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## SITE-FOUR HIGH AVAILABILITY PROGRAM REVIEW

EVENT DATE(S): 10.15.2023 - 10.22.2023

### 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 October 15<sup>th</sup>, 2023. Preparations began at 9:00PM CT. The subsystems were brought down at 9:45PM CT. The rollover began at 10:01PM CT and was done by 10:47PM CT. Rollover was completed by 10:59PM CT.

The roll back to the Yankton facility was performed on Sunday, October 22<sup>nd</sup>, 2023. Preparations began at 9:15PM CT and the subsystems were brought down at 9:45PM CT. The roll back began at 10:04PM CT and was done by 10:43PM CT. The roll event was called completed by 10:51PM 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\*Asterisk network. The Group Providers announce these planned events and work directly with the 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 October 15<sup>th</sup>, 2023. Preparations began at 9:00PM CT. The subsystems were brought down at 9:45PM CT and the Splash-page for online and mobile banking was put up. Control of the host was then handed over to the iSeries Admin Team and the actual rollover process began at 10:01PM CT. System control was returned to Site-Four at 10:26PM CT and network changes were made. Post-rollover testing began at 10:37PM CT and subsystems were started at 10:45PM CT. The splash-page was taken down at 10:47PM CT. FIS was the only EFT vendor that needed to be contacted to bring the ISO subsystem online, but all subsystems online and verified by 10:59PM CT.

The roll back to the Yankton facility was performed on Sunday, October 22<sup>nd</sup>, 2023. Preparations began at 9:15PM CT and the subsystems were brought down at 9:45PM CT and the Splash-page for online and mobile banking was put up at that time. At 10:03PM CT the system was handed over to the admin team and roll swap began at 10:04PM CT. At 10:29PM CT control was returned to Site-Four and the network changes were made. The subsystems were started and testing began at 10:38PM CT. The splash-page was taken down at 10:41PM CT, post-roll checks were complete and online and mobile banking were verified by 10:43PM CT. The roll event was called completed by 10:51PM CT setting a new record for Site-Four.

## **CHALLENGES:**

Site-Four continues to expand and improve as we provide our services to a growing client network. Systems and network environments continue to 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 in an effort to maintain our preparedness 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.

Perhaps the most critical note of importance for this rollover event were the changes made to our replication system which had a dramatic effect on the amount of time the actual roll-swap process takes. While there are a lot of preparations and tasks involved in a rollover event such as networking changes and subsystem management, the most critical, and often the most time consuming, is the roll-swap where the replication software actually swaps the roles of each host and reverses the direction the replication occurs. This process previously took 38 minutes during the last roll swap. During this rollover the time was reduced to 10 minutes and during the roll back, the time was reduced even further to 8 minutes 44 seconds. This is a significant time savings!

During this rollover event, the team used an updated version of the subsystem dashboard that evaluates the system status before allowing a subsystem to be brought down. During the rollover event the new dashboard performed flawlessly and streamlined the process considerably. During the roll-back, however, the new dashboard refused to allow the subsystems to be brought down. Eventually the decision was made to work through the previous dashboard to keep the roll event on schedule. We will be working together to understand what caused the issue and make corrections needed to eliminate the possibility of a repeat occurrence.

This rollover event also followed a firewall upgrade that was performed in our primary datacenter Yankton, SD. These new firewalls change the way the network changes occur, but the team was prepared to deal with the changes and the networking changes were able to be made without any issues or delays.

Following the rollover on Monday morning, 10/16/2023, we experienced no connectivity issue related to the rollover event, even with a new conversion recently gone live. As minor as this may seem, we consider this to be a significant achievement. With 120 credit unions, many running multiple branches, it is a considerable feat to have zero issues following a rollover event.

No additional outages or failures occurred during the event that could be attributed to the 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, as we continue to improve, this was one of the best rollover events we have performed on many levels. The pre-roll testing to confirm connectivity was greatly improved. The upgraded dashboard, while still not 100%, shows significant promise in its additional safety measures and capabilities. Lastly, the changes to the replication system showed incredible improvement. In the end, each improvement we do significantly streamlines the process and improves the end-user experience. With each scheduled rollover event we perform, we ensure that even an unscheduled incident will run smooth and efficient.

Respectfully,



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