Mixed Netezza Database Systems Replication Case Study

Large US Retailer

Introduction

IBM's PureData for Analytics Netezza appliances were superseded in 2019 by IBM's newer Cloud Pak for Data (CP4D) System running the Netezza Performance Server (NPS) database software, which is also available as a managed service in the cloud.

Customers wanting to upgrade their production system to NPS but would like to continue using their older models for development, testing, or for Disaster Recovery purposes, are unable to easily and automatically replicate databases between the two technologies using IBM's native Netezza Replication Services, as they are incompatible.

The N3001 (Mako) range of PureData for Analytics appliances reached end of IBM support on 30th April 2023, but many customers still want to continue using these systems in order to maximise their return on investment while it is still feasible for them to be serviced and supported via a third party offering, such as Smart Associates' Afterlife Support.

Being led to believe that the databases of the new and old generation of Netezza systems could not be replicated has created a dilemma for businesses wanting to upgrade their production platform but continue using one or more of their older systems for non-production workloads. Business are effectively being forced to either upgrade all their appliances to CP4D even though their existing appliances still have plenty of life left in them, or mix development and production workloads on the same platform risking instability in the process.

Background

Our client is a large retailer in the United States that was running two Netezza N3001-005 systems in separate data centers - one as a production server and the other for disaster recovery and development/testing. They kept their two systems synchronized using our Netezza Database Replication as a Service, or SmartSafe, product. Having their two Netezza systems fully synchronized in near-time allowed for workloads to be spread as well providing a far more robust disaster recovery solution.

Objectives

1. For the client to be able to refresh their technology by upgrading one of their servers to CP4D, when their Mako appliances reached end of support, without losing the ability to keep their systems synchronized.

2. To undertake a seamless migration between their existing Mako system and their newly purchased CP4D system.
3. To be able to keep their new CP4D system synchronized with their older Mako appliances
4. To replace IBM's product and hardware support for their Mako's with an affordable afterlife support service.

Solution

Previously, our Smart Management Frameworks SmartSafe product had only been used between PureData for Analytics-based Netezza appliances, but our engineers have since enabled it to replicate databases bi-directionally between both old and new versions of Netezza hardware and software.

Results

- The customer was able to undertake a full system migration simply by enabling database replication from the old environment to the new, and running the two systems side by side in parallel until they were ready to cut-over, rather than having to use a more resource intensive, expensive, disruptive, and risky 'big bang' approach.

- The customer's new CP4D production system is now being fully synchronized with both of their older Mako appliances for Disaster Recovery, load balancing, and development/testing purposes.

- Due to the successful delivery of the Netezza Database Replication Service, and the client's satisfaction with the service provided, Smart Associates was invited to provide ongoing support cover of the client's Mako generation Netezza systems after IBM support ended in April 2023. This we are doing in partnership with our local on-site hardware replacement partner, Service Express.

- The customer has never had a single critical/severity 1 outage on any system for the entire duration of the support relationship.