

## CU\*ANSWERS REVIEW OF SAGE DIRECT, INC.'S DISASTER RECOVERY TEST

EVENT DATE: 10/26/2018 9:30 AM – 3:10 PM ET.

### SUMMARY

As part of a robust business continuity program, CU\*Answers regularly assesses the preparedness of vendors who provide business critical services and supplies. This includes the audit and review of vendor disaster recovery plans and tests. According to the 'Statement Processing Agreement' with Sage Direct, Inc., a recovery test is to be performed every 18 months (or as otherwise requested by CU\*Answers).

On October 26, 2018, a recovery test was performed at the Sage Direct recovery site, witnessed and reviewed by Danielle Caliendo, Business Continuity Coordinator at CU\*Answers. The test was conducted in part to confirm the capability to fulfill their service obligations in the event of a significant disruption at their primary production facility.

For the purpose of this test, daily notices, member, credit and mortgage statement files were generated and securely transmitted by the CU\*Answers production host to servers at the Sage Direct recovery site, located within the US Signal data center in Kentwood, MI. From there, the files were processed for printing and securely transmitted to their alternate print service vendor, Extend Your Reach. EYR has production facilities in Kentwood and Lansing, MI.

The following sections identify challenges observed, lessons learned, and recommendations for consideration related to this recovery event.

### EVENT REVIEW

Sage Direct's continuity and recovery strategy includes three facilities:

Main office and primary production facility (IT and Printing):  
3400 Raleigh Ave. SE  
Kentwood, MI 49512

The vendor maintains a colocation agreement with US Signal to host their redundant servers in the Kentwood data center and provide workspace if needed for disaster recovery purposes. At this data center are computer systems and networking equipment to receive, process and transmit data files to and from clients.

Disaster Recovery Site (IT only):  
US Signal Data Center – Grand Rapids East  
4765 Barden Ct.  
Kentwood, MI 49512

The vendor maintains a contractual agreement with Extend Your Reach for emergency printing services in the event of a disruption to normal production at the primary production facility.

Extend Your Reach facility (IT and Printing):  
4850 Kendrick Street SE  
Grand Rapids, MI 49512

This disaster recovery test proceeded as follows:

- The statement test files were encrypted and sent via secure FTP to the recovery site prior to the beginning of the test.
- The test files were received by systems at the site and held for processing.
- Participants arrived at the site at 9:30 AM ET.
- The test files were decrypted, processed, re-encrypted and then securely transmitted to the FTP server at Extend Your Reach for printing.
- Participants arrived at the Extend Your Reach production facility at 2:00 PM ET.
- From the processed test files transmitted, a sample of daily notices, member statements, credit card statements and mortgage statements were printed, folded, inserted into envelopes and sealed.
- The test concluded around 3:10 PM ET.
- For confirmation purposes, several print proofs and production result samples of printed, inserted and sealed statements were retained by Sage Direct for their own recovery test records. The remaining test samples were destroyed and statement data file(s) purged.

## OBSERVATIONS

- The relocation of the Sage Direct recovery site to the US Signal data center provides enhanced physical security capabilities, including:
  - Retinal scanners installed at each ingress point between security zones.
    - During the test, Sage Direct staff demonstrated retinal access to the various parts of the building.
  - Test participants without access were required to sign in and were escorted throughout the duration of the test.
  - Interior doors are configured so that the next will not open until the former is closed (man trap).
  - Enhanced perimeter security by fully encompassed gate with telecom to gain access to the parking lot and building.
- The colocation contract between Sage Direct and US Signal includes the availability of eight data centers located throughout the mid-west region, in the event the Kentwood data center is not available.
- Physical security at the Extend Your Reach facility included proper visitor sign-in and badging. Participants were accompanied by an EYR employee at all times during the test and facilities tour.
- EYR provided adequate proof of sufficient (rotated) inventories of paper and envelopes on site for use in the event of a disruption at the Sage Direct primary production facility.
- Additional observations and comments are included in “Disaster Recovery Test Results” on page five of this report.

## CHALLENGES

The documented recovery process combined with the experience of the Sage Direct recovery team involved in this test demonstrated a high level of competence and overall preparedness. The colocation agreement with US Signal only exemplifies the vendor's commitment to their continuity and recovery strategy. No significant challenges were observed during this test.

## STATEMENT PROCESSING AGREEMENT

One of the objectives for each recovery test is to confirm the following requirements from the 'Statement Processing Agreement' between Sage Direct and CU\*Answers. These include the following:

1. Sage Direct warrants that they will ship within 2 weeks of a catastrophic event.
  - a. Based on test results, there is no evidence to suggest that the vendor is unable to meet this requirement.
2. Sage Direct warrants the ability to receive and decrypt statement and notice data using the FTP protocol.
  - a. Secure file transmissions have been tested successfully during multiple tests.
3. Testing will "ensure that the disaster recovery service will satisfactorily handle the current CU\*Answers processed volumes." This is to include details on site processing capabilities as well as material sources (paper, envelopes, etc.).
  - a. The data processing and printing capabilities (including raw material inventories) at both the primary and alternate print facilities (EYR) meet and/or exceed the requirements of CU\*Answers.
4. Minimum 18-month testing cycle.
  - a. The previous test was performed in October of 2017, placing this test within the agreed upon 18-month schedule timeframe.
5. CU\*Answers has the right to audit and visit the site accompanied by a Sage Direct employee.
  - a. As noted in this report; both the recovery site and their alternate vendor site have been reviewed for production capability and security.
6. Test results will be provided to CU\*Answers as soon as they become available.
  - a. Evelyn Alvey (General Manager, Sage Direct Inc.) has provided their own test results report and certification that all data used in the test has been destroyed (included at the end of this report).
7. Sage Direct will maintain confidentiality of data at all times.
  - a. Proper security controls were observed as part of this test.

## CONTINUING EFFORTS AND RECOMMENDATIONS

During these recovery tests, the topic of facility proximity is often discussed. Part of continuity and recovery planning includes understanding the risks inherent to the locality such as regional power outages and severe weather outbreaks (ice, snow, winds, etc.). The vendor's primary production, recovery data center, and alternate print (EYR) sites are all located within a five-mile radius. This may be considered a risk for certain regional threats. To address this, Extend Your Reach maintains a second production facility in Lansing, MI with similar equipment and capacity. In addition, US Signal maintains eight data center locations with several controls in place to enhance availability.



## Disaster Recovery Test Results

Date: 10-26-2018

Person completing form: Evelyn Alvey

### Location test was performed:

Sage Direct's Disaster Recovery Co-Location  
US Signal  
4765 Barden Ct SE  
Grand Rapids MI 49512

Print/Insert/Mail Vendor  
Extend Your Reach  
4850 Kendrick Street SE  
Grand Rapids MI 49512

### Who Was Present

CU Answers: Danielle Caliendo  
Sage Direct: James Mucci, Rebecca Henne, and Evelyn Alvey  
Extend Your Reach: Larry Sieting, Lead Programmer; Matt Bridges, Data Processor;  
Matt Couturier, Production Manager; Randy Hecht, GM

### Files Transmitted to Sage from CU Answers

Mortgage statements: STMFLATM01.ZIP  
Credit card statements: STMFLATCC6.ZIP  
Member statements: STMFLAT6.ZIP  
Daily notices: NOTICES.ZIP  
All files were transferred to Sage's DR server on 10-25-18

### Files Transmitted to Extend Your Reach from Sage Direct DR Server

Mortgage statements: MortgageCUAr1.pdf  
Statements-CC statements: Presort1CUA1.pdf, Presort1CUA3.pdf  
Daily notices: NoticesCUAr26.pdf  
All files were transferred to Extend Your Reach on 10-26-18

### Printing:

- To and from dates on the statements are correct:  
Credit Card: 9/30/2018, Statements: 9/1/18 to 9/30/18, Mortgage: 10/17/18;  
Daily Notices: 10/25/18
- Number of pages shown on statement match the number of pages printed
- All address lines are showing including name, address, city, state, and zip

### Inserting:

- Correct envelopes were used
- Complete statements were folded and inserted into each envelope
- The address block placement in the window was correct
- Envelopes were sealing properly
- Opened 17 random statements out of 500 statements after inserting was complete and all statement pages were correct

Copy of test results were given to CU Answers: 11-12-18

Copy of test results were given to Extend Your Reach: 11-12-18

Comments:

- Sage Direct creates a 2D barcode using Extend Your Reach's (EYR) specifications. This bar code communicates to EYR's inserting equipment: the run number, the total number of pages in the statement packet, which page out of that total the feeder is currently pulling, and the sequence number for each statement packet. During the recovery test, SAGE demonstrated a few of the controls in place to ensure accuracy and security for member documents.
- Demonstrated what happens if one page of a statement is pulled from the statement packet intentionally creating an error condition.
- Demonstrated what happens if a page of one member's statement is inserted into another member's statement creating an error condition.
- Demonstrated what happens if one statement packet is pulled from the belt creating an out of sequence error condition.
- In all demonstrations, the inserter stopped, the error was identified on the monitor, and the operator reconciled the error.
- Use of 2D barcodes by production equipment allows for more specific information to be tracked and monitored unique to the credit union, batch, sheet and page count, inserts unique to each member, time and date stamp, and the inserter operator.
- Key points discussed; CU Answers' provided audit totals and job summaries are compared throughout the workflow process ensuring the correct file was transmitted and received by Sage, processed in its entirety, and printed correctly.
- US Signal's physical security controls were reviewed.
- US Signal's cyber security controls were discussed in 2017.
- Sage Direct utilizes cloud-based data storage.

In the event of a disaster:

No file audits will be available. Credit card statements will be householded with member account statements. No CREs will be inserted into statement packets that have a credit card statement. All statements will be printed and mailed ASAP after Extend Your Reach receives data from Sage Direct. If a disaster were to include all the Grand Rapids area Sage Direct would use Extend Your Reach's Lansing print and inserting facility.

The original copy of this completed form will be kept on file at Sage Direct.

Signature:  Date: 11-12-18