Research Report

Abstract:

Trends in Protecting Virtualized Environments

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Introduction

Why Virtualization Protection Matters

Virtualization, more specifically server virtualization, was pioneered by VMware and is now also offered through Microsoft Hyper-V, as well as open source and other mechanisms. Virtualization has truly changed how server infrastructure is delivered in a modern IT environment. As with any other fundamental IT transformation, when production resources are modernized, protection mechanisms must also evolve. As such, it is not surprising that increasing server virtualization usage and improving data backup and recovery have consistently been among the top five IT priorities for midmarket and enterprise organizations over the last several years, including 2015.

In order to get a more in-depth perspective on the strategies and technologies IT organizations are employing to protect their virtualized infrastructures, ESG gathered the data presented in this report as part of a broader research effort covering general data protection trends.

Executive Summary of the Research

ESG surveyed 375 North American IT professionals representing midmarket (250 to 999 employees) and enterprise-class (1,000 employees or more) organizations in order to explore the business and IT requirements driving modern data protection strategies, including the methods used for protecting virtualized infrastructure. All respondents were responsible for and/or familiar with their organization's data protection infrastructure, processes, and strategy, and were required to have purchase decision authority or influence.

Based on the data collected from this survey, ESG concludes that:

- **The shift toward purpose-built, virtual machine-specific backup solutions continues.** The majority of IT organizations still leverage unified solutions capable of protecting both physical servers and virtual machines today. However, this trend is shifting in the favor of purpose-built solutions for virtualized servers. In fact, at the current and anticipated usage rates, separate solutions for virtual machines could be in use in half of all IT environments by 2017, regardless of the relative parity of VM-protection features found in modern unified solutions.
- **The methods for protecting data within VMs continues to be diverse.** This includes the use of guest-based agent technology, host-based whole-VM backups, snapshots, replication, etc. Not only are the methods diverse, but the anticipated increase in their usage (in all methods) suggests that IT organizations recognize that no single approach for protecting data is sufficient. Instead, based on agility, retention, economic and operational requirements, multiple approaches will be applied to data within virtual machines in much the same way that a myriad of methods are used to protect data within physical servers or services.
- **Most of the challenges stemming from protecting virtualized environments still revolve around visibility.** These issues are created by the abstraction of physical compute, storage, and networking within the underlying infrastructure. Simply put, poorly instrumented approaches for data protection are leaving backup administrators, virtual administrators, and IT operation teams uninformed as to whether their solution is adequately backing up, successfully restoring, or sufficiently operating within the virtualized framework.
- **The primary driver for choosing a new data protection product for use in virtualized environments is "agility."** This includes the speed or flexibility to recover virtual machines instantly or almost immediately directly from on-premises backup servers or appliances, as well as the ability to leverage cloud-based services for an offsite protection option.

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 March 18, 2015 and April 3, 2015. To qualify for this survey, respondents were required to be IT professionals responsible for data protection technology decisions 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, we were left with a final total sample of 375 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.

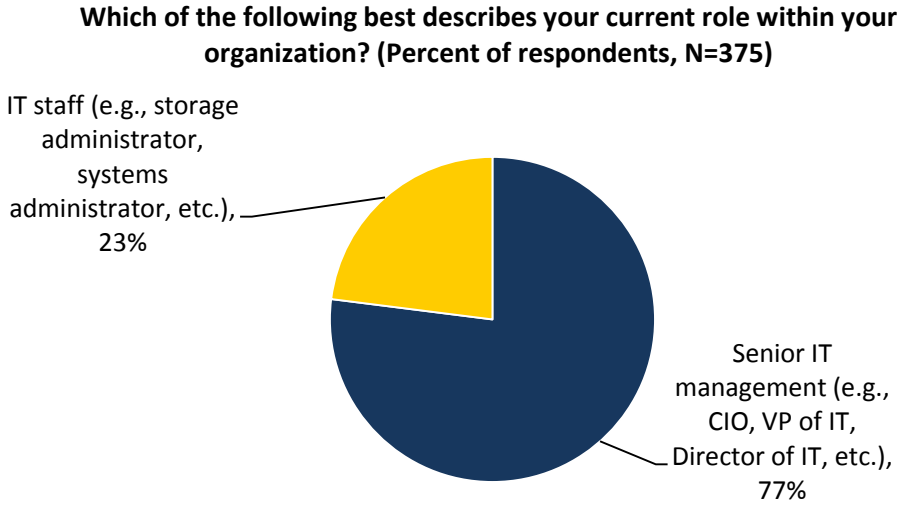
Respondent Demographics

The data presented in this report is based on a survey of 375 qualified respondents. Figures 6-12 detail the demographics of the respondent base, including individual respondents' job responsibility, as well as respondent organizations' total number of employees, primary industry, and annual revenue.

Respondents by Current Job Responsibility

Respondents' current job responsibility is shown in Figure 1.

Figure 1. Survey Respondents, by Job Responsibility

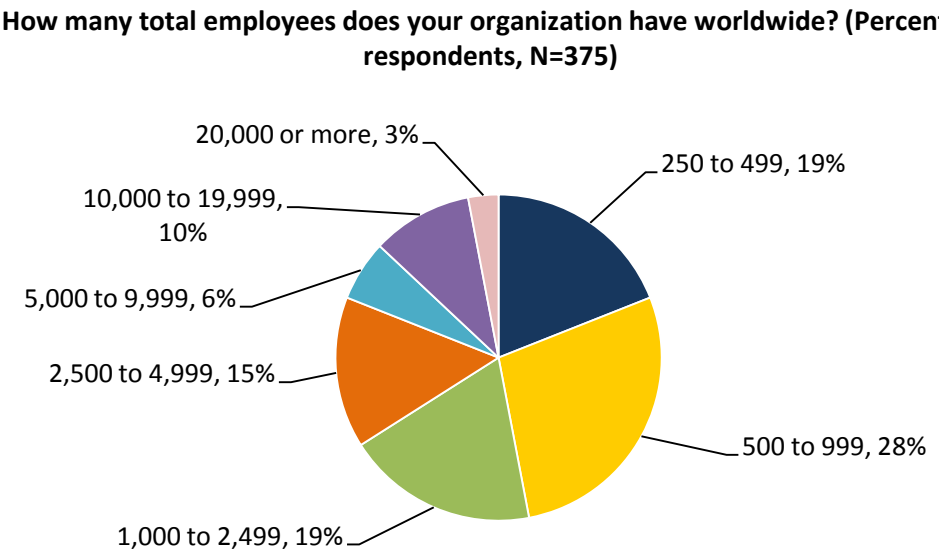


Source: Enterprise Strategy Group, 2015.

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

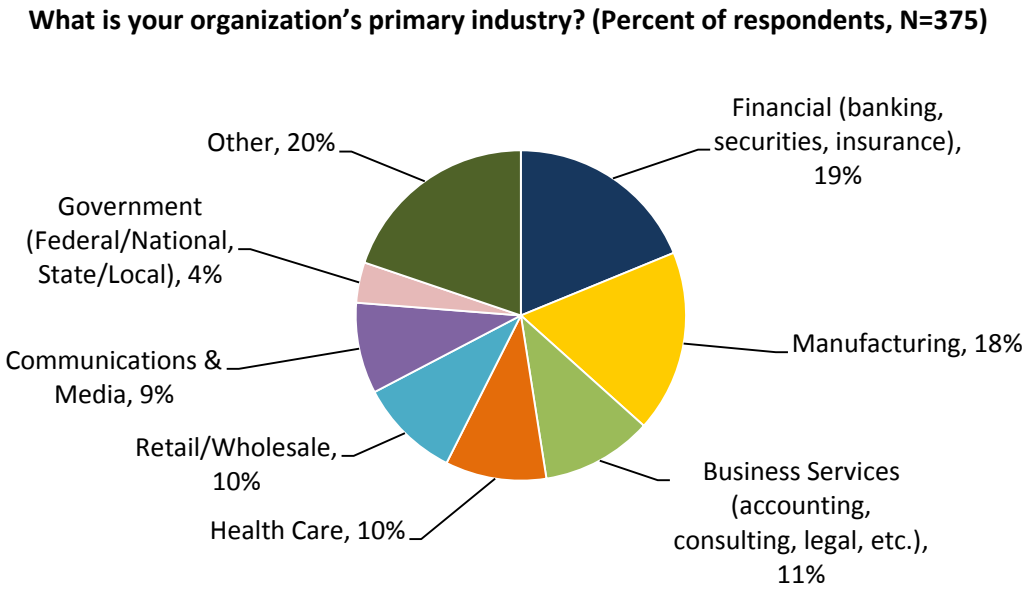


Source: Enterprise Strategy Group, 2015.

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

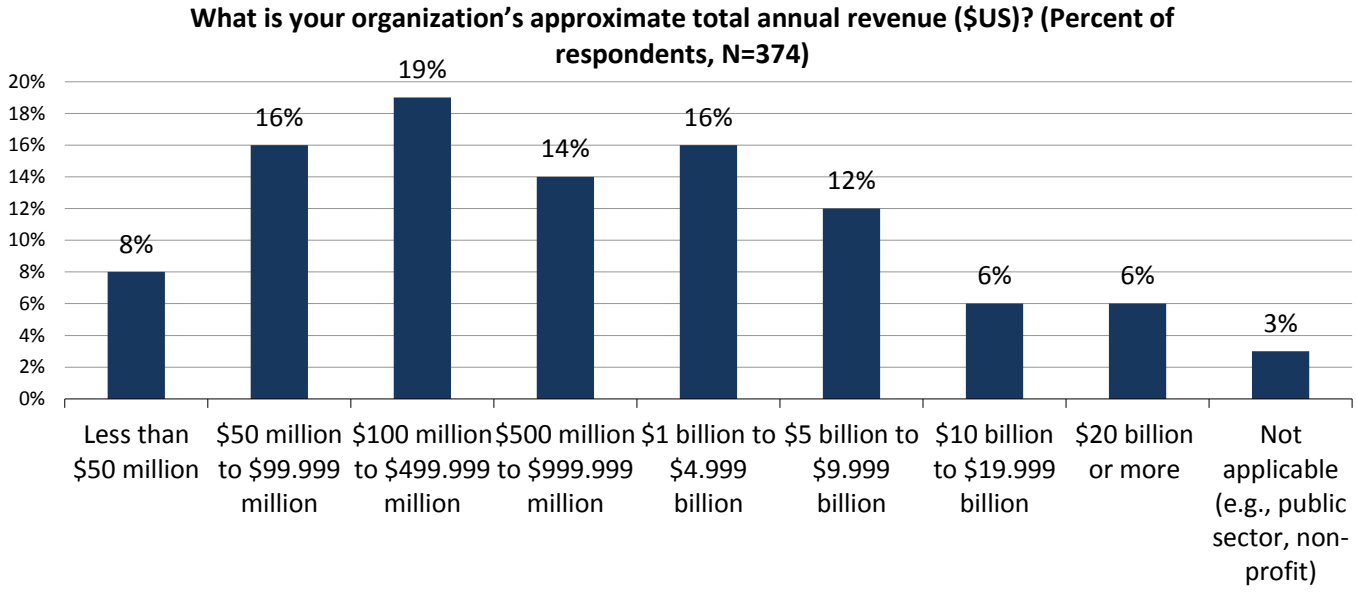


Source: Enterprise Strategy Group, 2015.

Respondents by Annual Revenue

Respondent organizations' annual revenue is shown in Figure 4.

Figure 4. Survey Respondents, by Annual Revenue

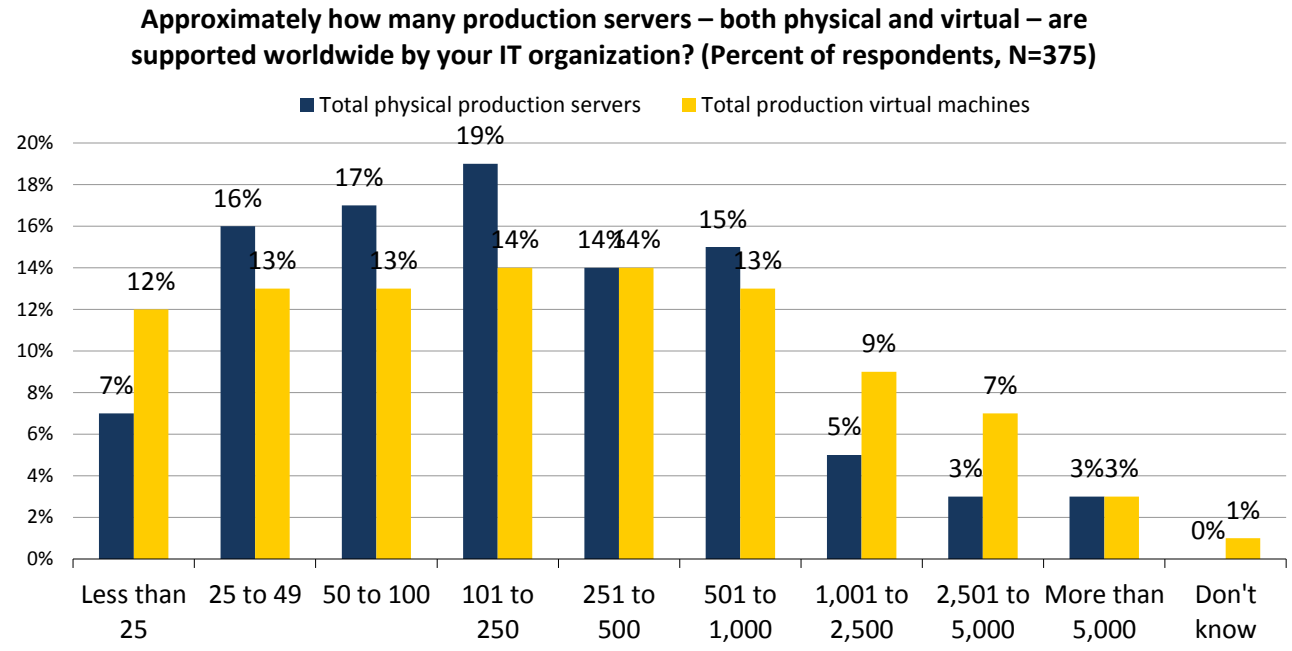


Source: Enterprise Strategy Group, 2015.

Respondents by Production Servers

The number of production servers operated worldwide by respondents' IT organizations is shown in Figure 5.

Figure 5. Survey Respondents, by Number of Production Servers

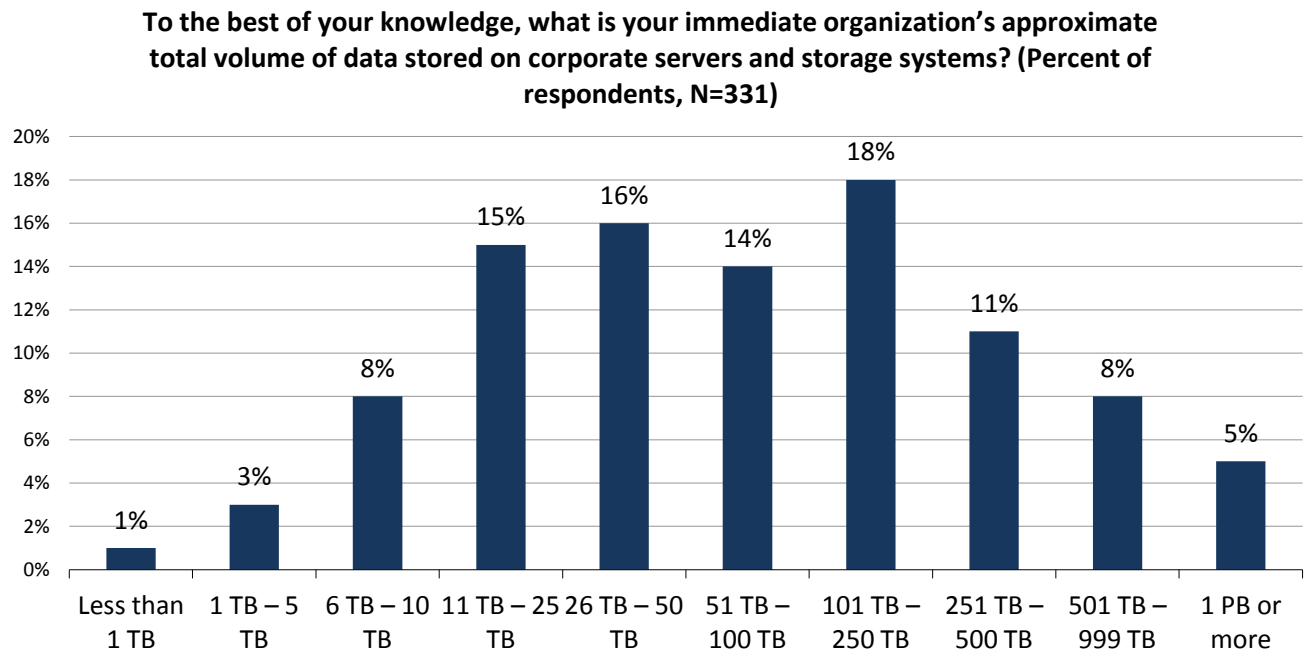


Source: Enterprise Strategy Group, 2015.

Respondents by Total Data

The approximate total volume of data stored on respondent organizations' corporate servers and storage systems is shown in Figure 6.

Figure 6. Survey Respondents, by Total Volume of Data Stored on Servers and Storage



Source: Enterprise Strategy Group, 2015.

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