SITE-FOUR HIGH AVAILABILITY PROGRAM REVIEW
EVENT DATE(S): 04.09.2023 - 04.16.2023

SUMMARY:

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 real-time CU*Base/GOLD data replication between identical servers located at two geographically dispersed, state-of-the-art datacenters. Recurring, biannual, HA rollover events are scheduled in the Spring and Fall every year, where core-processing and Operations are redirected to our secondary/backup datacenter (located in Kentwood, MI) for seven business days as part of an active and constantly evolving business continuity program. At the completion of each event, core-processing is then redirected back to the primary datacenter, location in Yankton, SD. These rollover exercises are an invaluable part of our business continuity program, testing and confirming our recovery processing readiness and ensuring the ongoing availability of our CU*Base/GOLD core processing environment.

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

This rollover to the Kentwood, MI system was performed on April 9th, 2023. Preparations began at 9:00PM CT. The actual rollover process began at 10:10PM CT and was completed at 10:56PM CT. All post-rollover testing completed by 11:20PM CT.

The roll back to the Yankton facility was performed on Sunday, April 16th, 2023. Preparations began at 9:15PM CT and the system was taken offline at 9:45PM CT. At 10:02PM CT the system was handed over to the admin team and roll swap was completed by 10:52PM CT. All post-roll checks complete by 11:10 PM 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 originally 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 do network testing to assess their connectivity to the secondary data center in advance of the rollover. This allows us 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 ensure a high and practiced level of readiness. This 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 following this rollover exercise event.

EVENT DETAILS:

This rollover to the Kentwood, MI system was performed on April 9th, 2023. Preparations began at 9:00PM CT. The splash page went up at 9:50PM CT and the subsystems were taken offline. At 10:03 the admin team took control and began pre-role-swap checks. The actual rollover process began at 10:10PM CT and was completed at 10:56PM CT. Network changes were completed by 11:02PM CT and subsystems were online by 11:15PM CT. All post-rollover testing completed by 11:20PM CT.

The roll back to the Yankton facility was performed on Sunday, April 16th, 2023. Preparations began at 9:15PM CT and the system was taken offline at 9:45PM CT. At 9:48PM CT it was observed that the ISO subsystems would not end. It was eventually determined that during EoD processing the previous night, a transaction was trapped in the ISOPOST2 subsystem. Safety measures

were preventing the rollover process from continuing because of this. Normally this is not an issue as it would correct itself during the next EoD processing, but these calls are not replicated so it would have to be manually resolved in the morning. At 10:02PM CT the system was handed over to the admin team and roll swap was completed by 10:52PM CT. Network changes wer completed by 10:57PM CT and the splash page was taken down at 11:02PM CT. Core processing of CU*BASE/GOLD transferred back to the primary system in Yankton, SD and all post-roll checks complete by 11:10 PM CT.

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.

This rollover event also provided Site-Four with the opportunity to upgrade our host systems to the next major Operating System release without incurring any downtime for its member credit unions. Prior to the event, the High Availability (HA) system is upgraded to the new level so the initial rollover event brings us up to the new OS level. While the hosts are swapped and we are operating out of the Kentwood, MI facility, the primary host in Yankton, SD is upgraded to match.

Following the rollover on Monday morning, 04/10/2023, a handful of CU*South credit unions were unable to access CU*Base GOLD. As these issues were addressed, the following was determined to be the cause of the outages. Two credit union branches had recently upgrade to new FortiGate firewalls and it was determined that the VPN to the HA location was not properly setup. Once the setup was completed, these branches came online. One credit union branch experienced a failure of their primary ISP and the backup ISP did not come online due to a misconfiguration on the Site-Four HA firewall. This credit union came online once this was determined and corrected. The remaining credit unions were brought online once some adjustments were made to the VPN connections that would have been discovered and addressed beforehand if proper testing had been done. No CU*NorthWest credit unions experienced any reported issues due to the rollover.

During the last rollover event, RVA Financial experienced issues with their ITM's going offline while we were rolled. Due to additional configuration issues they also failed to revert to ATM mode. As the use of ITM's was new to Site-Four credit unions, testing was planned during this rollover event to stabilize the connection to support the widespread use of ITM's. During this roll, however, the ITM's stayed online and were stable throughout the entire event.

The errant transaction that was preventing the roll-back to Yankton on 04/16/2023 was manually run on Monday morning without any issues.

No additional outages or failures occurred during the event that could be attributed to the rollover. The instability that had occurred previously between the Kentwood and Yankton facilities was also nonexistent during this rollover event.

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.

Overall, this was one of the best rollover events we have performed. With additional attention to pre-roll testing to confirm connectivity to each credit union we can significantly improve the end-user experience even further. These rollover exercises continue to show improvement and validate the work being done to streamline the process. With each scheduled rollover event we perform, we ensure that even an unscheduled incident will run smooth and efficient.

Respectfully,

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