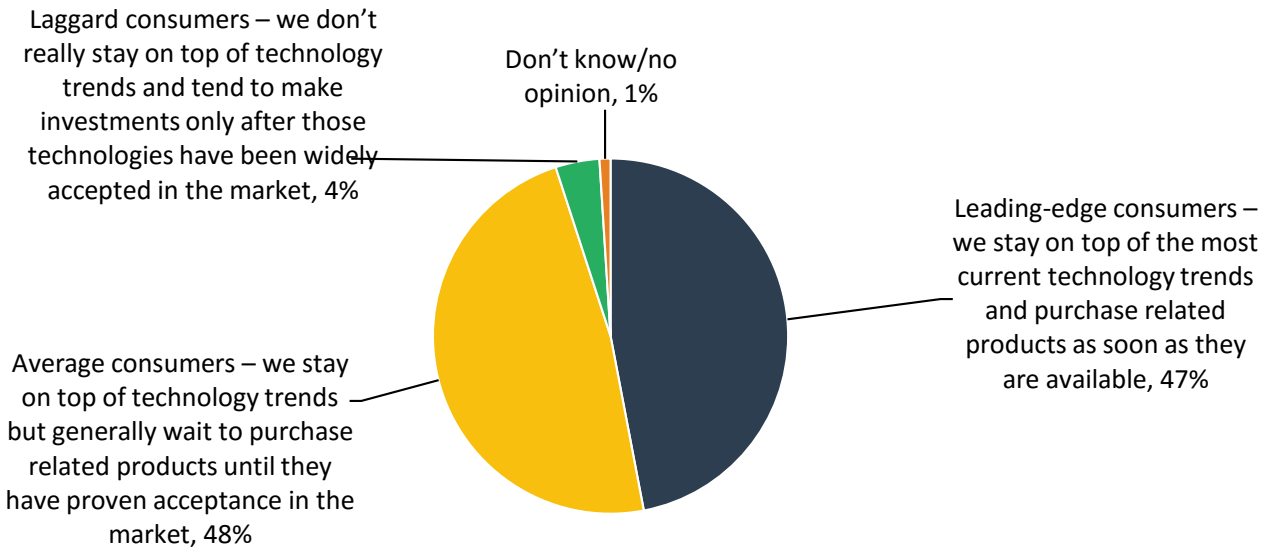
Source: Enterprise Strategy Group, 2016.

Respondents by IT Purchasing Pattern

ESG created a company "psychographic" profile by capturing respondents' views on their organizations' purchasing patterns for IT products and services (see Figure 7).

Figure 7. Survey Respondents by IT Purchasing Patterns

Generally speaking, how would you describe your organization's purchasing patterns for IT products and services? (Percent of respondents, N=306)



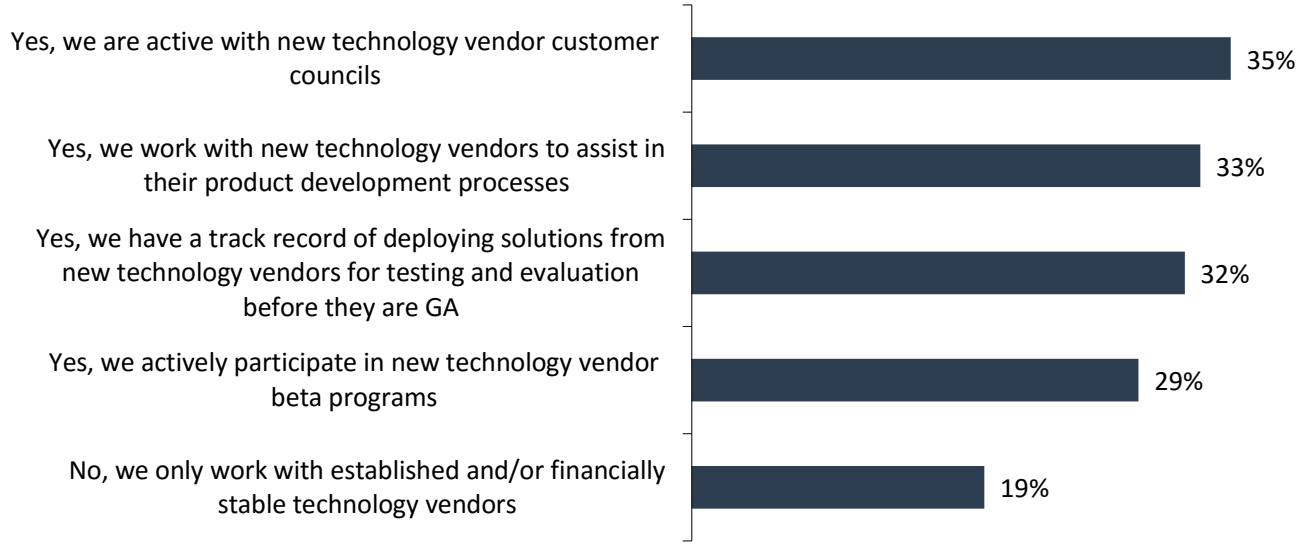
Source: Enterprise Strategy Group, 2016.

Respondents by Use of Startup Technology Vendors

Respondents' use of startup technology vendors is shown in Figure 8.

Figure 8. Survey Respondents by Use of Startup Technology Vendor

Does your organization engage with new (i.e., startup) technology vendors that offer solutions that apply to your IT infrastructure? (Percent of respondents, N=306, multiple responses accepted)



Source: Enterprise Strategy Group, 2016.

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