HPE Shadowbase Support for BASE24[™]



Business Continuity and More for BASE24 Environments

Gravic, a world leader in providing business continuity software enabling high and continuous availability for IT systems, and an inventor of bi-directional data replication, provides support for BASE24 classic and BASE24-eps in its patented Shadowbase product line. All of the features and benefits of HPE Shadowbase software are available for BASE24 application environments, including:

- Uni-directional active/passive replication for disaster recovery
- Bi-directional *sizzling-hot-takeover* (SZT, also known as *sizzling-hot-standby*) active/"almost active" replication for high availability
- Bi-directional active/active replication for continuous availability
- Online data warehouse feeds
- · Real-time decision support for event-driven business intelligence solutions
- Data synchronization and application integration
- Zero downtime migration (ZDM) for upgrading to a new application version or database format
- Heterogeneous data replication across different databases and platforms



Figure 1 – Shadowbase and BASE24 Disaster Recovery

Disaster Recovery and Active/Passive Replication Architectures

Load and maintain your hot-site backups of production databases for seamless recovery in the event of a primary system failure. This Shadowbase mode is typically configured for uni-directional replication (Figure 1), which allows your primary node's application to be up and running with Shadowbase data replication keeping the database on the backup node synchronized with the data changes being made on the primary node.

High Availability and Active/"Almost-Active" Replication Architectures

HPE Shadowbase solutions also support SZT architectures where your backup node's application is running and ready

to take over on a moment's notice (Figure 2). In these architectures, your application is running on both the active and the backup nodes, but is only accepting "update" transactions on the active nodes. This architecture greatly improves the recovery time at failover as the target application is already running with the database fully accessible. Additionally, it dramatically simplifies failover testing as the backup node processing can be tested at any point without impacting the production application. This Shadowbase architecture is configured for bi-directional replication so that if a failover occurs to your backup node, resynchronization of the databases can quickly occur once the failed node has been recovered. This architecture is useful for applications that cannot run in a fully active/active mode due to the possibility of data collisions.



Figure 2 – Shadowbase and BASE24 High Availability (SZT)

Continuous Availability and Active/Active Replication Architectures

Gravic's patented bi-directional replication technology provides you the highest level of disaster tolerance available, enabling two or more simultaneously active systems, each with its own copy of the database, within the architecture (Figure 3). Scale your applications and databases across multiple physical nodes to create one logical system that can scale linearly and survive the failure of an entire node or data center. Shadowbase active/active technology supports various architectures that can avoid data collisions, as well as provide for data collision identification and resolution using various algorithms when running in the "update anywhere" model.



Real-Time Business Intelligence

Feed events from your BASE24 environments into an online data warehouse or a data mart rules engine as they occur, so you can make betterinformed business-critical decisions (Figure 4). Integrate your application data with sub-second latency across two or more homogeneous or heterogeneous platforms and databases. Use unidirectional or bi-directional replication depending on the needs of your applications and projects. For example, as key data changes in your BASE24 operational database, Shadowbase



Figure 4 – Shadowbase and BASE24 Real-Time Data Integration

replication can selectively "trigger" on the key data changing in a way that matters to you, optionally cleanse or transform the event data, and forward that event in real time to another for additional processing. This extended value-add processing can typically be accomplished without having to modify any existing application code.

Database, System, or Site Migrations or Application Upgrades with Zero Application Downtime

Seamlessly migrate your BASE24 environment to new systems or sites, with minimal or zero application downtime with HPE Shadowbase Zero Downtime Migration (ZDM). A large amount of system downtime is often due to planned outages required for upgrades, maintenance conversions, or migrations. The requirement could be for an operating system upgrade, a new application release, database maintenance, or installing new hardware. With Shadowbase ZDM, your interruptions are handled without denial of application services to end users, therefore scheduled downtime is eliminated. A location is needed either on the same node or another node (depending on the type of conversion) for the new environment. Keep your new databases synchronized with the old until all applications have been migrated to the new environment, avoiding the risk of the "big-bang" cutover approach. Shadowbase ZDM minimizes the inherent risk of migrations and facilitates testing the new environment ahead of time enabling the users to be cutover to a *known-working* environment.

Summary

HPE Shadowbase solutions provide your BASE24 environment with the replication and online facilities necessary for realtime business information systems and the infrastructure to implement extreme-availability architectures. These facilities include a real-time data replication engine that provides high-speed data replication among a variety of databases and platforms, and the HPE Shadowbase online loading, verification, and validation utility (SOLV) for performing the initial loads of the target environment as well as periodically checking that the target data matches the source. Shadowbase support for BASE24 uses HPE NonStop AutoTMF for non-audited source files and tables, or the SOLV utility for generating periodic "snap-shot" loads of non-audited data. If you have non-audited data to be replicated, please contact us for more information.

Learn more: shadowbasesoftware.com hpe.com

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