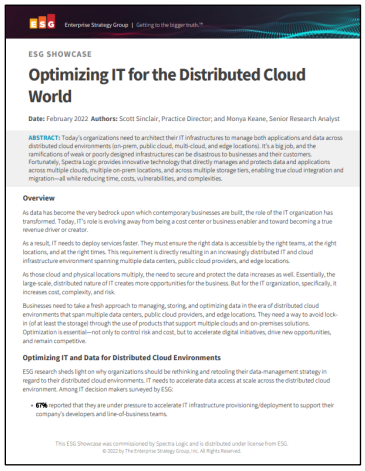

ESG SHOWCASE

Optimizing IT for the Distributed Cloud World

Date: February 2022 Authors: Scott Sinclair, Practice Director; and Monya Keane, Senior Research Analyst

ABSTRACT: Today's organizations need to architect their IT infrastructures to manage both applications and data across distributed cloud environments (on-prem, public cloud, multi-cloud, and edge locations). It's a big job, and the ramifications of weak or poorly designed infrastructures can be disastrous to businesses and their customers. Fortunately, Spectra Logic provides innovative technology that directly manages and protects data and applications across multiple clouds, multiple on-prem locations, and across multiple storage tiers, enabling true cloud integration and migration—all while reducing time, costs, vulnerabilities, and complexities.

Overview

As data has become the very bedrock upon which contemporary businesses are built, the role of the IT organization has transformed. Today, IT's role is evolving away from being a cost center or business enabler and toward becoming a true revenue driver or creator.

As a result, IT needs to deploy services faster. They must ensure the right data is accessible by the right teams, at the right locations, and at the right times. This requirement is directly resulting in an increasingly distributed IT and cloud infrastructure environment spanning multiple data centers, public cloud providers, and edge locations.

As those cloud and physical locations multiply, the need to secure and protect the data increases as well. Essentially, the large-scale, distributed nature of IT creates more opportunities for the business. But for the IT organization, specifically, it increases cost, complexity, and risk.

Businesses need to take a fresh approach to managing, storing, and optimizing data in the era of distributed cloud environments that span multiple data centers, public cloud providers, and edge locations. They need a way to avoid lock-in (of at least the storage) through the use of products that support multiple clouds and on-premises solutions. Optimization is essential—not only to control risk and cost, but to accelerate digital initiatives, drive new opportunities, and remain competitive.

Optimizing IT and Data for Distributed Cloud Environments

ESG research sheds light on why organizations should be rethinking and retooling their data-management strategy in regard to their distributed cloud environments. IT needs to accelerate data access at scale across the distributed cloud environment. Among IT decision makers surveyed by ESG:

- **67%** reported that they are under pressure to accelerate IT infrastructure provisioning/deployment to support their company's developers and line-of-business teams.



# Optimizing IT for the Distributed Cloud World

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- 54% agreed that the complexity of their IT infrastructure is slowing down IT operations and digital initiatives.[1]

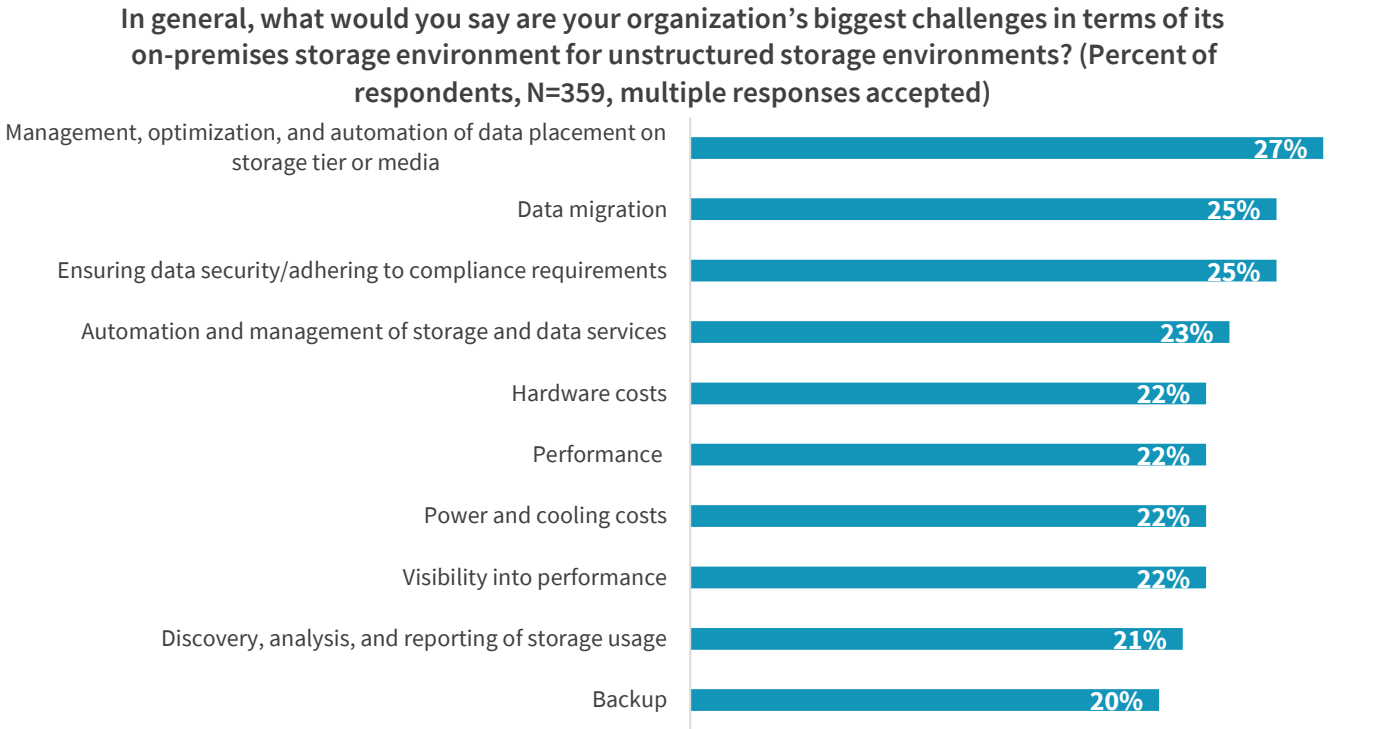
By itself, the term "multi cloud" doesn't adequately reflect the complexity of modern IT. Enterprises are managing multiple data centers, multiple public cloud providers, and multiple colocation partners. They are overseeing dozens, if not hundreds, of edge locations. The dispersed nature of contemporary IT environments can be more correctly referred to as the distributed cloud.

As the sites that IT infrastructure components reside in grow, data and application movement increases, too. Fifty-four percent of surveyed cloud users indicate that their organization moves data between its data center(s) and public cloud services all the time or at least on a regular basis. Similarly, 49% say their organizations move data between multiple public cloud service providers either all the time or regularly.[2]

That data movement supports multiple objectives, including making data accessible by cloud-based applications (cited by 45% of respondents), protecting backups or archive copies (38%), managing data collected at edge locations (33%), and supporting application development/DevOps activities (31%).[3]

More data mobility brings more challenges to unstructured storage environments. The most common ones relate to the management, optimization, and automation of data placement, data migration, and data security and compliance (see Figure 1). These challenges are trickier to solve than traditional challenges tied to storage—i.e., dealing with hardware costs (22%) and performance (22%).[4] In particular, it is vital to maintain data security and compliance as data moves across locations. For global enterprises especially, maintaining regulatory compliance is an important driver of data-locality decision making.

**Figure 1. Top Ten Most Common Challenges Associated with Unstructured Storage Environments**




*Source: Enterprise Strategy Group*

[1] Source: ESG Research Report, *Data Infrastructure Trends*, November 2021.
[2] Source: ESG Survey Results, *2021 Data Infrastructure Trends*, September 2021.
[3] Ibid.
[4] Ibid.

## From TCO to Accelerated ROI: Rethinking IT Optimization

With such abundant data movement happening, IT optimization truly becomes key. As environments scale, so do cost and complexity. Simultaneously, the pressure to accelerate operations can lead to increased inefficiency if the organization prioritizes speed over optimization. While always important, optimization is absolutely crucial for digital enterprises.

Historically, IT organizations have served as a cost center, optimizing IT functions to reduce the cost of providing those services. Now, IT is often a revenue driver. And in this context, the goal of cost reduction is to improve the ROI of digital initiatives, maximize the number of projects that can fit in the budget, and accelerate those activities.

### Essentials for Optimizing Data Across the Distributed Cloud

ESG has formulated several recommendations for architecting a storage environment to support a digital business that is growing and constantly moving data and apps across distributed clouds. Here are the essentials for managing data in the distributed cloud era. When you architect such an environment, prioritize the following characteristics:

- Consistency—Abstract management from location. You want simple, consistent management regardless of the location of the data, whether on-premises or in a public cloud. Look for architectures that offer more cloud-like interactions that can help meet your organization's goals for agile data mobility.
- Visibility—Data and applications will move. Ensure that you have consistent visibility across the entire environment (on-premises and off) to reduce risk.
- Movement—That movement is constant, increasing, and here to stay. Architectures that simplify the data movement process itself will deliver a meaningful boost to accelerating operations and optimizing costs.
- Control—Ensure that the right people control the movement of data and applications according to what your business needs. They will be in charge of ensuring that high-priority data and applications are located on high-performance infrastructure and that less frequently used data resides on cost-effective storage—all while ensuring regulatory compliance, optimizing egress costs, and accelerating operations.

## The Spectra Logic Data-centric Design for Optimizing Distributed Cloud Environments

Spectra Logic, with its Spectra Vail technology, is a differentiated thought leader in this space. The company has been approaching the data management challenge with the right mindset—appreciating that organizations already have increased the number and variety of their locations and that the trend will continue. For example, it ensured that Spectra Logic Vail, a new distributed multi-cloud data management software, offers the ability to support an unlimited number of sites. Some other solutions run into challenges with just three or four.

The Vail offering adheres remarkably tightly to the ESG recommendations for optimizing IT for a distributed cloud world. It offers:

- Consistent management—Designed with the expectation that organizations include the hybrid cloud in all management/functionality, it provides a single global name space across multiple cloud services and other sites.
- Visibility—Spectra Logic Vail ensures that data is accessible regardless of physical location.
- Movement—Spectra Logic Vail offers multi-directional data synchronization across public cloud services and on-premises environments, with a configurable policy engine to manage data placement. Customers are able to extract

more value from their data by enabling legacy and modern applications to take advantage of cloud services, no matter where the data resides.

- Control—Spectra Logic offers options to leverage local storage and/or cloud services to support hybrid workflows in a seamless fashion. Organizations can create a secure, central repository for long-term preservation and disaster recovery. Spectra Logic also can deliver a cost-effective, cloud-like active storage archive tier leveraging tape storage, similar to archive storage tiers offered by public cloud providers.

This solution is built to meet the needs of digital organizations working in multiple industries such as media and entertainment, life sciences, government, financial services, healthcare, and energy exploration, to name a few, enabling those organizations to leverage distributed cloud infrastructure environments and accelerate their operations while reducing cost, complexity, and risk.

For example, leveraging Vail, IT administrators have visibility into the object store, manage the movement of data, tier storage, and place objects where desired across multiple sites and public cloud providers such as AWS, GCP, or Azure. After 30 days, the data could drop into one site. And after 90 days, it could shift over to tape. In this manner, the organization can automate data movement to get the benefits of a multi-site, multi-tier environment quickly and efficiently.

## The Bigger Truth

We continue to see a disaggregation of IT resources everywhere. Right now, organizations are highly focused on migration to and leveraging the cloud, as well as security. They used to think about in-house data center infrastructure costs, but the focus has shifted to the cloud and security. Given these market drivers, Spectra's Vail product appears to meet all the key qualities to fill a critical market-need gap.

Everything ESG is seeing with its research reinforces that this vendor's approach to optimizing IT for the distributed cloud world is in tune with the future. We will all have more distributed locations than we have today, and things will be more complex in the future than they are today.

Even with the new market focus, cost is still critically important. IT organizations used to equate "cost optimization" to "taking on initiatives in the most cost-effective way possible." Now, when they consider the topic of cost, it's about embarking upon the maximum amount of digital initiatives possible within a given cost envelope and maximizing the return for the whole business. It's not about reducing costs just for the sake of saving money anymore. The critical aspect here is being able to leverage the most cost-effective service (compute, managed services or storage), whether in the cloud or a physical location, that makes the most financial and business sense. It's about optimizing costs to enable and accelerate that next digital initiative and then reaping the rewards of the big business opportunities that follow.

**Enterprise Strategy Group** is an IT analyst, research, validation, and strategy firm that provides market intelligence and actionable insight to the global IT community.

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