

HIGH AVAILABILITY PROGRAM REVIEW

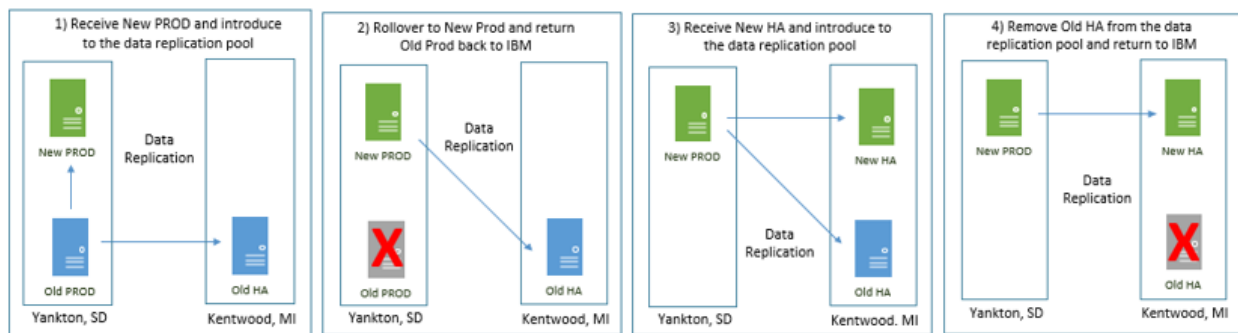
EVENT DATE: 11/07/2021

EVENT SUMMARY

All times included in this report are Eastern Time.

As part of an ongoing business continuity program, CU*NorthWest, CU*South, and Site-Four actively maintain a high-availability (HA) core processing environment with near real-time data replication between identical hosts located at two geographically dispersed, state-of-the-art data centers. Live HA rollover events are scheduled on a regular basis to redirect CU*BASE core processing production and operations to the HA data center (located in Kentwood, MI) for a period of one full business week or longer. At the conclusion of the rollover event, core processing is redirected back, and operations resumed at the primary data center (located in Yankton, SD). These live production HA rollover events are invaluable to validate procedures and ensure the ability to recover CU*BASE GOLD core processing in an effective and timely manner when incidents occur that threaten to disrupt business operations.

Every 36-48 months, the server hardware that hosts the CU*BASE application suite is replaced with new technology to meet the demands of a growing user base and changing application performance requirements. During the month of October, the execution phase of the project was initiated to upgrade both the production (PROD) and high availability (HA) servers to a new hardware platform using the familiar “rollover” process.



This process, shown in the four steps above, involves receiving the new hardware from the manufacturer under a lease agreement, installing and configuring the operating system and applications using a comprehensive system build checklist, introducing the server to the live data replication pool, performing pre-roll tests and audits, then conducting the rollover to bring the new PROD server online as the CU*BASE production host. This process is repeated for the HA host. Once completed, the old hardware is sanitized per the data security policy and returned to the manufacturer.

This report details the scheduled high-availability rollover performed on November 7th to accomplish the first three steps of the process to migrate core processing to the new PROD and HA servers. A follow-up event is scheduled for March 20-27, 2022, to perform the initial rollover to the new HA server.

EVENT DETAILS

As part of this project, the new server hardware was received in early September and prepared for implementation through a series of comprehensive system and application testing from multiple teams. On the evening of **November 7, beginning at 8:00 PM ET**, the rollover process began to bring CU*BASE core-processing online on the new PROD host. To minimize the impact to end users and other applications that communicate with CU*BASE, the systems were renamed and network addresses renumbered so that the new host mirrored the settings of **the** old host.

The initial rollover for any new system requires a complete set of audits to initialize the data and prepare it to be the source for the replication pool. These additional steps, along with comprehensive post-roll testing to ensure data integrity, required an extended maintenance window (4 hours) compared to most typical HA rollover events (1 hour). During the scheduled maintenance window, all EFT transactions were processed following preconfigured stand-in mode arrangements.

This extended maintenance window allowed teams the time required to engage with support vendors to resolve an issue with synchronizing data replication journals. Once this issue was corrected, a system IPL (restart) was conducted as a precautionary step to validate the changes.

By **2:00 AM ET**, CU*BASE core-processing was back online, running on the new hardware. For the next few hours, teams worked to identify and correct any application issues that surfaced during the initial EOD/BOD daily processing. From that point forward, the new PROD host performed well without any issues.

The next HA rollover is scheduled for **March 20-27, 2022**, when CU*BASE core processing and operations will be performed at the secondary data center in Kentwood, MI.

CLOSING REMARKS

Performing a “fork-lift” upgrade of hardware for the CU*BASE core-processing environment in a relatively short maintenance window is both a recovery and high-availability effort requiring careful planning and orchestration with strict attention to details. Each step of the process introduces a level of risk requiring a response strategy to execute when things do not go as planned. This report details the effort of recovery teams at CU*NorthWest, CU*SOUTH, CU*Answers, and Site-Four during this live production rollover event.

As applications and networks become more complex and integrated, while at the same time, tolerance for downtime becomes practically non-existent, businesses are rethinking their strategies for achieving the level of resilience required to compete and succeed. As a core data process and CUSO for a growing network of credit unions, we will continue to be aggressive in investing in and testing our capabilities through live rollover events.