

State Information Advisory Committee (SITAC)

03-09-16 | ITD's 438V Board Room |
4201 Normandy Street Bismarck ND



NORTH DAKOTA
INFORMATION
TECHNOLOGY
DEPARTMENT

Mike Ressler

CIO



Agenda

Time	Topic	Presenter
3:00	Welcome / Opening Comments	Mike Ressler
3:05	IT Standards - Updates	Jeff Quast
3:20	Service Layer Redundancy & High Availability	Dan Sipes Duane Schell
4:05	Service Rate Reductions	Mike Ressler
4:10	Large Project Reporting Bank of ND – Managed File Transfer Project	Justin Data Joe Herslip
4:25	Open Discussion / Closing Comments	Mike Ressler

Jeff Quast

Enterprise Services



Enterprise Architecture

- Waiver approved for DFI to receive .zip files as email attachments for certain accounts from a certain domain.
- Waiver approved for DPI to use a vendor provided authentication system instead of AD or the State Login ID for a new school lunch management application.
- Remote Access standard has been updated.
 - Added “SSL or client-based” in reference to VPN to distinguish that the standard does not apply to point-to-point tunnels.
 - Reference to dial up modems was removed and cellular modem was added.

Enterprise Architecture

- Employee Security Awareness standard has been updated.
 - New employees must be provided with a Security Awareness Overview on the first day of employment.
 - Must complete the ITD provided training in PeopleSoft ELM within 3 days of being granted access to PeopleSoft.
 - ITD will provide access to the 30 minute refresher training video outside of ELM for agencies to use, and or Security Architecture will develop a summary handout.
- Access Control Standard has been updated.
 - Now have four options for password complexity instead of three, and the requirements can now be enforced.
 - Now have five instead of three successive invalid sign on attempts before an AD account becomes locked.
 - Shared Accounts are now allowed.
 - Must begin with an Exclamation Point (!)
 - Passwords must expire in 60 days instead of 90
 - Agencies must create a sub-OU for shared accounts

Enterprise Architecture

- Enterprise Architecture Event Recaps
 - All EA Events on the ITD [web site calendar](#) include a “Recap”, which is added to the event details after the meeting.
 - The Recaps are a summary of the discussions, news, and action items resulting from the meeting.
 - The monthly ITCC meeting recap includes links to all four Architecture meetings, so it’s a one-stop-shop for monthly activity and news in EA.
 - Recaps are generally posted a day or two after an event.
 - Other ITD Events include Recaps too, not just EA.

Enterprise Architecture

A special THANK YOU to soon to be retired Cher Thomas!

- Past Chairperson of EA Architecture Review Board
- Current Chairperson of Information Technology Coordinators Council
- Long time supporter of NDGOV Enterprise Architecture





Dan Sipes
Deputy CIO



Duane Schell
Director, Network Services Division

Service Redundancy and High Availability

- Introduction – Dan Sipes
- February 24, 2016 Incident Overview – Duane Schell
- STAGEnet Redundancy – Duane Schell
- Telephone Redundancy – Duane Schell
- Recovery Time Objectives (RTO) – Dan Sipes
- Customer communications during outage incidents – Dan Sipes

IT Business Continuity Dependencies

SYSTEMS & DATA

NETWORK SERVICES

POWER & ENVIRONMENTALS

FACILITIES & STAFF

January 18, 2011 Event

SYSTEMS & DATA

NETWORK SERVICES

POWER & ENVIRONMENTALS

FACILITIES & STAFF

February 24, 2016 Event

SYSTEMS & DATA

NETWORK SERVICES

POWER & ENVIRONMENTALS

FACILITIES & STAFF

February 24, 2016 Event Timeline

- ITD Network Operations Incident Start Time 2:11 PM
- 2:40 pm Assembled our Incident Response Teams
 - Communicated with customers who have critical applications with DR investments
 - Changed Help Desk phone message to provide a message and point to Twitter
 - Used Twitter to communicate status until E-mail and Web Site services were restored
- Network Services to the Data Center were restored shortly after 6:13 PM
- Efforts for the day concluded around 9:45 PM

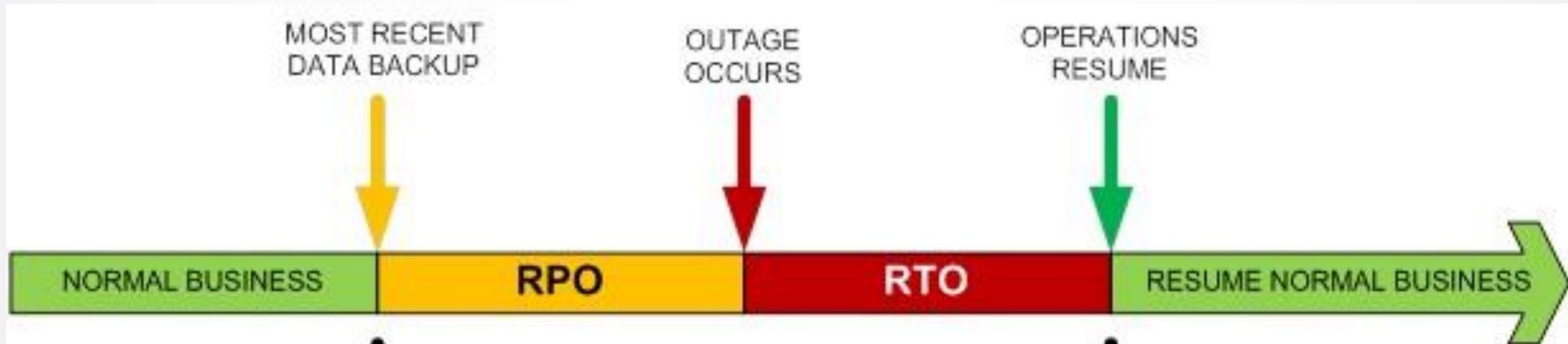
STAGEnet Redundancy

- Four Quadrant Ethernet Ring provides redundancy on the statewide ring by allowing traffic to automatically failover if a core node fails.
- The Network Point of Presence in each quadrant has equipment architected for High Availability and backup power generation. Dual Point of Presence in Bismarck and Fargo
- Internet Gateways in Bismarck and Fargo are load balanced and architected to provide failover if one of the Internet Gateways fails.
- Redundant Wireless Controllers
- Redundant VPN Controllers
- Agencies should coordinate with ITD if they require redundancy (network diversity) at individual endpoint locations.

Voice Service Redundancy

- Voice over IP (VoIP) design – this service was functioning as designed
- As part of the standard VoIP design we have redundant Call Managers in Primary/Secondary data centers as well as survivability in each network quadrant.
 - Provides the ability to relocate telephone numbers to other sites with network connectivity.
 - Allow for survivability of a quadrant in the event of network isolation
 - Provides redundant core services for dial tone, call center and automatic call distribution (ACD).
- Voice mail redundancy between Primary and Secondary data centers
- IVR – current project to make active/active in Primary/Secondary data centers
- Remaining capability being virtualized to enhance recovery options

Recovery Point & Recovery Time Objectives



TOTAL OUTAGE TIMELINE

DURATION IN MINUTES, HOURS, DAYS, WEEKS, MONTHS

Recovery Time Objectives - Current

- We have improved the RTO of the second data center from four hours to a matter of minutes for core network services (includes VPN).
- Common shared services that will be up within the first hour:
 - E-Mail
 - File and print services
 - AS/400 platform and applications
 - Current replicated hardware with critical infrastructure designations
 - Disaster Recovery Web Site – basic information
- Common shared services that will be up within two to twelve hours:
 - ITD Hosted Drupal Websites
 - Mainframe (must IPL)
 - ConnectND

Incident Communication Protocols

- Normal Channels:
 - Customer Service Desk – 328-4470
 - E-mail
 - ITD Website
- With Service Disruptions to ITD Services:
 - Assurance NM – currently used to communicate with our staff
 - Phone Calls to Agencies Providing Critical Services
 - State numbers or mobile numbers depending on services impacted
 - Social Media - Twitter

Justin Data

Enterprise Services Division



2015 Q4 Project Status Highlights

- Five projects in execution with budgets >\$5M, and they are all reporting green status
- Six other projects in execution: 3 green, 3 yellow, and nothing reporting red
- No projects completed or moved into execution this quarter
- Two projects in planning: DHS Electronic Health Records, and DHS Operating Rules
- Summary reports
 - <https://www.nd.gov/itd/services/project-management-oversight>

Project Variance Course Correction

54-59-23. ...

2. During the life of the project, the agency shall notify the state information technology advisory committee if:

a. At a project milestone, the amount expended on project costs exceeds the planned budget for that milestone by twenty percent or more; or

b. At a project milestone, the project schedule extends beyond the planned schedule to attain that milestone by twenty percent or more.

3. A report under subsection 2 must specify corrective measures ... If the agency has not taken corrective measures within 90 days after the report, the agency shall submit a report to the legislative management's information technology committee ...



Joe Herslip

Bank of North Dakota

Managed File Transfer Project Variance

Causal Factors

- Unforeseeable technical problems presented and took a significant amount of time to resolve
- The contractor did not have sufficient knowledge in the external applications that they said they supported

Lessons Learned

- Review requirements with contractor before beginning design
- Require a proof of concept prior to development or making configuration changes
- Engage technical team members early on and maintain consistent team member involvement

Recovery Strategy

- Recovery was not possible
- A re-plan of the schedule and budget was conducted
- An additional phase was added to the project
- Current work has a completion date of August 2016 (was April 2016)

Mike Ressler

CIO



- Closing Remarks



THANK YOU

Visit us at www.ND.gov/ITD