IBM Resiliency Orchestration for the IBM z Systems mainframe

Simplify disaster recovery automation management to help improve the recovery process

Business benefits

- Automates complex recovery for multivendor physical and virtual environments

- Provides real-time insight into application data loss and recovery time

- Uses recovery workflows to help meet service levels and recovery point and recovery time objectives

What is IBM Resiliency Orchestration?

IBM® Resiliency Orchestration offers disaster recovery (DR) monitoring, reporting, testing and workflow automation capabilities of complex hybrid IT environments in a scalable, easier-to-use solution built on industry standards. The offering combines automation and analytics for faster, more cost-effective DR to help keep daily business operations running. It also helps proactively avoid disruptions that can lead to lost revenue, brand damage and dissatisfied customers.

Why choose IBM Resiliency Orchestration?

Today's business environment has near-zero tolerance for service outages and disruptions. It can be a difficult balancing act to manage DR. This is complicated by a dispersed hybrid IT environment with cross-platform resource use and availability, scalability and performance requirements. The Resiliency Orchestration offering can simplify DR automation with real-time DR readiness validation that helps reduce DR test times and recovery time objectives (RTOs). The result: a more cost-effective DR experience that is smarter, more tailored and more agile than ever.

Solution advantages

With the Resiliency Orchestration solution, you can be more confident about your ability to recover from any outage, whether it's related to a disaster or an infrastructure failure. Implementing this solution helps your organization:

- Automate complex recovery for multivendor physical and virtual environments
- Gain real-time insight into application data loss and recovery time
- Detect environment changes that cause recovery failure using dry-run capabilities
- Automate redundant, resource-intensive and costly DR processes
- Design recovery workflows to help meet service levels, recovery point objectives (RPOs) and RTOs
- Enable global recovery audit reporting and documentation

Solution highlights: IBM Resiliency Orchestration for IBM z Systems mainframes

IBM Resiliency Orchestration for IBM z Systems® mainframes offers storage-based logical partition (LPAR) replication for the IBM z/OS® operating system.

The web-based central management dashboard handles DR operations using workflows for:

- **Failover**—The recovery workflow switches the LPAR from the primary site to a secondary site in case of disaster.
- **DR drills**—The recovery workflows:
    – Nonintrusively validate the ability to move operations to a secondary site during the primary site failure
    – Switch roles so that the LPAR comes online on a secondary site and goes on standby at the primary site
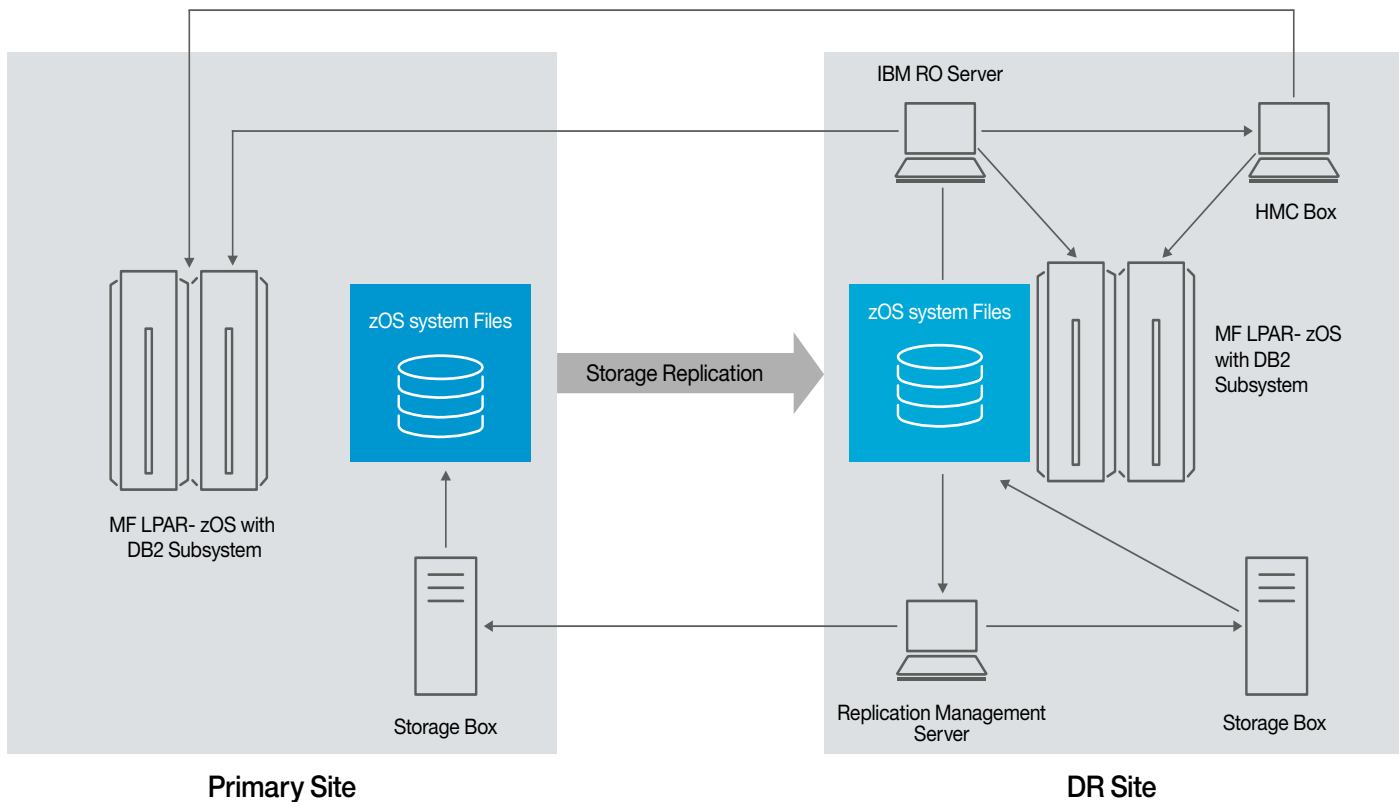   – Bring the LPAR online on the primary site and on standby at a secondary site

- **Prechecks**—The workflow validates the primary and secondary environments and configurations before performing any drill or any other recovery activity to help ensure success.

Additional workflows can be created at any time to detail other capabilities.

Solution design

Your organization can replicate the LPAR-containing database, applications and operating systems to an IBM FlashCopy® volume on Global Mirror technology. You can do this by using the IBM Copy Services Manager (CSM) solution on an IBM DS8000® hybrid-flash data system at a secondary site. There, your business applications can fail over if an outage occurs at their primary site.

The LPARs are managed by using an IBM Hardware Management Console (HMC).

Primary Site   DR Site

Prepackaged solution environment

Z OS	2.1 / 2.2
HMC	=>2.12.0
CSM	2.12.0
Volume	Flash copy with Global Mirror
Storage	DS8000

Custom support

You can achieve LPAR volume replication by using the following technology:

- FlashCopy
- A snapshot
- Dell EMC TimeFinder/Snap
- Mirroring by implementing:
    - Peer-to-Peer Remote Copy
    - Dell EMC Symmetrix Remote Data Facility
    - Hitachi ShadowImage

Customized recovery workflows can be created depending on the requirements for various storage replication technologies available for the z/OS.

Key questions to ask yourself

- Are you confident that your DR, business continuity, crisis management and technical recovery plans and procedures are sufficient to meet your recovery requirements?
- Do you progressively increase the scope and complexity of your IT DR and business continuity tests, or do you execute the same tests over and over?
- Do you include third parties in your test exercises?
- Do your employees understand their roles in the recovery of your technical and business resources?
- Do you change personnel as part of your test exercises, or do you use the same people for test after test?
- Have you ever had a recognized industry leader in resiliency observe the execution of your tests and report findings and recommendations for executive management awareness and future test improvements?

Solution benefits

- Helps integrate and align IT and business requirements for DR by using a deep understanding of the necessary interactions between IT and business to help you build and maintain confidence in your resiliency plans
- Helps you understand current capabilities and gaps so you can plan for future enterprise-wide resilience initiatives
- Provides flexibility to help you test your systems and business process recovery procedures whether you have legacy systems or virtual machines, or you operate in a cloud environment

About IBM Resiliency Services

The IBM approach to helping you achieve a more resilient business is robust, covering strategy and vision, organization and human resources, business processes, applications, data, IT infrastructure, and facilities. With over 50 years of experience helping enterprises improve their resilience, IBM is a leader in addressing business, data and event-driven risks. IBM offers you the services of highly skilled resiliency professionals to assess, design, implement, test and sustain a sound business-based resiliency program.

For More Information

To learn more about IBM Resiliency Services, please contact your IBM representative or visit the following website:
ibm.com/services/resiliency

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