

2024/Q4 ARCOS Platform Disaster Recovery Test Results

November 7, 2024

To whom it may concern:

In accordance with the ARCOS Disaster Recovery policy, the ARCOS Cloud Operations team conducted the scheduled annual DR drill on November 7, 2024. Procedure testing is a critical element of a viable recovery plan. Testing enables plan deficiencies to be identified and addressed and helps staff to better understand their roles in the process. ARCOS LLC tests our recovery procedures at least annually across the ARCOS platform.

During the latest drill, the following items were tested:

- Item 1: Performed Validation of Standby Infrastructure. Purpose: Test ARCOS Platform for stability and functionality.
- Item 2: Performed test with key personnel observing only.
 Purpose: To ensure all personnel who would potentially be involved in a DR response understand DR procedures and can perform them accurately.
- Item 3: Train additional personnel on database procedures prior to DR test.
 Purpose: To ensure that database knowledge and procedures are understood in the event of unavailability of database administrator(s).
- Item 4: Update internal documentation for any changes to scripts or procedures.Purpose: To ensure that anyone new to the CloudOps team has clear documentation on how to perform DR.

Documentation:

- JIRA Ticket: CO-7280

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Objectives and Procedures

Objectives

- Test ARCOS Platform for stability and functionality.
- Training for contingencies when only certain personnel are available.
- Validate accuracy of all Disaster Recovery Procedures.
- Complete Disaster Recovery Test within Recovery Time Objective (4 hours) and Recovery Point Objective (Real-Time to no longer than 20 minutes).

Procedure and Timeline

| Start Time | Task |
|------------|--|
| 15:12pm | DR Test Window Begins |
| 15:13pm | Take DB out of stand-by |
| | Standby became primary 2024-11-07T15:13:31.166257-05:00 |
| 15:14pm | Isolate DR from primary online and purge active data from database 15:22 |
| 15:23pm | Remove FreeSWITCH server from Production Environment |
| 15:25pm | Validate Proxy server configuration |
| 15:26pm | Place Tomcat online in DR App server |
| 15:31pm | Place FSW server in DR group |
| 15:35pm | Enable inbound calls for FSW |
| 15:47pm | Remove active Prod FreeSWITCH servers from DR Environment |
| 15:48pm | Place ARCOS service online on DR App Server |
| 15:49pm | QA Testing and Validation Begins |
| 16:19pm | QA Testing and Validation Complete |
| | Data Recovered To: 2024-11-07 15:13:16 |
| | Environment Approved and Released to Client |
| 16:20pm | Take App server Out-Of-Service |
| 16:22pm | Place DB in Stand-by and validate Production replication successful |
| 16:25pm | Place FSW Server back into Production service |
| 16:48pm | DR Test complete |

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ARCOS Platform Disaster Recovery Test Result

ARCOS Platform disaster recovery test completed without error, within required RTO (recovery time objective), within required RPO (recovery point objective), and passed Internal Arcos QA Validation. All CloudOps personnel were present for the DR test, participated in execution and/or training.

Root Cause Analysis

- No issues were encountered during the test.
- No documentation updates needed.

Corrective Actions

• No corrective actions noted from this test.

ARCOS confirms that the above results are accurate. Please let us know if ARCOS can be of any further assistance regarding our Disaster Recovery policy and procedures, or these Disaster Recovery test results.

Sincerely,

Yelena Ravvina Senior Vice President, Engineering Chris Newman Director, Cloud and InfoSecurity Operations

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