Research Report

Abstract:
Data Protection Personas and Methods

By Jason Buffington, Senior Analyst and Bill Lundell, Senior Research Analyst
With Jennifer Gahm, Senior Project Manager

February 2015

© 2015 by The Enterprise Strategy Group, Inc. All Rights Reserved.
Introduction

Research Objectives

In order to gauge “who is choosing what and how?” when it comes to modern data protection tools, ESG surveyed 305 IT professionals responsible for and/or familiar with their organization’s data protection infrastructure, processes, and strategy, representing large midmarket organizations (defined as organizations with 500 to 999 employees) and enterprise-class (defined as organizations with 1,000 employees or more) organizations in North America. All respondents were required to have purchase decision authority or influence. The goal of the research was to explore the business and IT requirements driving modern data protection strategies, the influencers and stakeholders within their organizations, and the implementation details of their existing and preferred data protection strategies.

The survey was designed to answer the following questions:

- Which organizational roles (specific groups or unique individuals) are involved with any aspect of organizations’ various data protection processes and operations on a day-to-day basis? How has the level of involvement of non-IT groups/individuals (e.g., line-of-business managers, application owners, etc.) changed in terms of various data protection processes over the last 12 months?
- How are data protection technologies and processes funded?
- Which individuals and groups are typically (i.e., most often) responsible for the various phases of the data protection lifecycle?
- What kind of impact does the involvement of application/workload owners in data protection tasks have on the future of the data protection “specialist” role?
- How involved are database administrators (DBAs) when it comes to organizations’ data protection technologies, processes, and strategies for production database platforms? What role(s) do database administrator(s) play with regard to data protection today and how will this change 24 months from now?
- Which of the following methods are used to back up production databases? What is the primary method for backing up production databases?
- Do organizations employ at least one virtualization administrator (i.e., a person whose sole focus is server virtualization technology) as part of their IT staff?
- How involved are virtualization administrators (vAdmins) when it comes to organizations’ data protection technologies, processes, and strategies for production virtual machines/hosts? What role(s) do virtualization administrators play with regard to data protection today and how will this change 24 months from now?
- What methods are used to back up virtual machines? What is the primary (i.e., most commonly used) method for backing up virtual machines? How is this expected to change—if at all—over the next 24 months?
- What role(s) does the storage administrator(s) play with regard to data protection today? What is their anticipated role with regard to data protection 24 months from now?
- What individual or group is typically (i.e., most likely) responsible for performing file or directory restores?
- What methods are used to back up file servers and NAS platforms? What is the primary method for backing up file servers/NAS?

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 September 18, 2014 and October 16, 2014. To qualify for this survey, respondents were required to be IT professionals with day-to-day knowledge of and/or familiar with their organization’s data protection environment and strategy. 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 305 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 305 qualified respondents. The figures below detail the demographics of the respondent base, including individual respondents’ current role, technology responsibility, and age, as well as respondent organizations’ total number of employees, primary industry, and annual revenue.

Respondents by Current Role

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

Which of the following best describes your current role within your organization? (Percent of respondents, N=305)

![Pie chart showing current roles: IT management (e.g., CIO, VP of IT, Director of IT, etc.), 59%; IT staff (e.g., Storage Administrator, Systems Administrator, etc.), 40%; Non-IT business manager, 1%]


Respondents by Current Technology Responsibility

Respondents’ current technology responsibility is shown in Figure 2.

Which of the following would you consider to be your primary area of technology responsibility?

![Pie chart showing primary technology responsibilities: IT Operations, 29%; General IT, 24%; Data protection (e.g., backup/recovery, archive), 16%; Servers/systems administration, 10%; Senior Management, 7%; Applications/Database, 4%; IT Architecture/Planning, 4%; Virtualization, 1%; Storage/SAN administration, 3%; Other, 1%]

Respondents by Age

The age of survey respondents is shown in Figure 3.

**Figure 3. Survey Respondents by Age**

Please select your age group. (Percent of respondents, N=305)

- 25 and under, 4%
- 26 to 35, 40%
- 36 to 45, 30%
- 46 to 55, 16%
- Over 55, 10%

*Source: Enterprise Strategy Group, 2015.*

Respondents by Number of Employees

The number of employees in respondents' organizations is shown in Figure 4.

**Figure 4. Survey Respondents by Number of Employees**

How many total employees does your organization have worldwide? (Percent of respondents, N=305)

- 2,500 to 4,999, 15%
- 1,000 to 2,499, 24%
- 5,000 to 9,999, 18%
- 10,000 to 19,999, 8%
- 500 to 999, 20%
- 20,000 or more, 15%

*Source: Enterprise Strategy Group, 2015.*
Respondents by Industry

Respondents were asked to identify their organizations’ 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 5.

**Figure 5. Survey Respondents by Industry**

What is your organization’s primary industry? (Percent of respondents, N=305)

- Manufacturing, 22%
- Financial (banking, securities, insurance), 17%
- Business Services (accounting, consulting, legal, etc.), 10%
- Health Care, 10%
- Government (Federal/National, State/Province/Local), 9%
- Retail/Wholesale, 9%
- Communications & Media, 6%
- Other, 18%


Respondents by Age of Organization

The age of respondents’ organizations is shown in Figure 6.

**Figure 6. Survey Respondents by Age of Organization**

For approximately how long has your current employer been in existence? (Percent of respondents, N=305)

- More than 50 years, 26%
- 11 to 20 years, 27%
- 21 to 50 years, 27%
- 6 to 10 years, 18%
- 1 to 5 years, 1%
- Don’t know, 1%

Respondents by Annual Revenue

Respondent organizations’ annual revenue is shown in Figure 7.

**Figure 7. Survey Respondents by Annual Revenue**

![Graph showing annual revenue distribution](source)

**What is your organization’s approximate total annual revenue ($US)? (Percent of respondents, N=305)**

- Less than $50 million: 2%
- $50 million to $99.999 million: 10%
- $100 million to $499.999 million: 13%
- $500 million to $999.999 million: 16%
- $1 billion to $4.999 billion: 21%
- $5 billion to $9.999 billion: 12%
- $10 billion to $19.999 billion: 11%
- $20 billion or more: 7%
- Not applicable (e.g., public sector, non-profit): 8%

**Source:** Enterprise Strategy Group, 2015.

Respondents by Number of Physical Servers and Virtual Machines

The total number of physical servers and virtual machines deployed at respondent organizations is shown in Figure 8.

**Figure 8. Survey Respondents by Number of Physical Servers and Virtual Machines**

![Graph showing server and machine distribution](source)

**Approximately how many total physical servers and virtual machines does your organization have running in a production environment? (Percent of respondents, N=305)**

**Total physical servers running in production environment**

- Less than 25: 4%
- 25 to 49: 11%
- 50 to 100: 12%
- 101 to 250: 11%
- 251 to 500: 17%
- 501 to 1,000: 16%
- 1,001 to 2,500: 15%
- 2,501 to 5,000: 10%
- More than 5,000: 7%
- Don’t know: 2%

**Total virtual machines running in production environment**

**Source:** Enterprise Strategy Group, 2015.
Respondents by Types of Disk-Based Storage Technologies Deployed to Store Production Data

The type of disk-based storage technologies respondent organizations use to store production data is shown in Figure 9.

**Figure 9. Survey Respondents by Types of Disk-Based Storage Technologies Used to Store Production Data**

Which of the following type(s) of disk-based storage technologies are currently being used by your organization to store production/primary (i.e., active) data on-premises? (Percent of respondents, N=305, multiple responses accepted)

- Network-attached storage, i.e., NAS (this includes general-purpose file servers as well as storage systems accessible via NAS gateways) - 77%
- Internal server storage - 67%
- Fibre Channel storage area network (SAN) - 55%
- iSCSI storage area network (SAN) - 48%
- Direct-attached storage (DAS) - 44%
- Unified storage - 33%

*Source: Enterprise Strategy Group, 2015.*
Contents

List of Figures ........................................................................................................................................... 3

Executive Summary ...................................................................................................................................... 4
  Report Conclusions .................................................................................................................................. 4

Introduction .................................................................................................................................................. 5
  Research Objectives ................................................................................................................................ 5

Research Findings ....................................................................................................................................... 6
  The Shifting Organizational Dynamics of Data Protection ................................................................. 6
  Protecting & Recovering Databases: The Role of the DBA ................................................................. 12
  Protecting & Recovering Virtual Machines: The Role of the Virtual Administrator ....................... 14
  Protecting & Recovering Unstructured Files: The Role of the Storage Administrator ...................... 17

Conclusion .................................................................................................................................................... 19
  Research Implications for Data Protection Vendors ........................................................................... 19
  Research Implications for IT and Data Protection Professionals ....................................................... 20

Research Methodology ................................................................................................................................. 21

Respondent Demographics .......................................................................................................................... 22
  Respondents by Current Role ................................................................................................................. 22
  Respondents by Current Technology Responsibility ............................................................................... 22
  Respondents by Age ................................................................................................................................. 23
  Respondents by Number of Employees .................................................................................................. 23
  Respondents by Industry ......................................................................................................................... 24
  Respondents by Age of Organization ...................................................................................................... 24
  Respondents by Annual Revenue ........................................................................................................... 25
  Respondents by Number of Physical Servers and Virtual Machines ................................................... 25
  Respondents by Types of Disk-Based Storage Technologies Deployed to Store Production Data ....... 26
List of Figures

Figure 1. Organizational Roles Involved in Any Aspect of Data Protection Processes ................................................. 6
Figure 2. Groups Typically Responsible for Each Phase of the Data Protection Lifecycle ............................................. 7
Figure 3. Funding of Data Protection Processes ........................................................................................................... 8
Figure 4. Change in Level of Involvement of Non-IT Groups/Individuals in Data Protection Processes ......................... 8
Figure 5. How the Involvement of Application/Workload Owners will Impact the Future of Data Protection Specialist Role .................................................................................................................. 9
Figure 6. Additional Tasks or Responsibilities a Revamped Data Protection Specialist Would Handle ..................... 10
Figure 7. How Often New Data Protection Products/Mechanisms are Considered ..................................................... 11
Figure 8. How Organizations would Re-Architect the Primary Backup Process ......................................................... 11
Figure 9. Database Administrators’ Level of Involvement with Data Protection ......................................................... 12
Figure 10. Role of Database Administrator with Data Protection: Today and 24 Months from Now ...................... 13
Figure 11. Methods Used to Back Up Production Databases: Today and 24 Months from Now ............................ 13
Figure 12. Existence of Virtualization Administrators ............................................................................................... 14
Figure 13. Virtualization Administrators’ Level of Involvement with Data Protection .............................................. 14
Figure 14. Role of Virtualization Administrator with Data Protection: Today and 24 Months from Now ................. 15
Figure 15. Methods Used to Back Up Virtual Machines: Today and 24 Months from Now ...................................... 16
Figure 16. Management of Virtual Machine Backups: Today and 24 Months from Now ....................................... 16
Figure 17. Role of Storage Administrator with Data Protection: Today and 24 Months from Now ........................ 17
Figure 18. Role/Group Most Likely to Restore a File and Directory ........................................................................... 18
Figure 19. Methods Used to Back Up File Servers and NAS Platforms: Today and 24 Months from Now .............. 18
Figure 20. Survey Respondents by Current Role ........................................................................................................ 22
Figure 21. Survey Respondents by Current Technology Responsibility ................................................................. 22
Figure 22. Survey Respondents by Age ..................................................................................................................... 23
Figure 23. Survey Respondents by Number of Employees ......................................................................................... 23
Figure 24. Survey Respondents by Industry ................................................................................................................ 24
Figure 25. Survey Respondents by Age of Organization ............................................................................................ 24
Figure 26. Survey Respondents by Annual Revenue ................................................................................................. 25
Figure 27. Survey Respondents by Number of Physical Servers and Virtual Machines ........................................... 25
Figure 28. Survey Respondents by Types of Disk-Based Storage Technologies Used to Store Production Data .... 26