Data Protection for Hybrid Cloud, Containers, and Virtual Machines

Workloads: Modern, Unified, Cost-Efficient, and Automated

APRIL 2021
Hybrid Cloud Is at the Core of Modern Digital Infrastructure

Data Protection Needs to Evolve and Align with Modern Paradigms

Hybrid cloud success depends on data protection that can optimize and protect data anywhere and in any format — physical, virtual, cloud, and container workloads.

Hybrid cloud data services investment priorities for businesses in 2021:

- **47%** Integrated data protection
- **47%** Security and compliance
- **38%** Data integration and orchestration
- **30%** Data migration

By the end of 2021, over **90%** of enterprises worldwide will rely on a mix of on-premises/dedicated private clouds, several public clouds, and existing platforms to meet their infrastructure needs.
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Mounting Data Management Pressures in Hybrid Cloud Undermine Resilience

1. **Data growth**
   - Data generated in three years > past 30 years combined
   - 39% of organizations expect business data to grow more than 50% every year across structured, semistructured, and unstructured data types.

2. **Data control challenges**
   - Cyberattacks surged 238% between February and April 2020, during the pandemic.
   - Ransomware is the most challenging area of data protection.
   - **Most challenging areas for data protection cited by % of IT and business leaders**
     - Ransomware protection: 27%
     - Copy data management: 25%
     - Spiraling costs: 24%
     - SaaS data protection: 22%
     - Data fragmentation: 20%
     - Demonstrating compliance: 20%
     - IaaS data protection: 19%
     - Limited visibility of data: 19%
     - PaaS data protection: 16%

3. **Data fragmentation is a growing challenge**
   - On average, organizations have 12 copies of data ($6 of $10 of storage budget is spent on copy data).
   - Data fragmentation is a top data management concern.
   - **DATA SPLITS**
     - Core: 29%
     - PaaS: 19%
     - Edge: 18%
     - IaaS: 17%
     - Sec DC: 17%

About **50%** of organizations have **suffered an unrecoverable data event** in the past three years.
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Data Protection is Extending to the Cloud to Overcome Challenges

Scale, Flexibility, and Cloud Consumption Models are Key Features to meet Modern Data Management Needs

Nearly 6 in 10 respondents using cloud said the following workloads have been identified to be moved to the cloud as part of their 2020–2021 technology road map (IDC COVID-19 Impact Survey):

- Backup and recovery: 62% of respondents
- Data management: 58% of respondents
- Security: 58% of respondents

Between 2019 and 2024, global data protection as a service (including backup, DR, and archive as a service) will grow 16.8% CAGR. IDC considers the data protection as a service market a key component of the wider hybrid multicloud data management ecosystem.

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Container Data Protection Needs Are Moving Mainstream

Use of Containers for Critical Applications is Challenging Legacy Data Protection Strategies

By 2024, net-new production-grade cloud-native apps will increase from 10% in 2020 to 70% due to adoption of technologies such as microservices, containers, dynamic orchestration, and DevOps.

58% of cloud-first organizations cite containerized applications and Kubernetes platforms as a top data protection challenge.

Users also say a lack of skills and complexities in container environment lead to the following data protection challenges:

- Protecting templates, logs, data lakes, and configuration
- Misconfiguration
- Upgrade errors
- Traditional tools’ inability to protect container environments

Ensuring container protection at multiple levels of granularity (cluster namespace, label, application, and storage volume level) is the key to success.
Unified Data Protection Strategy can Help Overcome Complexities and Boost Data Resilience

Key IT priorities in 2021

- Improve security and compliance
- Improve agility and flexibility
- Manage costs
- Modernize traditional workloads
- Enhance DR capabilities
- Unify data protection

Tight integration between modern storage, data protection, and cloud is key to transforming the full data protection life cycle in hybrid cloud environments.

Key features:

- Eliminate human errors, identify anomalies, and detect vulnerabilities
- Granular search, recovery, and restore
- Tiered recovery strategy to meet specific needs of individual applications
- Data mobility in multicloud environments
- Migrate legacy backup at scale, restore to landing zones, and import to preferred cloud/object stores
- Protect all workloads — traditional business apps, transforming apps, SaaS, and containerized apps — consistently

By 2023, 50% of organizations will adopt a strategy to unify storage, access, and governance to deliver a consistent data experience.

Business outcomes of a unified data protection strategy:

- Simplification
- Cost efficiency
- Resilience
- Compliance