Solution Brief

Industry: Cross industry
Solution: IBM Z Batch Resiliency

A resiliency solution to reduce business risk in the Z environment

Leveraging analytics with automation for improved resiliency, compliance and insight for non-database-managed data

The greatest challenge for CIOs and IT operations managers is protecting their companies from the impact of workload outages and downtime.

IBM Z® Batch Resiliency can aid in reducing dependency on domain expertise and the need for time-consuming and error-prone manual analysis to determine the impact of data corruption incidents.

By delivering **resiliency management of non-database-managed data** and applications, leveraging **detailed real-time analysis**, and reporting insights to **eliminate the manual approach** required to manage data which is outside of database control, enterprises can have increased confidence in their ability to respond to events, decide on the course of action and act quickly to restore service

The challenge

Having an accurate, real-time picture of your environment with the insight you need to make the business resilient

- Threats to data are on the rise, the complexity of application dependencies is increasing, and knowledge to manage it all is dwindling
- Business Service Level Agreements have increased in urgency driving the need for information that support quick decisions
- The volume of operational data is increasing, often with no single source of truth for which is critical for recovery

Streamlining your environment to capture knowledge; maintain and use that knowledge with minimal human effort

- Inability to quickly identify which data is at-risk in a recovery scenario
- Lack of application knowledge to determine dependencies and downstream effects of recovery processes
- Enterprises back up more data than they need; and potentially miss what's critical that adds risk, wastes resources, and complicates the recovery process

Proving compliance and recoverability on an ongoing basis beyond a planned or scheduled test event

- No inventory of all backups in the environment to prove recoverability
- No auditable way to identify unintended updates or accesses of critical production data by non-production workloads
- Inability to simulate an test event and provide evidence of recoverability

Key business needs today

Maintain service levels while there is an increased threat to business-valuable data together with growing complexity of application dependencies

Demonstrate resiliency of core business applications and compliance with regulatory requirements

Address skills gaps with a reduced or less experienced workforce manage existing applications

Typical approaches

Relying on traditional methods for managing non-database-managed data

- Using a job scheduler to manage recovery points, which doesn't understand data dependencies
- Ignoring the importance of non-database-managed data to the application ecosystem, and its relationship to databases
- Relying on human knowledge of the application

Relying on hardware solutions, or multiple copies of data as a recovery strategy

- Using hardware replication as the sole approach for recovery
- Overreliance on multiple backups as a solution
- Using disconnected backup strategies across the organization that introduce risk and complicate recovery

Relying on manual changes and 'staged' tests for compliance and auditability

- Accepting the level of business risk without understanding the gaps
- Using planned exercises to test the ability to recover
- Depending on manual application updates to protect critical data

Consequences of using these approaches

Any of these strategies is sub-optimal for the needs of today due to the risks introduced by assumptions made on incomplete or out-of-date information.

This affects the ability to recover from event impacting key data sources from increased resource costs – both computational and human – that lead to a more complex and time-consuming recovery.

The negative impact to the overall business could result in missed SLAs, regulatory non-compliance or reputational damage.

The IBM solution

IBM Z Batch Resiliency can improve resiliency, provide auditability, and reduce business risk for enterprises by delivering a similar level of insight into non-database-managed applications and data as provided by tools for database subsystems, such as offering immediate insight into application data inter-dependencies and vulnerabilities.

Real-time insights for operational resiliency

- Gain real-time inventory of data usage and all backups, including zFS filesystems
- Provide real-time interface with IBM Z Workload Scheduler for up-to-date batch job information
- Acquire visibility and knowledge of application data dependencies

Reduce risk

- Automated detection of critical data sets without a scheduled backup
- Provide proof of recoverability with recovery simulation and automated updates of backup processes

Enhance cyber resiliency

- Cyber Vault Health Check report identifies any non-database-managed data set that is open at the time a Safeguarded Copy backup is taken
- Reverse Cascade reports assist in forensic investigation aiding in the isolation of the program that caused the error
- Forward Cascade report to help develop a forward recovery strategy identifying impacted workloads
- Provided surgical recovery of any non-database-managed data sets to augment the recovered cyber vault copy

New features in IBM Z Batch Resiliency V1.2

Enhanced integration with IBM Z Workload Scheduler with up-to-date batch job information collected direct from the scheduler when changes occur

Support for managing data on z/OS® UNIX® file systems, such as zFS, using SMF 92 records

Capabilities to benefit IBM Z Cyber Vault deployments via new Health Check report delivering insight into IBM DS8000® Safeguarded Copy copies and support surgical recovery of required data sets.

The solution value

Improved resiliency, faster recovery

- Reduce mean time to recovery from hours or days by identifying at-risk data at the point of failure within minutes
- Restore at-risk dataset immediately following the identification and determine all data sets associated from the point of corruption forward
- Identify all critical tape data sets being used in your application and ensure their recovery

Streamlined and modernized processes

- Have a clear picture of all your data, who's using it and how it's used.
- Automatically identify critical data sets that don't have a backup and eliminate unnecessary backups and only back up what's needed to recover to reduce operational costs
- Automate the creation of backup and recovery JCL based on application need

Auditable proof of compliance for recovery

- Gain actionable insight into the accuracy and viability of backups and the ability to surgically recover a data set once identified
- Simple visibility into production and non-production data sharing
- Reduce the risk of non-compliance of data management without the cost of manual disaster recovery testing

Why IBM

IBM's unique capabilities to include data and knowledge from your IBM Z environment reduces risk and improves resiliency.

IBM Z Batch Resiliency forms a key part of a journey to AIOps on IBM Z by enabling faster insight into information to decide on the right course of action and ability to act promptly to support the business needs.

Learn more

Essential resources:

IBM Z Batch Resiliency product page

IBM Z Resiliency solution page

IBM Redbooks - Getting Started with IBM Z Resiliency

AIOps on IBM Z Community

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