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## **SITE-FOUR HIGH AVAILABILITY PROGRAM REVIEW**

**EVENT DATE(S): 10/11/2020 – 10/18/2020**

### **SUMMARY:**

As part of an ongoing business continuity program, Site-Four, LLC actively maintains a high-availability (HA) core-processing environment with real-time CU\*Base/GOLD data replication between identical servers located at two geographically dispersed, state-of-the-art datacenters. Regular HA rollover events are scheduled to redirect core-processing and operations to the secondary/backup datacenter (located in Kentwood, MI) for up to seven business days as part of an active and constantly evolving business continuity program. At the completion of each event, core-processing is redirected back to the primary location in Yankton, SD. These rollover exercises are an invaluable part of business continuity testing and recovery processing readiness and ensure the ongoing availability of CU\*Base/GOLD core processing environment.

These events are an important component of the Site-Four value proposition, and Site-Four encourages that these be shared with all stakeholders. This level of reliability is above par and should be shared in the board rooms for client credit unions.

The rollover to the Kentwood, MI system began at 10:00pm CT, October 11, 2020. The rollover itself was completed at 11:15pm CT, with all post-rollover testing completed by 11:30pm CT. The roll back on Sunday, October 18 began at 10:00pm CT and was completed at 11:00pm CT with core processing of CU\*BASE/GOLD transferred back to the primary system in Yankton, SD and all post-roll checks complete by 11:15pm CT.

This event was performed through the combined efforts of Site-Four, CU\*Northwest, CU\*South, and CU\*Answers as part of an ongoing reciprocal HA colocation agreement with CU\*Answers. This arrangement was created in 2014 as a proactive measure to minimize disruptions at credit union branch locations across the CU\* network. The Group Providers announce these planned events and firmly encourage credit unions to test their connectivity to the secondary data center in advance of the rollover to minimize issues attendant to the role-swap exercise.

As highlighted in this report, the mutual colocation agreement between Site-Four and CU\*Answers not only includes shared facility space within a state-of-the-art data center, but also network and operations support throughout the rollover event. The end goal in this agreement is to provide seamless support and a high and practiced level of readiness that allows the party experiencing the disaster time to focus on recovery and resumption while the unaffected partner oversees daily operations from the high-availability data center site.

The following sections review details, challenges encountered, lessons learned, and recommendations for consideration.

### **EVENT DETAILS:**

On the evening of Sunday, October 11, 10:00pm CT, the recovery team brought CU\*BASE/GOLD offline and began the role-swap process to redirect Site-Four core-processing from the production system in Yankton, SD to the high availability system in Kentwood, MI. During the rollover process, a "splash-page" for online mobile banking was displayed to alert members that system maintenance was being performed. After completion of the rollover, all processes were verified, communications were back online, and CU\*BASE/GOLD was back online by 11:07am CT. Additional audits are performed afterwards and were completed by 11:35pm CT.

The rollback was completed on Sunday, October 18 beginning at 10:00pm CT to redirect core-processing back to the primary production server in Yankton, SD for completion of the rollover event. All processes were verified, communications were back online, and CU\*BASE/GOLD was back online by 11:11pm CT.

A noteworthy facet of this rollover event was that our partner, CU\*Answers, remotely ran Site-Four processes as a co-location exercise during the period in which we were rolled to our high availability site at their location. This closely mimics a severe event in which processing would be relocated to Grand Rapids in a case in which we lost both system and staff remote capabilities.

## CHALLENGES:

As we continue to expand and improve our products and services to a growing client network, systems and environments experience an increased number of changes at a very rapid pace. Performing these rollover exercises in a planned, controlled setting during non-peak business hours is a deliberate investment to prepare for an actual crisis. It is the position of Site-Four that any role-swap event which does not reveal any issues is regarded as a missed opportunity to learn and improve.

The most noted challenge in this rollover occurred, in fact, before the role-swap exercise began. It was the intent of Site-Four to test recovery connectivity for one of our switch vendors, Fiserv. This testing involves modifying the communications connection so that live data passes from the switch vendor directly to the HA system. In this case, it was determined that the contact information on hand for the vendor had hanged and there was a delay in reaching the continuity testing facilities on the vendor side. Once contacted, the vendor was unable to clearly identify the connections or facilitate continuity testing. Because of this, testing with the vendor was postponed (as tests of this kind can be performed outside of system rollovers) to ensure that there was no undue impact to our clients.

An additional issue was discovered when a Pre-Conversion Credit Union was left in an active test state. All the libraries for this Credit Union configuration had not yet been setup to replicate to the HA host and this caused errors with a port on the CU\*Talk subsystem which was being tested on PROD prior to the roll event. This issue was rectified on Monday morning.

A couple of days prior to the scheduled rollover, the person that was scheduled to lead the rollover was sidelined due to an injury. Despite this, we were able to engage someone else to lead the rollover on short notice and the scheduled was maintained.

## CONTINUING EFFORTS AND RECOMMENDATIONS:

Each recovery test and high-availability rollover exercise provides us the opportunity to improve the process, expand capabilities, and adjust procedures as the production environment changes. The best way to accomplish this is to execute, document, and improve in regular iterations. The best way to be ready for a disaster is to practice.

The following is a list of action items and projects that we are completing to improve our HA rollover capabilities:

1. We will be contacting switch vendors and arranging for continuity testing as available. Note that this may not be possible with all vendors, as some require an actual emergency be declared, some impose prohibitive fees or require an extended test, and so forth. Vendor continuity status will become an element of our availability strategy.
2. Additional double-checks were added regarding the setup and testing of new Credit Unions to ensure that nothing remains active prior to a roll event and replication is setup immediately for all new Credit Union libraries.

This was an excellent rollover event, especially given the enactment of remote processing through our colocation strategy. These rollover exercises continue to show improvement and validate the work being done to streamline the process. Due to our cross-training efforts, even a last-minute change in personnel proved to have no impact on the schedule. With each scheduled event, we build our confidence in the process and the team to ensure that even an unscheduled incident will run smooth and efficient.

Respectfully,



Alan Rogers | CEO- Site-Four, LLC  
arogers@site-four.com