

ESG Lab First Look

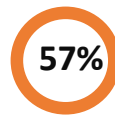
Scale-out Data Protection with the PowerProtect X400 Appliance from Dell EMC

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Data Protection Challenges:



The percentage of respondents who consider their IT environment to be **more or significantly more complex** today than it was two years ago.¹



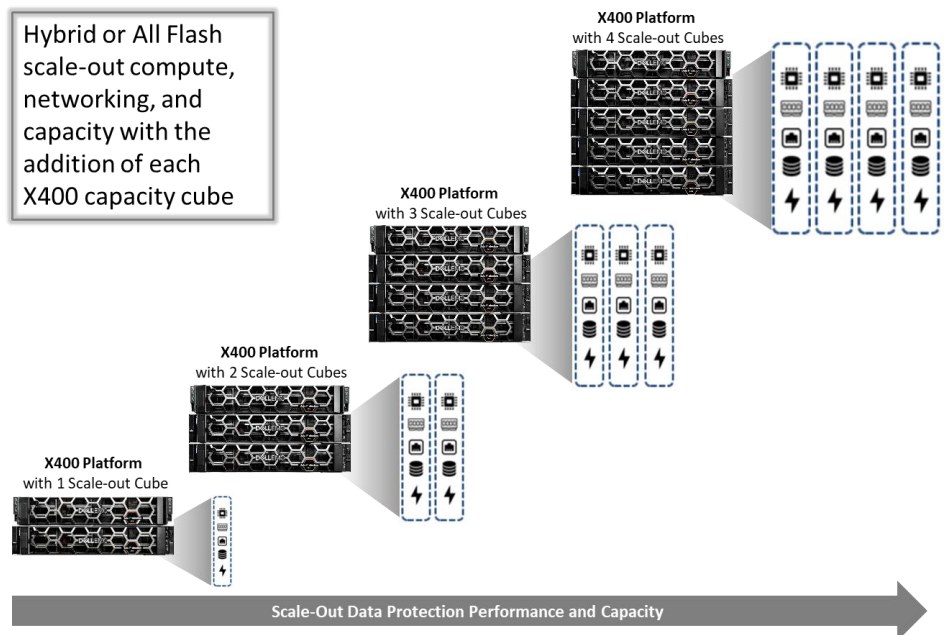
The percentage of organizations that state their **tolerance for high-priority application downtime** is less than 15 minutes or 15 minutes to less than one hour.²

According to ESG research, 66% of respondents report that complexity inside their IT environment is either more or significantly more complex than it was two years ago. Even though data protection is a longstanding IT discipline, it is not immune to this perception of complexity. In fact, when production environments get more complex, and production data grows, data protection environments usually follow. Increased complexity and capacity can make it more difficult for IT to manage application uptime requirements and deliver business-level SLAs for recovery.

Dell EMC PowerProtect X400 Multi-dimensional Appliance

The PowerProtect X400 is a fully integrated scale-out data protection solution from Dell EMC that supports full VM, instant access, file level, Oracle, and MS-SQL backup and recovery workloads. It is deployed as an appliance on Dell EMC PowerEdge technology. The initial configuration starts with a 2U core cube that hosts the PowerProtect platform and a 2U capacity cube that processes and stores backup data. The PowerProtect X400

incorporates multi-dimensional scale-out architecture that can be expanded by adding capacity cubes in 2U increments or by adding additional capacity within each cube by simply activating a license key. This multi-dimensional concept means that it can be scaled in hybrid or all-flash configurations that enable users to customize their data protection environment to match their backup and recovery SLAs. Hybrid configurations scale from 64 TB to 384 TB of usable capacity. All-flash configurations scale from 64 TB to 448 TB of usable capacity. The PowerProtect X400 architecture is



designed to eliminate the typical performance bottlenecks associated with data protection environments at scale because data is sent directly to the capacity cubes over 10 or 25 gigabit Ethernet connections. This means that backup and recovery data is never routed through the core cube. Also, as cubes are added for scale, so is CPU, memory, networking, and storage capacity. To round things out, the PowerProtect X400 is designed to be easily deployed and managed. It is customer-installable and requires a skill set that's similar to what's needed for a simple server deployment.

¹ Source: ESG Master Survey Results, [2019 Technology Spending Intentions Survey](#), February 2019.

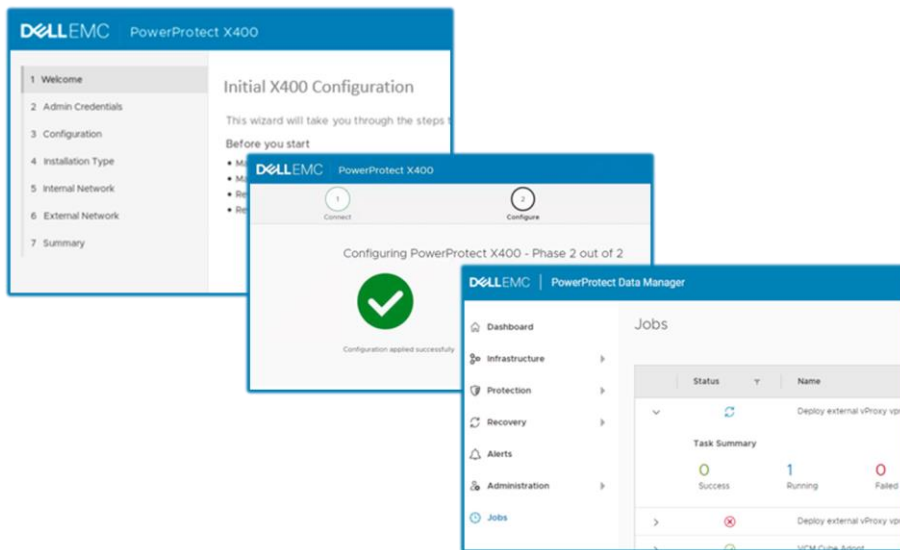
² Source: ESG Master Survey Results, [Real-World SLAs and Availability Requirements](#), April 2018.

ESG Lab Demo Highlights

ESG performed hands-on evaluation of the PowerProtect X400 by participating in two hosted proof-of-concept sessions at a Dell EMC facility in Hopkinton, MA, where we walked through the entire installation and configuration process of a pre-racked 4U PowerProtect X400 system with three Dell EMC customers.

Customer-installable, Easy to Manage

- ESG started the evaluation process by simply connecting a laptop with a predefined static IP setting to a port on a network switch in the data center that was connected to the PowerProtect X400 Appliance. As shown, we launched a web browser to connect to the PowerProtect X400 initial configuration screen. The configuration wizard walked us step by step through the entire setup. This process required only simple network settings like DNS, IP address, gateway, subnet mask, system credentials, a serial number for the capacity cube, and a license key. Once the required settings were added, the system started the automated configuration process. It took about 45 minutes to deploy the 96TB PowerProtect X400 appliance.
- Next, we launched and logged into the PowerProtect Data Manager to explore the solution's management interface and to configure and run backup and recovery jobs. The responsive HTML5 user interface has a modern look and feel. Though this was our first time working with the protection application, we were able to easily configure and run multiple jobs. We successfully executed the following recoveries: a crash-consistent VM recovery, a file and directory recovery, an Instant Access VM recovery, and a Microsoft SQL database recovery to an alternate location.



First Impressions

ESG research indicates that improving SLAs/RPOs/RTOs is the data protection mandate most cited by respondents. Combined with increased complexity, IT teams are finding it increasingly difficult to manage application uptime requirements and deliver the business-level SLAs that meet their leadership's mandates.³

ESG's first impression is that the PowerProtect X400 is a great addition to the Dell EMC backup appliance lineup. We are especially excited about the scale-out data protection capabilities of the new architecture. ESG believes that a scale-out architecture significantly increases the efficiency, extensibility, and bottom-line value of a consolidated data protection infrastructure. Last but not least, the initial release of the PowerProtect X400 includes machine learning (ML) technology for deduplication optimization. Moving forward, we hope to see the platform evolve to leverage more ML, perhaps based on backup policy optimization for different recovery scenarios.

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³ Source: ESG Master Survey Results, [2018 Data Protection Landscape Survey](#), November 2018.