Florida Agricultural and Mechanical University
PeopleSoft Disaster Recovery Test
October 2007
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1. Executive Summary

The goal of the annual disaster recovery test, conducted on October 2007, was to ensure a consistent, predictable, repeatable approach and to validate the IBM Disaster Recovery Service. The procedure included all steps necessary to go from a non-DR situation, to a situation where DR is enabled.

The DR recovery success is measured to the following objectives:

- **Recovery Time Objective = 72 hours**
  Recovery of the vendor delivered product utilizing database replication to the recovery site. Secondary recovery in the event of a failure in replication will be provided through tape restore. For recovery to start the DR system resources (hardware, storage, network, etc.) and recovery personnel must be at the recovery location.

- **Recovery Point Objective = 24 hours**
  Data recovery will measure the age of the data (data loss) from the time that the incident occurred the caused the declaration.

The recovery time is measured from declaration of the disaster until the availability of the restored database. The data loss is determined from the date and time stamp of the last database log file that is applied to the restored database.

Based on post test analysis and feedback from EIT DR team members, the overall objectives of the test were met and the test was deemed a success. All critical criteria, including connectivity, point in time data recovery, and functionality was recovered within the allotted time frame.

2. Purpose

The following are the test objectives:

- To determine if FAMU has the appropriate information to successfully utilize the planned Hot Site strategy to reestablish mission critical operations and application processing at the recovery facility.
- To validate whether the alternate site meets the SLA requirements.

2. Scope

The FAMU environments included in the test are listed below.
2.1 Business Systems

- Production PeopleSoft Modules in Qwest S2 Sterling.

2.2 Support Systems

- Backup/restore System currently in Qwest S2 Sterling.
- No other support systems are included in this procedure.

Hence forth where the term PROD is used it will imply the current or source PeopleSoft Production instance and the term DR will imply the post-disaster or destination instance.

IBM ASP will provide the following resources during the disaster:

- A Business Application resource knowledgeable in PeopleSoft delivered products specified under Section 2.1. This resource will also assist in recovery and acceptance testing.

- A Database resource to recover the databases for the production systems specified in Section 2.1. This resource will also implement database support services for continued operations.

- Provide System Administration resources to add operating system configuration changes required to recover the vendor delivered products specified under Section 2.1.

- Provide a Disaster Recovery Lead to manage the recovery events and IBM ASP resources.

3. Configuration Overview

The prerequisites below apply to this system regardless of the timing of the disaster.

3.1 Automation Prerequisites

1) RSYNC. Continuous data sync between the primary production database and the DR database. Log writes are successful when completed on the primary database and the primary is notified that the logs have been placed in memory on the DR database.

2) Application specific data flow requirements are documented under an appendix in this document.

3) Internet connectivity will be available at the DR site.
3.2 Infrastructure Prerequisites

1) Recovery site will have hardware capacity matching the production application and support infrastructure minimum requirements. Infrastructure testing / diagnostic information will be available.
2) Connectivity to the recovery site will be available prior to the recovery and will support both FAMU and IBM ASP locations.
3) DR site storage will support the hardware and accommodate storage management and protection software. Storage capacity will support data recovery space and implementation subsequent support services.
4) All servers will have native operating system loaded as listed provided with the vendor (Appendix A). The servers will reside on a common VLAN except for equipment specified in a DMZ

3.3 Software Configuration

DR Software State to Support Business and Support Systems

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</table>
4. DR Declaration

4.1 DR Declaration Criteria

In the event of an actual disaster, it will be up to the shift manager to analyze the impact of the outage on IBM ASP’s customer base. The first step to establishing a DR procedure is to understand the expected length of the outage for FAMU. If this is a critical outage such as a fatal production system failure requiring an environment rebuild, we must initiate a DR recovery. If this is a Data Center issue impacting numerous customers, the shift lead must work closely with the DC to understand if the affected DC has experienced a critical outage due to a natural disaster or system-wide outage where system recovery is not expected for a minimum of 24 hrs.

The customer CPM will be responsible for managing the transition to the DR instance and the Production
4.2 DR Contact List

Primary FAMU Personnel Involved in DR:

ASP Manager: Stephanie Fall
DBA: Charles Reid
Fin. Module: Veronica Stokes
SA Module Michael James
Portal Module P. Griffin
Security Michael McAvoy

Assisting I. Robinson
S. Wesley
P. Williams
M. Gaines
S. Menard
J. Hurchins
C. McCrary
A. Bialowas

Primary IBM ASP Personnel Involved in DR Build and Testing:

Project Manager: Newton Greene
IBM Applications on Demand
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(908) 500-0854 (c)

App Admin: Ted Wilson
IBM - Applications on Demand
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DBA: John Maier
IBM Applications on Demand
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(877) 888-1811
4.3 DR Test Timeline

Overview for October 2007 Disaster Recovery Test

TEST #: 01
FROM DATE/TIME: October 24, 2007
TO DATE/TIME: October 26, 2007
TEST LOCATIONS: FAMU Campus, Tallahassee, FL and IBM ASP, Phoenix, AZ

Chronology of Events

- Tuesday October 23
  - 11am ET: Mock Disaster Declaration
  - 11am ET: Activation of recovery environment begins
  - 4pm ET: Status call
- Wednesday October 24
  - 11am ET: Estimated start for FAMU testing
  - 4pm ET: Status call
- Thursday October 25
  - 4pm ET: Status call
- Friday October 26
  - 4pm ET: Testing close status call
4.4 Issue Notes

**Issue #1:** DR portal links are pointing to production not DR.
Resolution: In Portal the nodes which control content viewing for other apps are not the default local nodes but the delivered nodes: HRMS, SA and ERP. Once these nodes were updated to point to the DR URLs the issue was resolved.

**Issue #2:** Unable to ping any external app messaging nodes from SA DR environment
Resolution: Correction procedure:
1. Ensure app and web servers are down,
2. Update the node definitions in SA through app designer and
3. Ensure web and app server cache has been cleared. Then start app and web server

**Issue #3:** No connection through SSL VPN.
Resolution: SSL VPN connection was not established prior to Mock DR test. Corrected by SR 1-37082901 and SR 1-37097395.

**Issue #4:** Time Admin process is failing in HR Prod. (DR) due to Temporary table space.
Resolution: Failure was caused by insufficient space. Table space was increased

**Issue #5:** The check font MICR is not printing on the check from the DR site.
Resolution: Printers were not set up on the correct server at the DR site. Printer configuration was copied from the production server and loaded on the correct server. IP addresses were aligned to the correct server. SR 1-37436514, SR 1-37260111, SR 1-37078321 and SR 1-37070559.

We also had to downgrade printer driver on DR to match Prod setup, to correct network ports allowed from DR servers to NAT addresses used for customer side printer access and to update FAMU firewall. We then re-installed all MICR and requested fonts and initiated through Fonts folder - File - Fonts - Install Fonts. Verified that MICR font was available through Windows apps such as Wordpad and MS Word, then recycled DR servers to allow all changes and updates to initialize completely.

**Issue #6:** Receiving error message we get when attempting to upload a journal.
Resolution: Password expired for XMLLink ID in the web profile. Password had been incorrectly entered in the new WebProfile created for the DR environment. Incorrect URL was being used for the journal upload in DR.