HPE Shadowbase Data Replication Solutions

Today, business is global, and it's 24/7. It relies on IT applications in continuously running datacenters. It requires constant uptime and demands data sharing across an enterprise. Mission-critical enterprise users rely on the award-winning HPE Shadowbase product suite to distribute their critical data and information in real-time to target databases and applications in a variety of architectures.

Eliminate Unplanned Downtime

HPE Shadowbase Business Continuity software ensures extreme availability levels where system uptimes are measured in centuries. To eliminate unplanned downtime, there are several different availability architectures available:
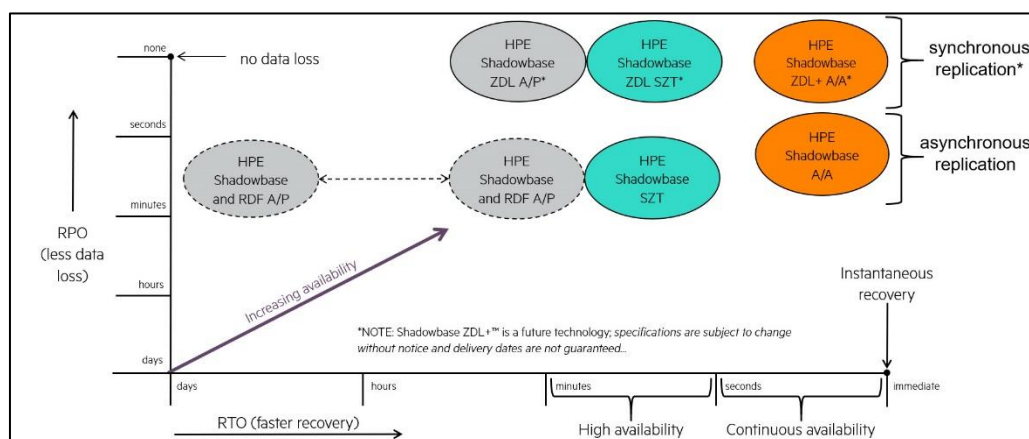
- **Continuous   Availability**
  - Disaster *Tolerance*
    - Active/active
    - Fully bi-directional data replication
    - Algorithmically resolves data collisions
- **Higher Availability**
  - *Sizzling-Hot-Takeover* (SZT)
    - Active/"almost-active"
    - Bi-directional data replication
- **High Availability**
  - Disaster *Recovery*
    - Active/passive
    - Uni-directional data replication

Eliminate Planned Downtime

HPE Shadowbase Zero Downtime Migration (ZDM) enables risk-free software and hardware upgrades while preserving application and data availability while the migration occurs.

Zero Data Loss

The Shadowbase data replication engine is powerful, capable of synchronous replication, where a source system's committed data is safe-stored on a backup system and is always available, even if the source system is lost.

Data and Application Integration

HPE Shadowbase Integration easily connects existing applications and databases to new applications and databases in real-time, freeing trapped data to recognize its full potential to rapidly create new value-add services for the organization. Create event-driven architectures that act on data changes in real-time to populate online data warehouses, data marts, and operational data stores which can consolidate your business' strategic data along with tactical data.
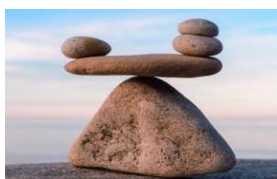
Data Validation

HPE Shadowbase Compare validates that a target database matches its source to help satisfy regulatory requirements. **HPE Shadowbase Repair** is a feature in the Shadowbase Compare for SQL utility to assist with correcting or repairing SQL/MP or SQL/MX database discrepancies between two tables. It works on any two database tables, provided they are both the same type (MP or MX), and does not require the Shadowbase replication engine.

Data Transformation

HPE Shadowbase software can transform the data between source and target database formats either automatically or via Shadowbase User Exit customizations. Data may be aggregated, disaggregated, and/or transformed. The following methods (listed most granular to least) are available:

- **SBMAP** – a powerful, sophisticated, and extensible scripting "language" that can be used to tell Shadowbase software how to transform source data into target data formats.
- **SBDDLUTL** – a database schema conversion tool that converts an HPE NonStop Enscribe record definition (which is naturally hierarchical) into a SQL schema definition (which is naturally a 'flattened' structure).
- **User Exits** – an extremely flexible process which extends Shadowbase functionality by adding code snippets into the replication engine, enabling almost any kind of data transformation to be performed.
- **DBS Mapping** – a scripting "language" for target-side other-server platforms that can drop all or specific events for a target table, convert updates to inserts, drop column(s), concatenate (text) columns, and convert or replace formats and characters.
- **Miscellaneous** – there are a number of Shadowbase parameter settings that assist with data transformation, e.g., convert non-printable binary data in a character field to spaces. However, these settings work on the data record at an aggregate level,and not at a field level.

Database Restoration

HPE Shadowbase UNDO and REDO restores a corrupted database to a known, correct state through selective change data "roll back." Helpful reports can be generated from the undo or redo queues to aid in determining the period of corruption and the contributing sources.

Audit Reporting

Capture application database changes (e.g., inserts, updates, and deletes) and create a searchable archival "audit" database of the change activity to review before and after images, and transaction details of what data was modified, when, and by whom. Review how and when data (and the database) is being changed. Selectively notify user applications when your data changes in important ways.

Test Database Creation and Refresh

Create test databases from subsets of production data without interrupting production processing, and refresh the test databases as needed.

Supported Databases

HPE Shadowbase supports a wide range of homogeneous and heterogeneous platforms and databases, including Oracle, MySQL, IBM Db2®, SQL Server, Sybase, SAP Hana, Enscribe, SQL/MP, and SQL/MX, running on UNIX, Linux, Windows, and HPE NonStop Server platforms. For a complete list of supported databases, platforms, and environments, please visit: Supported Databases and Platforms.

Summary

HPE Shadowbase software allows enterprise users to preserve valuable data, immediately recover from an outage, integrate data and applications for competitive advantage, and leverage a variety of utilities for valuable master data management.

Hewlett Packard Enterprise directly sells and supports Shadowbase solutions under the name HPE Shadowbase.
For more information, please contact your local HPE Shadowbase representative or visit ourwebsite.

Learn more:
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