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 software 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 availabilitylevels where system uptimes are measured in centuries. To eliminate unplanned downtime, there are several different availability architectures available:
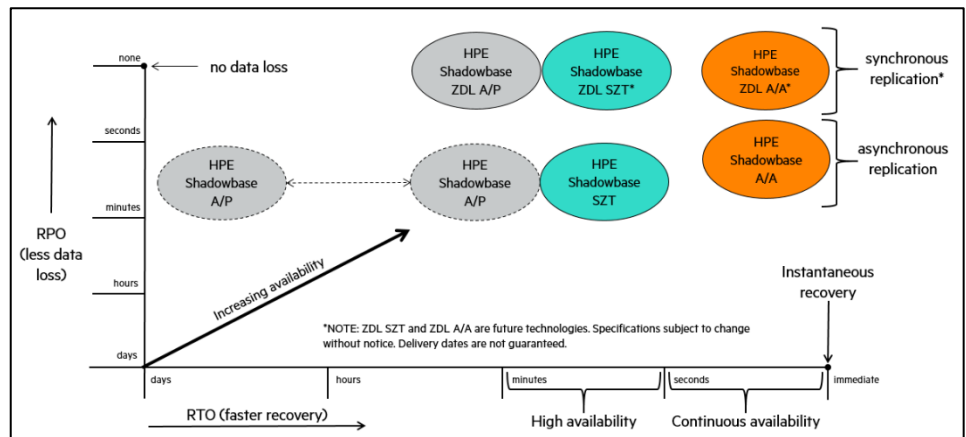
Continuous Availability
- *Disaster Tolerance*
- Active / Active
- Fully bi-directional data replication
- Algorithmically resolve data collisions

Higher Availability
- *Sizzling-Hot-Takeover* (SZT)
- Active / "Almost-Active"
- Bi-directional data replication

High Availability
- Post-disaster *Disaster Recovery*
- Active / Passive
- Uni-directional data replication

Eliminate Planned Downtime

Zero Downtime Migrations (ZDM)
ZDM enables risk-free software and hardware platform refreshes and upgrades while enabling normal application operations to continue during the migration.

Zero Data Loss (ZDL)[1]
ZDL adds synchronous replication, where a source system's data is *safe-stored* on a target system before the source system can commit. This means data between these systems is always 100% consistent and available, even if one system is lost.

Data Integration and Application Integration (DIAI)
DIAI easily connects existing applications and databases to new ones. Free siloed or trapped data to recognize its full potential, rapidly creating new value-add services. Event-driven architectures (EDAs) can act on data changes in real-time to populate online data warehouses, data marts, and operational data stores, or to feed cloud services. Leverage DIAI to consolidate your business's strategic data and tactical data, improve decision making, and rapidly create value-add services.

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[1] NOTICE: This product does not guarantee that you will not lose any data; all user warranties are provided solely in accordance with the terms of the product License Agreement. Each user's experiences will vary depending on its system configuration, hardware and other software compatibility, operator capability, data integrity, user procedures, backups and verification, network integrity, third party products and services, modifications and updates to this product and others, as well as other factors. Please consult with your supplier and review our License Agreement for more information.

Data Validation

Compare validates that a target database matches its source to help satisfy auditors and regulatory requirements, and prove to key stakeholders that the target is correct. Generate reports for further investigation into the cause of the mismatches. Compare has a repair function to easily correct mismatches between like-to-like files and tables. Compare is a standalone solution that runs independently from other DB products and system processes.

Essentials Software Bundle

The Essentials bundle includes several solutions for data transformation, management, restoration, along with compliance and monitoring.

Data Transformation

Aggregate, disaggregate, and transform data. Convert records into tables and produce flat files.

- **SBMAP** – Shadowbase Map generates powerful, sophisticated, and extensible HPE NonStop data transformation processes using a SQL-like scripting language (eliminates the need for customer User Exit coding)
- **SBDDLUTL** – Shadowbase DDL Utility converts HPE NonStop Enscribe record definitions into any supported SQL schema
- **SBCREATP** – Shadowbase Create SQL/MP converts HPE NonStop SQL/MP table schemas into any supported SQL schema
- **ETL Toolkit** – Shadowbase Extract, Transform, and Load Toolkit performs online and offline loading (or unloading), and comes with a number of adapters to feed data into other environments (flat-file, Kafka, IBM MQ, JSON, etc).

Data Management

- **DCR** – Shadowbase DDL Command Replication automatically integrates DDL commands with replication, and replicates and applies them from the source database to the target database

Database Restoration

- **UNDO & REDO** – Shadowbase database recovery restores a corrupted database to a known, correct state. Helpful reports can be generated from the undo and redo queues to help determine the cause and duration of corruption.

Data Compliance and Monitoring

- **SAL –** Shadowbase Audit Log reads TMF Audit Trail changes and creates a searchable archival database to show who did what, and when
- **SAR –** Shadowbase Audit Reader enables directly querying HPE NonStop TMF Audit Trail changes

Unlimited Customization and Scalability

Additional flexible approaches are available to enable unlimited customization and scalability.

Flexible Approaches

- **User Exits** – Extend Shadowbase functionality by adding code snippets into the replication engine. This enables almost any kind of data transformation and 'special logic' to be performed on the replicated data.
- **DBS Mapping** – Filter and convert columns and events; perform text and character formatting.
- **API Library** – Filter and customize data replication with a library that includes commonly used functions and commands.
- **Miscellaneous** – An adapter ecosystem of partners is available to customize existing adapters and write new ones for databases and platforms that are not offered out-of-the-box. Additionally, numerous parameters exist to assist with data transformation at an aggregate level (other approaches are available for granularity down to the individual field level).

Safely Test and Upgrade Systems

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

- Periodically submit test transactions to ensure a passive back-up system is ready for failover
- Create, load, validate, and then migrate users to known-working new versions for upgrades and migrations

Support

Shadowbase Support is often hailed as "world-class." Our experts have the "calm, cool demeaner" and experience to help remediate any issues you face 24x7x365.

Supported Applications

- BASE24
- BPC SmartVista
- Home-grown Applications
- Lusis Tango
- Verifone RTS (formerly AJB)

Supported Databases

- Enscribe, SQL/MP, and SQL/MX
- IBM Db2®
- MySQL
- Middleware/Messaging Feeds
- Oracle
- PostgreSQL
- SAP Hana
- SQL Server
- Sybase

Supported Platforms

- HPE NonStop
- IBM
- Linux
- UNIX
- Windows

For complete and up-to-date lists, please visit: Supported Databases & Platforms

Summary

HPE Shadowbase software allows enterprise users to preserve valuable data, immediately recover from an outage, integrate data andapplications 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* and is HPE's *go forward* data replication and streaming solution.

For more information

Contact your HPE sales representative.
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