CU*ANSWERS
Business Resumption

2012 Disaster Recovery Gap Analysis Report

April 26, 2012

Event Details

Planned annual disaster recovery test to restore core CU*BASE processing systems at one of the equipped IBM BCRS facilities

Event Start Date: April 18, 2012
Event End Date: April 20, 2012

This report identifies any challenges observed, lessons learned, and recommendations for future events.

For more information on the CU*Answers Disaster Recovery program, please visit the Business Continuity section of our website at http://www.cuanswers.com/bcp/

Overview

This year's annual disaster-recovery test was conducted from April 18 to April 20, 2012 at the IBM Sterling Forest, New York BCRS facility. Due to scheduling conflicts in May, this test was moved ahead four weeks to April. For the first time, recovery teams were divided among the IBM facility and the CU*Answers High Availability (HA) data center in Muskegon, Michigan with users in Muskegon accessing the New York host via remote access. During the test, core-processing systems and applications were recovered from tape archives to an IBM-provided system and network at the New York facility.

By dividing the recovery staff, we were able to rotate additional team members operating on multiple shifts throughout the 60-hour event window. This included three first-time event participants, giving us an expanded base of skills and experienced personnel in the event of an actual disaster.

This was a full-system restore test, encompassing the restoration of encrypted data; application testing from two proxy credit unions conducted (to confirm access, account balances, and authentication); transaction verification from three separate proxy vendors processed, and encrypted FTP transmission of statements.

Automated Clearing House Transmissions

In past events, we tested the transmission of ACH files through Honor Credit Union ("ACH buddy system"). Since we connected remotely to the New York host from the Muskegon HA data center, we took the opportunity to use the redundant FedLine VPN appliance located at the HA data center to successfully perform the transfers.

Appreciation for Participants

These recovery tests were made possible with the participation and cooperation of the following organizations:

ATL Federal Credit Union
(Proxy credit union)

Frankenmuth Credit Union
(Proxy credit union)

Bridgestone
(Secure FTP transmission)

CO-OP Financial Services (ISOCOP)
(Third-party transactions)

FIS Global (ISOFIS)
(Third-party transactions)

Vantiv (ISOFTH)
(Third-party transactions)

Federal Reserve Bank
(ACH-file transfers)

ItsMe247.com

Also included in this annual recovery test was the ItsMe247.com application. Users were able to authenticate on the server pool located at the Muskegon HA data center and perform transactions. During this test, servers hosting OBC (Online Banking Community) were not included. For the test, the OBC component was disabled, taking the user directly to a login prompt. Users selected for this test included internal and remote staff connecting over the Internet, accessing personal accounts from two separate credit unions (Western Districts and River Valley CU).

It's Me 247 Online Banking

LIBRARY RESTORATION

During these recovery tests, we perform a restoration of the production host on an alternate system (at the IBM BCRS facility) parallel to the live production host (at the Kentwood datacenter). By performing this test parallel to production, no downtime is required for clients. This scenario can expose the potential risk of incorrectly identifying which host a recovery worker is accessing, creating the opportunity to inadvertently perform tasks meant for the recovery host on the actual live host. This in fact did occur at the conclusion of this recovery test, invoking a real recovery effort to restore a credit union's production-library file during non-business hours. With the diligent effort of recovery teams, the library file was restored by the open of business the following morning.

Future recovery tests will provide controls to prevent and/or mitigate this incident from reoccurring.

Detailed Gap Analysis

A remote console test was performed prior to the event (on 4/13) to ensure staff at the Muskegon HA data center would be able to access the host at the IBM BCRS facility in NY. At this time, accounts and password were generated. On the morning of the event (4/18) the user accounts had been changed by IBM (normal process for them). This lasted approximately 30 minutes since we had to track down someone to assist us at IBM. *Obtaining user names and passwords will be a checklist item for future tests.*

Standard operating procedures at IBM are to not plug in the router network communications until our recovery teams arrive at the IBM site. Their purpose in this is to not chance interruptions with live productions networks without staff on-site for troubleshooting. This created a slight delay in our network-communications preparation on the morning of 4/18. Given this, we were still able to complete each test as scheduled with time to spare. *This has been noted and documented.*

This is the first test in which recovery teams were located at multiple sites. There was a communications error in the request to insert a specific tape into the drive. This created a slight delay in the initial recovery time until the correct tape was inserted into the drive. *Should multiple sites be used again, identical recovery checklists will be available at each location detailing the process and resources required.*

The firewall shipped to IBM New York for the purpose of the test had an incorrect route configured that required access to the router from an external source over the WAN interface to resolve. *Prior to the next recovery test, the firewall will be permanently housed at the IBM MCRS facility negating the need to reconfigure for the tests.*

Communications issues on the Vantiv router temporarily prevented communications with that vendor. When the vendor enabled debugging on the router, the issue was resolved, but they could not explain what had caused it.

An attempt to make a change to an account/card on our DR host to match that on the FIS Global host resulted in an encryption error in the data. We were able to confirm the data, even though the host rejected the transmission due to the error. *Had this been an actual disaster and not a test, this would not have been an issue.*

The ItsMe247.com test (without OBC) did not provide a credit union ID prompt when the user browsed directly to the root of the site (www.itsme247.com). If accessing the site from the login link on the credit union's home web page, the transfer was transparent to the user *(worked as expected).*

Also on the ItsMe247.com test, there were a few missing images related to OBC (Online Banking Community). This did not inhibit the functionality of the site. The ASP team is working to improve the deployment procedures to ensure that all images are available at Muskegon.

ISO transaction testing included transactions on the recovery host for a credit union that was part of the proxy test. These transactions altered the balances and totals, requiring a fresh restore of the library files and the performance of a second test. The second test was successful (accounts balanced). *We will revisit this to determine if the sequence of tests needs to be modified or if a change needs to be put in place requiring a selection of different credit unions used for third-party communications and proxy testing.*

The ACH file sent to the FRB included data from files of credit unions not identified in the scope of the test. Although the file was received and acknowledged, *future tests will include either a file containing only those credit unions identified as test clients, or the scope of the test with FRB will expand to include all online credit unions using FRB services through CU*Answers.*

An error occurred when attempting to transfer the statement file to the 400FTP server. The statement file was not in the list of files restored to the system. The statement file had to be recreated prior to transmission. This was completed successfully. *This file-creation step has been added to the recovery-plan run sheets.*

A pre-event communications test was performed for all participating third-party vendors with redundant communications at the Muskegon HA data center. This presents some confusion with some vendors when we change hosts to the IBM BCRS facility for the actual event. This may be inevitable given the circumstances and may require us to work through the communication issues each year (change in ports, IP addresses, etc.). *We will look for methods to better communicate this to our vendors for future tests. Had this been an actual disaster and not a test, this would not have been an issue.*