

EMC Data Protection Advisor for Replication

The Big Picture

• Application-aware replication support

- Centralized monitoring and alerting for replication technologies including EMC SRDF, TimeFinder, SnapView, and MirrorView—as well as RecoverPoint family
- Visual mapping displays an intuitive interface
- Service-level agreement (SLA) measurement, configuration, and execution monitoring/alerting
- Improved recoverability of critical applications such as Oracle, SQL Server, Exchange, and file systems; reduces effort, and improves compliance with SLAs

• Network-based replication

- Centralized monitoring and alerting for EMC RecoverPoint
- Performance tracking, forecast demand, and issue alerts
- SLA measurement for performance configuration tracking
- Robust reporting, expanded monitoring and alerting increase insight

Replication is the process of copying data from one location to another and comes in a variety of forms such as array-based replication and network-based replication. Array-based replication leverages the array to move blocks of data within the same array for a duplicate copy, or from one array to another. EMC® array-based replication such as EMC SRDF®, EMC TimeFinder®, EMC SnapView™, or EMC MirrorView™ is used to replicate between homogenous storage systems.

EMC RecoverPoint provides local synchronous replication between LUNs that reside in one or more arrays at the same site, and dynamic synchronous and asynchronous remote replication between LUNs on arrays at two sites. Both RecoverPoint local and remote replication feature any-point-in-time recovery, which allows the target LUNs to be rolled back to a previous point in time and used for read/write operations without affecting the ongoing replication or data protection.

EMC Data Protection Advisor, the industry-leading data protection management solution, collects and analyzes information from your entire data protection infrastructure, enabling faster decision making and improved data protection. With support for heterogeneous backup infrastructures and industry-leading EMC replication technologies through a single user interface, Data Protection Advisor enhances the protection and recoverability of your data while reducing risk and cost—so you always know you can recover your data.

Replication management challenges

Replication is a key data protection strategy for enterprises of all sizes. It's used for the most critical enterprise information, copying data locally or remotely for higher levels of protection and availability, ensuring business continuity—as well as data repurposing for development, QA, and business intelligence. There can be hundreds of replicas in a typical environment with no centralized monitoring and alerting solution. Environments today rely on a series of scripts to capture issues that arise from the execution and creation of replicas. Periodic audits are done or a disaster recovery (DR) test is performed, but these only capture recovery capability at a point in time. Given that most IT environments are subject to change on a regular basis, periodic checks and DR tests are not robust enough for critical business data.

Addressing common replication challenges:

- Are my applications recoverable? If not, what are the exposures?
- Is my data protection policy being enforced?
- How do I capture the constant changes that can impact recovery?
- Is there a way to evaluate my disaster recovery plan without a complete data center test?
- How can I do all this on a limited budget?
- What bottlenecks are impacting, or will impact, replication?

These challenges lead to uncertainty in the recoverability of data and impose a significant amount of manual effort to track and correct issues.

EMC Data Protection Advisor: automated replication monitoring and measurement

EMC Data Protection Advisor automates the monitoring and measurement of your replication operations, enabling you to manage to stated service-level agreements (SLAs). It supports EMC array-based replication and network-based replication for EMC and non-EMC arrays, providing the alerts and proof points you need to know you can always recover your data.

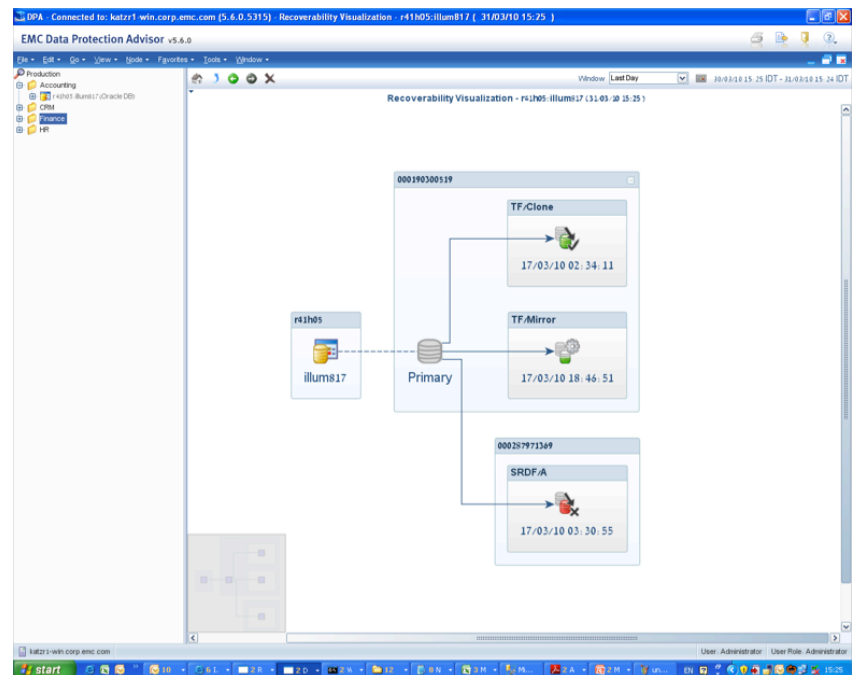
Application-aware replication support

EMC Data Protection Advisor integrates with EMC Symmetrix® and EMC CLARiiON® platforms' array-based replication and RecoverPoint network-based replication environments, enabling you to improve the recoverability of data with less effort and cost through feature-rich monitoring, reporting, mapping, and analysis capabilities including:

- Centralized monitoring and reporting across multiple sites, storage arrays, hosts, file systems, and leading applications such as Oracle and Microsoft® SQL Server® and Exchange®

Figure 1.

Graphical representation of an application with replicated volumes and highlights showing valid and invalid replicas (green/red).



- Continual monitoring of your EMC storage environment to ensure SLA discovery of execution or configuration gaps, and alerts for failures and issues
- A central data mine and visual mapping of the replication environment from the host down to the LUN, highlighting what is working and what is at risk (see Figure 1); provides a fast, intuitive way to see what is happening and where to focus corrective actions
- More successful disaster recovery testing by catching and remedying issues earlier

The Data Protection Advisor Replication Analysis support can significantly increase the recoverability of applications and data, reducing the resources required to maintain the environment.

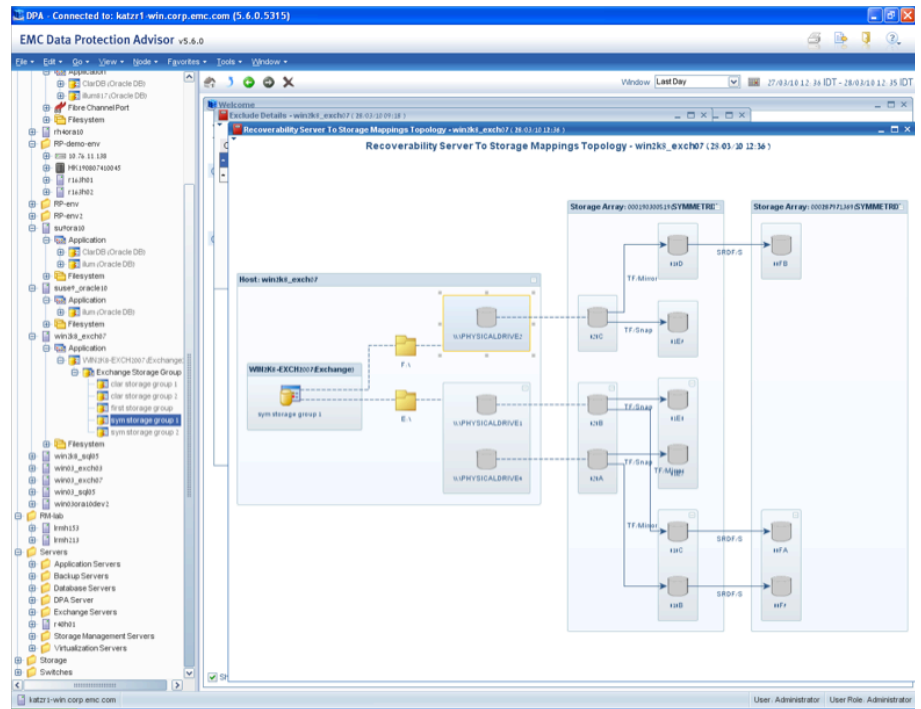
Improve protection. By improving the recoverability of applications and data, SLAs can be met more reliably and predictably, which reduces the number and duration of outages, increasing productivity as well as driving bottom-line business.

Reduce effort. Through automated data collection and rules-based analysis, problem resolution is accelerated, so operators spend less time tracking system changes; the environment is constantly checked, and policy violations are highlighted in real time. Disaster recovery tests are expensive to set up and execute. Knowing ahead of time that the data/applications are recoverable accelerates the success of these tests.

Reduce complexity. Data Protection Advisor provides a robust data collection and reporting interface. Using color-coded icons, the single, intuitive interface alerts issues on execution, SLAs, and configuration. Additionally, by displacing scripts, Data Protection Advisor eliminates another possible point of failure.

Figure 2.

Graphical representation of a host-to-storage mapping, which aids in identifying over-subscribed volumes and host-to-storage relationships.



Data Protection Advisor for EMC RecoverPoint and RecoverPoint appliances

Network-based EMC RecoverPoint is a single solution for local data protection and remote replication, with data recovery to any point in time. Data Protection Advisor's centralized monitoring, alerting, and reporting simplifies RecoverPoint system monitoring and SLA compliance.

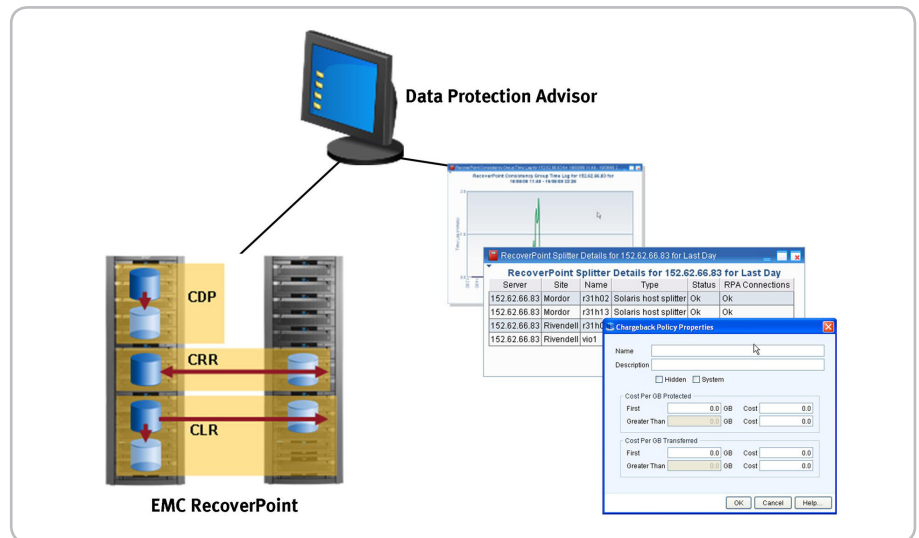
In addition to the application-aware replication support for RecoverPoint environments, EMC Data Protection Advisor helps ensure that the RecoverPoint replication and RecoverPoint appliances are operating as desired, SLAs are being met, and there are no performance or capacity issues that can impact recovery.

EMC Data Protection Advisor provides:

- Local or remote monitoring of all EMC RecoverPoint and RecoverPoint/SE environments
- Performance planning—a single console to perform trend analysis to identify performance issues globally
- Advanced alerting—the Data Protection Advisor analysis engine identifies problems in the environment, monitors service levels, and generates alerts against configured thresholds
- Chargeback—bill customers for the replication services based on a combination of data stored and data transmitted on a monthly basis
- Configuration management and change management—by gathering configuration information across multiple RecoverPoint installations, configuration standards can be enforced and reports provided on configuration changes that have occurred
- Link to change or trouble ticketing systems

Figure 3.

Data Protection Advisor monitors EMC RecoverPoint and provides multiple reports across the various RecoverPoint configurations.



This delivers a variety of benefits including:

- **Improved protection**—use the centralized data mine for information gathering on the hosts, replicated data, and SLAs to accelerate problem resolution. Advanced alerting rapidly identifies problems; monitoring configuration changes helps enforce standard configurations, and performance monitoring helps track exposure due to replication lag.
- **Reduce costs**—fast problem notification and resolution reduces risk to the business and improves replication efficiencies.
- **Reduce complexity**—a single console to monitor and alert on replication activities, identify and resolve problems, and manage SLA compliance.

Enhance your replication operations

EMC Data Protection Advisor can improve the recoverability of your data by ensuring that today's replication technologies are operating at peak performance to protect your data. Centralize the monitoring, alerting, and reporting of your replication capabilities, simplifying management, while improving the recoverability of your most-critical business data. When combined with backup, virtualization, and NAS support, Data Protection Advisor provides a unified solution for managing your data protection environment.

Replication analysis support:

- EMC TimeFinder: Clone, Mirror, and Snap
- EMC SRDF: Synchronous, Asynchronous, Concurrent, Cascading, STAR, and Consistency Groups
- EMC MirrorView/A, MirrorView/S, and SnapView
- EMC RecoverPoint: Continuous data protection (CDP), continuous remote replication (CRR), and continuous local and remote (CLR) data protection configurations
- EMC RecoverPoint/SE: CDP, CRR, and CLR configurations
- Applications: Oracle, Microsoft SQL Server, Microsoft Exchange, and File systems

Additional RecoverPoint support:

- EMC RecoverPoint appliances

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Take the next step

For more information on EMC Data Protection Advisor for Replication, contact your local EMC representative or visit our website at www.EMC.com.