A Large Canadian Bank Dramatically Improves its ATM/POS Availability with HPE NonStop Shadowbase Solutions

Executive Summary

A large Canadian bank took a major step towards providing improved service to its customers by modernizing its active/backup data center architecture and reengineering it into an active/active network. The end result? Planned outages for system upgrades were reduced from hours to minutes, and recovery from an unplanned outage resulting from a system failure or a data center disaster was reduced more than 95% from hours or even days to a few minutes. Most importantly, once an outage occurs, its ATM/POS application services are restored to customers much faster, in many cases without the customer even realizing that an outage occurred.

This move was made possible by a dedicated team of IT professionals from the bank, and included significant operational and infrastructure changes to support the new environment. HPEShadowbase softwarewas selected to provide the data replication and integration solutions. HPEShadowbase solutions provide decades-long experience in achieving high and continuous availability and application integration via its unique and patented data replication technology (ShadowbaseSoftware.com).

Project Overview

The bank operates the largest ATM/POS networks in Canada. Should this network go down, much of Canadian retail commerce would come to a halt. The bank uses the BASE24™ product from ACI (AciWorldwide.com) to manage its ATM/POS network. BASE24 running on HPE NonStop servers is a major application used by banks globally for this purpose.
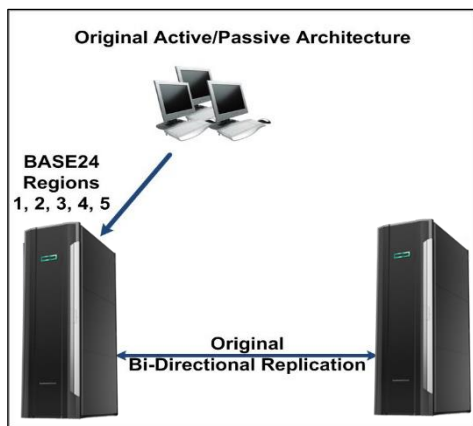

Figure 1 – Bank's Original A/P Architecture

> "We needed to improve our application service availability, and provide a better return on our IT investment with a cost effective and flexible solution. Shadowbase helped us do that. The team from Gravic was focused on our needs, and a pleasure to work with."
>
> **Bank Project Manager**

To ensure continuity of service, the bank operates two geographically-distributed data centers. In the original active/backup configuration, one site was active while the other was a passive standby (Figure 1). Recovery of the application, regardless if for a planned or unplanned outage, was time consuming and complex and typically took about four hours.

Key Shadowbase Features

➢ **High and Continuous Availability**
➢ **Uni- and Bi-Directional**
➢ **Data Synchronization**
➢ **Application Integration**
➢ **Heterogeneous**
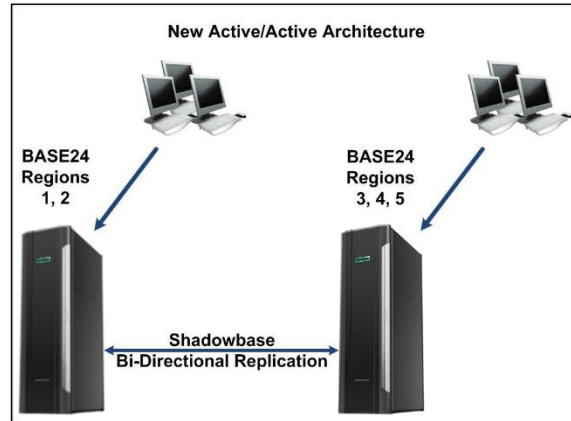➢ **Extensible**
➢ **Cost Effective**

Figure 2 – Bank's New A/A Architecture

The bank decided to dramatically improve on this architecture and recovery time by upgrading its network capabilities to handle an active/active architecture, and then to actively run its application across both sites (Figure 2). Unfortunately, the bank's original active/backup replication product did not have necessary features and was not as flexible as the bank needed. The bank thus performed an extensive evaluation of available solutions, and turned to Shadowbase technology to keep the databases synchronized.

Project Results

Previously, when an outage of the primary site occurred, all users were affected and would be down for several hours. Now when an outage occurs at one of the sites, fewer users are affected (only those connected to that site), and the recovery takes a significantly shorter amount of time. More importantly, failover is always to a known working system/environment as that site is actively running the application already. The bank no longer has to worry about whether or not the disaster recovery target environment will "come up."

The new architecture also avoids paying for idled system capacity because there is no "standby" node as all nodes are performing productive work, and all databases are available for application processing work.

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