DataFax Failover - Disaster Recovery

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DataFax Replication

• Requirements
  – Primary DataFax Server
    • Server resides at main site in Carlsbad, CA.
    • Both servers running same version of Solaris
    • Server is running DataFax version 3.7-002
    • Fax Service is offloaded to HylaFAX Enterprise
    • Primary Server is the active licensed DataFax server
  – Secondary DataFax Server
    • Server resides at Co-Location in Scottsdale, AZ
    • Both servers running same version of Solaris
    • Server is running DataFax version 3.7-002
    • Fax Service is offloaded to HylaFAX Enterprise
    • Secondary Server is an inactive licensed DataFAX server

• Replication Scripts and Cronjobs
  – Replication from Primary DataFax Server to Secondary
    DataFax Server
  – Rsync utility is used for replication
  – Replicated directories
    • Replication /opt/datafax directory and subdirectories
    • Replication of /home directories
    • Replication of crontabs
    • Replication of Study Directories (Requires disabling studies
      during replication)
    • Replication of passwd, shadow, and group files
  – Cronjobs are scheduled to replicate data nightly
  – Logs and email notifications are sent to the responsible
    persons
  – Logs are checked daily to verify successful replication
HylaFAX Enterprise Failover

- **HylaFAX Enterprise Service**
  - Fax service running on separate server from the DataFax server
  - Fax service can continue to receive faxes if the DataFax server is down
  - Main site and Co-Location each contain separate HylaFAX Servers
  - Dialogic Brooktrout Fax Board replaces use of analog modems
• **T1-PRI Circuit Requirements**
  - Local PRI is used with specific number of DID’s
  - Adtran Atlas 550 device and T1-PRI circuit is required for fax service
  - EAR (Enhanced Alternate Route) required for failover of PRI circuit
  - T1 crossover cable required between Adtran Brooktrout card

• **Failover of Circuit**
  - Ring no answer condition encountered, EAR (Enhanced Alternate Route) function is activated.
  - Busy signal will also activate EAR function.
  - Manual failover of circuit can be done with a tech call to Telco provider

• **Failover of Faxes**
  - When circuit failover is initiated incoming faxes will be routed to HylaFAX server at Co-Location
  - Faxes will queue on HylaFAX server if no DataFax server is available
DataFax Failover

- **System Failover**
  - If primary DataFax Server is down this will require a manual failover to the secondary DataFax Server
  - Failover script will be initiated on secondary DataFax Server at the Co-Location.
  - Hostname and DNS will be modified on secondary server.

- **Replication Verification**
  - Replication logs will be verified for successful replication

- **DataFax Startup**
  - License will be applied and DataFax will be started
  - Access to system and DataFax studies will be verified
  - Any queued faxes on HylaFAX server will be routed to DataFax
Validation

- **Server Validation**
  - Server Qualification is performed on primary and secondary DataFax servers.
  - Server Qualification is performed on primary and secondary HylaFAX servers.
  - Server Qualification will verify that the server is properly installed and functions as expected in the environment of intended operation.
• **DataFax Validation**
  - Validation is performed on primary and secondary DataFax servers.
  - Validation consists of IQ, OQ, and PQ.
  - The DataFax Installation Qualification will ensure that DataFax is properly installed in the environment of intended operation.
  - The DataFax Operation Qualification will ensure that DataFax is functioning properly.
  - The DataFax Performance Qualification will provide documented evidence that the DataFax system used functions as expected within the environment of intended performance.

• **HylaFAX Validation**
  - Validation is performed on primary and secondary HylaFAX servers.
  - Validation consists of IQ, OQ, and PQ.
  - The HylaFAX Installation Qualification is covered in the Server Qualification. No additional software installation is required.
  - The HylaFAX Operation Qualification will ensure that HylaFax Enterprise channels run properly and that HylaFax Enterprise can successfully receive, send, and store/queue faxes.
  - The HylaFAX Performance Qualification will ensure that the functions of HylaFAX Enterprise and its connectivity with DataFax v3.7-002 on the DataFax server are performing properly.
Disaster Recovery Plan

• DRP for HylaFAX and DataFax
  – The Disaster Recovery Plan (DRP) is designed to provide immediate response and subsequent recovery from any unplanned computing service interruption
  – The DRP provides procedures for failing over DataFax and HylaFAX service to the Co-Location
  – The DataFax and HylaFAX Service Failover is defined in the section; DR Procedure – Information Technology
  – The Procedure Step and Execution must be completed in order as specified in the DRP

• Testing the DRP
  – Execution of the DataFax and HylaFax Service Failover is tested annually
  – Execution includes simulated failover of circuit and remote connection to the Co-Location
  – Sending and receiving faxes is tested
  – Data verification is tested
  – Remote (VPN) access to DataFax at the Co-location is tested
Questions?