Office of Information Technology Services

Service Level Agreement

Mainframe Hosting

November 12, 2013 v2.1

Mainframe Hosting

Service Description

ITS provides managed mainframe hosting solutions for mission-critical z/OS and z/Linux applications for state and local governments, municipalities, and school systems.

ITS Mainframe and Software Services Management (MSSM) is responsible for making hardware and operating system environments available that enable secure, fast, reliable and recoverable processing that includes operating system software support, program product support, maintenance, disaster recovery and patching. IBM mainframes coupled with disk drives, robotic and virtual tape units provide a complete system for a customer to execute batch or real-time job streams.

Middleware

ITS Mainframe and Software Services provides software installation, upgrade, and monitoring support for the Middleware and Enterprise Service Bus (ESB) Products. With respect to ESB, ITS will provide a framework for the transformation, processing, routing and monitoring of simple and complex data. The following Middleware and ESB products are currently supported:

- MQSeries including Message Broker, MQ FTE and MQ advanced Msg Security (client not monitored)
- WebSphere Service Registry and Repository (WSRR)
- CICS Transaction Gateway (CTG)
- DB2 Connect (client not monitored)
- WebSphere Application Server (WAS) and Web Server (IHS) (monitored at platform level)
- Nastel Monitoring for MQSeries Servers

Storage

ITS offers a wide variety of storage capabilities utilizing tape and disk. These capabilities span the mainframe and open systems environments. ITS offers multiple disk and tape tiers such as high-end disk storage, virtual tape, mid-range disk storage, NAS devices, serial ATA disk systems, SAN attached storage and content addressable storage.

ITS storage offerings also come with standard reporting capabilities that provide utilization, performance and trending information. We routinely collect projection information from our customers in order to provide appropriate capacity planning for all storage offerings.

DB2 Database

ITS Mainframe and Software Services provides DB2 Database hosting for the zServer environment. Hosting services includes the infrastructure for clients to develop and deploy DB2 based database applications, installation and maintenance of the database resource to ensure data integrity and security, as well as appropriate levels of availability and recoverability. This service also includes maintenance and support of the environment with the latest vendor supplied software. Clients are granted access to all user functions necessary to manage and support their data stores. Support for associated tools and utilities to assist the client in managing their data environment is also provided with this service. Support costs for each of the services offered in this area are included in the standard Mainframe hosting rates.

DB2 Database Services - DB Hosting Responsibilities

- Installation and configuration of the DB2 subsystem and associated Tools and Utilities
- Design and implementation of appropriate DB2 archive logs to provide for recovery objectives
- Maintain current supported release levels of all DB2 and Utility/Tool resources
- On-call paging and/or e-mail alert of DB resource availability
- Database mirroring provided for Disaster Recovery via Mainframe XRC – DR facilities are provided by ITS

DB2 Database Services - Client Responsibilities

- Customers are responsible for providing and maintaining their own application and application DBA support. Database ownership rights are assigned to the customer
- Notification to the DB Hosting services group, through the ITS Service Desk, of any planned major application and/or database changes that will affect the resources required by the agencies databases
- Customers should designate local staff to serve as the primary contact for the DB Hosting services group
- Customer support requests should be directed to the ITS Service Desk
- Ensuring that application verification tests are conducted after all database patching and maintenance activities
- Database Backup, Retention, and Recovery (except for Disaster recovery via XRC) are the responsibility of the client agency
- The customer is responsible for all database archive and purging activities

Service Commitments

The general areas of support (such as Incident and Change Management) applicable to every ITS service, are specified in the ITS Global Service Levels document.   Specific service metrics are published monthly as a part of the ITS Operational Performance Scorecard.

Mainframe Availability: The target availability for each production LPAR on the mainframe is 99.99%.

Disaster Recovery: The target Recovery Time Objective (RTO) for the mainframe complex is 72 hours. This is the time when ITS would be able to turn over the mainframe environment to individual agencies to begin restoring their production application environments.

Hours of Availability

This service is available to customers 24 x 7 and adheres to the maintenance window schedule listed in the ITS Global Services document.

ITS Responsibilities

Support and Maintenance

Standard operational support hours are from 8:00 a.m. to 5:00 p.m. Monday - Friday EST. On-call, outside normal business hours, weekend, and holiday support is provided for production systems only. After-hours support is provided for test systems as needed and scheduled by customers with at least a two-week lead time. This allows the Mainframe Hosting team to coordinate system support events (that are required for day-to-day operations) around customer needs.

Disaster Recovery

- MSSM utilizes GDPS/XRC to perform data mirroring at our Western Data Center (WDC).
    - ITS mirrors mainframe data 24 x 7 in an asynchronous manner with data current to within 1 minute or less.
    - Data Mirroring allows ITS to shorten recovery time and minimize both Mainframe RTO and Recovery Point Objective (RPO).
- ITS provides monthly full pack backups for mainframe systems, applications and data.

These backups are secondary and a supplement to the GDPS/XRC process. The ITS backups may be discontinued at some future date. Customers will be notified in advance if the backups are discontinued.

Customer Responsibilities

- Customers may desire to create application backups using software available at ITS. It is the responsibility of the customer to do full backups of application data.

- Off-site storage or vaulting is available for application backups. If customers need this capability, they'll need to coordinate with ITS. Datasets written to virtual tape at the EDC are replicated to the WDC. Please submit a remedy request to "its.incidents@its.nc.gov" if off-site storage or vaulting is required.

- If requested by the customer, ITS will use Hierarchical Store Manager (HSM) for dataset backups. Customer requirements define the policy. While 90% of existing datasets are using HSM presently, please submit a remedy request to "its.incidents@its.nc.gov" to ensure inclusion.

Service Level Agreement Scope

This agreement specifies only the standard operational service commitments and responsibilities of ITS and its customers. Customer-specific deviations from these commitments and responsibilities will be specified in an accompanying Memorandum of Understanding. Service rates are outside the scope of this agreement and are specified in financial documents.

Signatures of Approval and Agreement Date

Customer Signatures

Agency Head or Designee:

Name	Title	Signature	Date

Agency Chief Financial Officer:

Name	Title	Signature	Date

ITS Signature

State Chief Information Officer:

Name	Title	Signature	Date
Chris Estes	State CIO		