COMMVAULT

WHITE PAPER

5 Ways Commvault Is Changing the Game in Data Protection

How companies can drive recovery readiness with the Commvault data platform

Introduction

To ensure recovery readiness for your business, you need to be able to address operational issues in your storage environment as quickly and effectively as possible while keeping day-to-day management and monitoring as simple as possible. In this discussion guide, you'll learn about five ways Commvault services can help you maintain operational excellence for optimal recovery readiness.

1 Accelerate Digital Transformation

Over the past decade, many companies have worked to standardize and consolidate their technology stacks to meet SLAs more consistently. Often, though, these efforts bring an unfortunate side effect: overly rigid operational processes that can't meet the requirements of fast-paced digital transformation. To increase agility and drive innovation without increasing risk, companies need a way to control costs, scale efficiently, ensure compliance, and protect data no matter how fast their environment grows and changes.

Digital Business Strategy

Digital Optimization	Digital Business Transformation
1 Improved productivity and products	3 New products and services
2 Better customer experience	4 New business tools

FIGURE 1
Key business requirements for the digital age

Source: Gartner Enterprise Architecture (EA) Summit 2018

Commvault services can help you balance the needs of IT and DevOps for faster, more successful digital transformation. The key: enabling measurement and observability across your storage environment. By gaining a clearer understanding of the costs, benefits, and future implications of design changes, you can make the right decisions based on your own priorities. And when unanticipated changes occur, you can adapt nimbly to maintain high-quality service.

2 Reduce Technical Debt

As organizations moved quickly to support the initial wave of digital transformation, many created storage silos across their infrastructure. While expedient in the short term, this also created numerous long-term headaches.

- **Costly, complex, and time-consuming operations** using multiple data management tools requiring more diverse staff expertise
- **Fragmentation** due to scale limits within silos, leaving companies unable to efficiently handle unexpected growth
- **Manual efforts to realign the environment,** with staffers constantly shifting workloads among silos to avoid overruns and prevent failures as consumption grows

- **Weakened data protection** as a larger, more fragmented storage environment forces teams to impose filter rules and reduce the scope of SLAs to adapt to the limitations of their data protection infrastructure. With looser recovery point objectives (RPOs) or less data protected, companies risk disastrous consequences should an under-protected resource be lost

To enable sustainable digital transformation with acceptable risk, companies now need to unburden themselves of the technical debt incurred through these shortcuts.

With Commvault services, companies can use intelligent policies to:

- **Monitor the production workspace,** automatically discover new workloads, and auto-assign them to the appropriate protection plan
- **Automatically load-balance operations** and route data to the appropriate storage pool based on SLA objectives, data retention, security requirements, and operational windows

Using Commvault services to shift from silos to a storage pool design, you can replace physical limitations with clusters of storage locations and devices that let you expand capacity and load balance quickly to ensure optimal performance. This pooled approach also increases resiliency if an individual device should fail. Creating a centralized data service architecture with a common namespace across storage pools makes it simple to apply the same protection plan across multiple locations –without the errors and compromises that can come with individual silo-by-silo configuration.

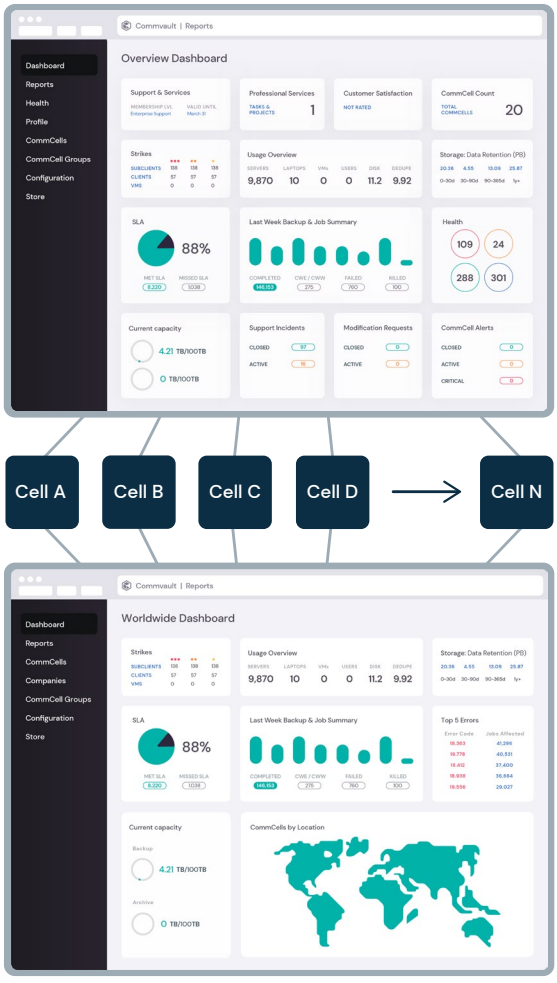
3 Simplify Operations to Speed Remediation

Adopting new technologies and retiring older ones can help organizations increase IT excellence – but a rapidly changing production environment can also increase complexity, slow the response to critical issues, and make it harder to meet SLAs. Facing new workloads, increased data sprawl, and rising cyberthreats, organizations need to be able to quickly root out and remediate high-impact issues to maintain a readiness state.

Commvault helps organizations stay green and compliant with SLAs. With embedded intelligence to monitor operations, resources, and schedules, the Commvault platform helps you support diverse workloads and distributed data environments within narrowly constrained windows for data recovery. Rich features for data awareness, operational intelligence, and monitoring help teams respond to issues quickly and effectively.

The intelligence and reporting capabilities of the Commvault Command Center™ operations control plane are complemented by the Global Metrics Reporting service, which provides comprehensive Commvault operational data with informed KPI dashboards. Deployable in a secure cloud to be available to all users, or locally in a private service mode, the Global Metrics Reporting Service provides a global roll-up across all your designated operating cells to provide focus and help teams resolve high-impact issues.

Command Center (global)
(cc) plans, access, jobs/ops, outcomes



Private Metrics Reporting (global)
(metrics) governance, trends, planning, healthcheck

FIGURE 2
A unified view of global metrics in the Commvault Command Center

4 Optimize SLAs

In a heightened cyber-risk environment, organizations need to prove operational excellence and ensure recovery readiness with SLA compliance and measurement. With Commvault, SLA objectives are set on recovery plans and govern operational outcomes.

Another key SLA-optimizing component of the Commvault platform is the Recovery Readiness Report, which is a dashboard report that monitors clients and groups against your SLA objectives. It can help you first figure out which clients are overloaded and struggling to meet desired outcomes. The dashboard analyzes the current state of the environment to provide a scored report with drill-down details. The results can be consumed as API/views to ingest the informed results into your own monitoring tools, or you can use the report alerting features to automatically inform your team of significant changes.

FIGURE 3
Establishing SLA objectives for recovery plans and operational outcomes

Intelligent monitoring and optimization

Commvault continuously measures, assesses, and optimizes runtime backup operations to help you achieve the SLA goals in your protection plan. The Commvault platform uses embedded AI to monitor the state of infrastructure, jobs, and schedules, alerting teams to points of concern. Data protection methods change dynamically to accelerate capture or Recovery Time Objectives (RTO) – for example, using replication to meet SLAs for more challenging clients and workloads. Teams gain the flexibility to use the best method for critical clients while balancing the economics of the overall strategy. Operational oversight helps you root out exceptions in need of correction.

Recovery Readiness Report

Presented in a clear, at-a-glance dashboard with drill-down detail, Commvault's Recovery Readiness Report monitors clients and groups against your SLA objectives. The service analyzes the current state of your environment to highlight any clients struggling to sustain their SLA. When a client falls into this Needs Attention category, teams can choose the appropriate response, such as:

- **Shifting the protection method** to a faster approach to improve RPO performance
- **Using LiveSync** replication to automatically maintain a restored state for a data set too large to recover within the RTO
- **Employing Commvault acceleration options** such as snapshot-based backups or direct replication to help achieve a more aggressive RPO

Continuous, real-time, ML-powered scoring across all operations helps qualify RPO/RTO estimates for a clear understanding of your status. As recovery tests and application validation tasks are performed, the system measures the actual infrastructure data transfer rates to improve performance. Recovery Readiness Report results can be ingested via API into other monitoring tools and used to automatically inform your team of significant changes.

5 Anticipate Issues

Operational excellence demands both a laser focus on the current state of completed jobs and predictive analysis of the near future. To maintain readiness, teams must be able to detect and correct developing conditions of concern early – before they can cascade downstream.

Commvault provides complete visibility into both current and potential future states. Once a client completes a successful backup, intelligent monitoring and predictive analysis root out any clients at elevated risk of missing their SLA. When a prediction exposes a concern, the corresponding job SLA state changes to May miss SLA. At this point, automated alerts can immediately notify appropriate parties for a prompt response. An automatic compilation of alerts can help operations monitoring teams make informed decisions and take appropriate actions (note that this feature is disabled by default, but recommended to be enabled).

CommServe® Anomaly Digest

Problematic clients are reported in the CommServe Anomaly Digest overview of identified concerns, including:

- Specific client computers that may miss the SLA
- The list of client computers, agent types of the client computers, name of the subclients, and reason(s) for missing the SLA
- Runtime anomalies in jobs when the runtime of the job exceeds the system threshold
- Anomalies in events when the frequency or occurrence of the events does not match the system threshold

Operational Metrics Health Check

The Operational Metrics Health Check dashboard includes SLA titles with a broad spectrum of operational oversight, infrastructure readiness, and usage and governance assessments. Published from the Global Metrics Reporting service, the dashboard is available for viewing privately when managed exclusively by customers in their own environment or from the Commvault Cloud Reporting Service.

Figure 4 below shows a live enterprise that manages its outcomes well. SLAs are shown to be solid, with no clients in need of attention. Strike counts identifying clients with successful failures help teams focus on repeated problem clients with multiple failures and correct these issues successfully to meet the RTO SLA.

Figure 5 below shows a production environment with more challenges, including a large number of VMs that Need Attention. This dashboard tile allows an administrator to easily drill down into the details of affected clients based on analysis by an embedded AI learning service. The list categorizes key concerns to help teams focus on high-impact resolution rather than chasing lower-level events that may intermittently fail but self-correct. Admins can click into the concern list to quickly review results and determine if there are a significant number of issues.

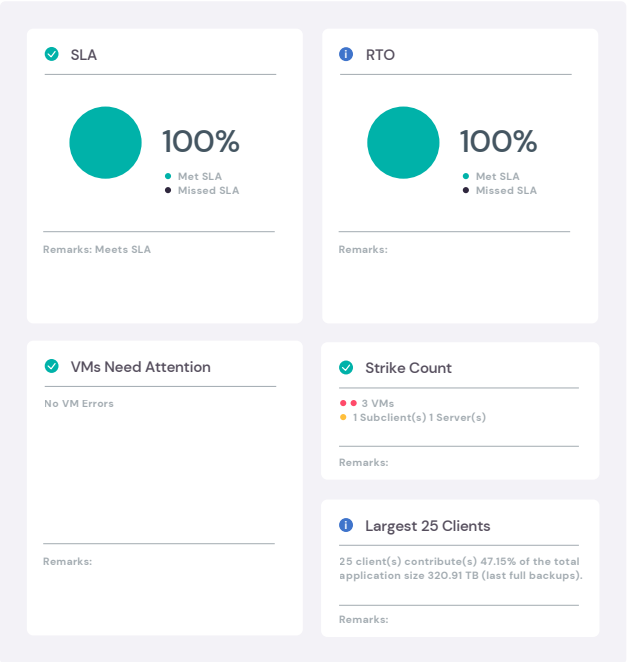


FIGURE 4
Effective outcome management via the Operational Metrics Health Check dashboard

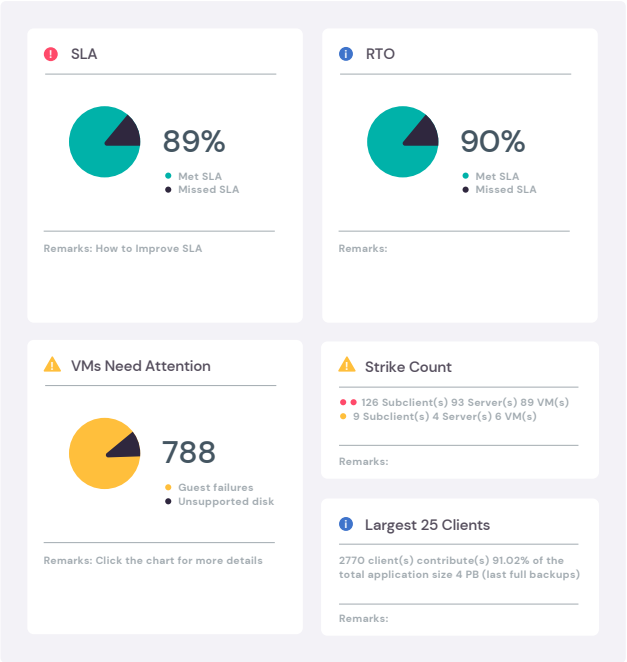


FIGURE 5
Production environment that's experiencing challenges

While the backup has been successful with a crash-consistent backup, this view indicates that the app running in the VM may have consistency issues during recovery. To simplify things for customers, the error type provides a direct hyperlink to the appropriate knowledge base article to provide deeper context on the issue and resolution recommendations.

Conclusion: Stay Green

Managing a data readiness solution with hundreds or tens of thousands of daily jobs is no easy task. Commvault services provide built-in automation, AI learning and classification, and simplified dashboards, making it easier for organizations to root out the most significant operational concerns and achieve the best SLA outcomes. We want our customers to Stay Green and be recovery-ready from day one – all while avoiding complexity and increasing scalability and simplicity.

Learn more here:

Data Views for the Recovery Readiness Report >

Metrics Reporting service >

Predefined Alerts and Notifications >