IOT Services Catalog - Mainframe
(IOT’s Product Code Reference Manual)

Fiscal Year 2023

July 1, 2022 – June 30, 2023

Version 1.0
Purpose

This document provides Indiana Office of Technology’s (IOT) customers a central place to find information about its Mainframe services.

Contents

Mainframe related products contained in this document include:

- **1066** Scheduling – Batch & Script Workloads
- **1092** Disk Storage Subsystem
- **1094** Tape Storage Subsystem
- **1206** Batch / System
- **1207** Relational Database - DB2
- **1209** CICS

Note: There is a separate document for all other IOT provided services.
Service Responsibilities Definition

IOT has developed a RACI Matrix to help their Agency Partners, their Supplier Partners and IOT better understand their specific responsibilities for each of IOTs service offerings. Each service offering described in this document will contain the appropriate portion of that RACI Matrix. Please review that information before requesting the service to make sure you understand your specific responsibilities for the service.

RACI Codes:
The following are the Codes used to indicate specific responsibilities.

<table>
<thead>
<tr>
<th>Code</th>
<th>Roles</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Responsible</td>
<td>Person or People responsible for correct execution - getting the job done.</td>
</tr>
<tr>
<td>A</td>
<td>Accountable</td>
<td>Person who has ownership of quality and the end result. Only one person can be accountable for each activity.</td>
</tr>
<tr>
<td>S</td>
<td>Supportive</td>
<td>Person that provides additional resources to conduct the work or plays a supportive role in implementation.</td>
</tr>
<tr>
<td>C</td>
<td>Consulted</td>
<td>People who are consulted and whose opinions are sought. They have involvement through input of knowledge and information.</td>
</tr>
<tr>
<td>I</td>
<td>Informed</td>
<td>People who are kept up to date on progress. They receive information about process execution and quality.</td>
</tr>
<tr>
<td>V</td>
<td>Verifies</td>
<td>Person or group that checks whether the acceptance criteria have been met.</td>
</tr>
<tr>
<td>O</td>
<td>Signs Off</td>
<td>Person who approves the decision and authorizes the product handover.</td>
</tr>
</tbody>
</table>

Example:

Responsibility  
R=Responsible, A=Accountable, S=Supportive, C=Consulted, I=Informed, V=Verifies, O=Sign-Off

<table>
<thead>
<tr>
<th>Service Name / Activities</th>
<th>Agency Partners</th>
<th>Supplier Partners</th>
<th>IOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disk Storage Subsystem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide a Computer with Network Access</td>
<td>RAVO</td>
<td>SC</td>
<td>SCI</td>
</tr>
<tr>
<td>Supply Available Storage Upon Demand</td>
<td>ICVO</td>
<td>SC</td>
<td>RAS</td>
</tr>
<tr>
<td>Ensure High Performance Throughput at all Times</td>
<td>IC</td>
<td>SC</td>
<td>RASIVO</td>
</tr>
<tr>
<td>Provide recoverability/restoration of disk files</td>
<td>IC</td>
<td>SC</td>
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</tr>
<tr>
<td>Provide disaster recovery of Disk Storage Subsystem</td>
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<td>SC</td>
<td>RASIVO</td>
</tr>
<tr>
<td>Request changes to access control for Disk Resources</td>
<td>RAVO</td>
<td>SC</td>
<td>SCI</td>
</tr>
<tr>
<td>Manage access control to Disk resources</td>
<td>SCIVO</td>
<td>SC</td>
<td>RAS</td>
</tr>
<tr>
<td>Maintain hardware reliability and current microcode levels</td>
<td>IC</td>
<td>RSC</td>
<td>RASCIVO</td>
</tr>
</tbody>
</table>
Name: Jobs Production  
Code: 1066  
Purpose: Scheduling and Monitoring of Batch or Script processing on a variety of operation system platforms:

- ✔ IBM System z Mainframe  
- ✔ MS/Windows  
- ✔ UNIX  
- ✔ Linux  
- ✔ AIX  

Included: Around the clock service  
Conducted 24 / 7 / 365  

Large Scale Scheduling Capability  
Professionally managed to cover any scheduling requirement.
- Independent, Dependent and Interdependent organization of batch and scripted workloads.
- Currently scheduling
  - Hundreds of work threads.
  - Tens of Thousands of jobs and events daily.
  - Hundreds of Thousands of jobs and events managed overall.

Automatic Scheduling  
- Conducted by CA-7 Workload Automation product from Computer Associates, Inc.
- Automatically start a single job, many jobs, a thread of jobs or many threads of jobs under a variety of interdependent conditions:
  - Time-of-Day – Calendar Driven – Includes holiday and weekend scheduling
    - ✔ Start work at a specified time of day or by special date consideration.
  - Prerequisite Work
    - ✔ Start new work when preceding work has completed.
  - Milestones
    - ✔ Start or resume paused work pursuant to consumer direction.
  - Data and/or Resource Availability
    - ✔ Start or resume paused work when prerequisite files or required computer resources are available.

On Demand Scheduling  
Request initiation of a single job or many threads of work.

Monitoring and Tracking  
Ensure scheduled work meets deadlines.

Advance Tardy Notification  
Notification to key consumer individuals when run times for one job or threads of jobs are discovered slipping which could impact deadlines.

Scheduling Consultation  
Conspire with IOT Workload Automation Schedulers to produce comprehensive and concentrated event scheduling plans.

Scheduling Validation  
Coincidental to Scheduling Consultation, ensure that workloads are sequenced to avoid impact with one another.

Scheduling Management  
Consumer alerting and coordination of workload scheduling requirements to ensure deadlines are met while managing workloads through stand-alone activities which may impact workload processing. An example of a stand-alone activity is implementation or conduct of operating system maintenance.
**Rate**  
$1.0646 Per Scheduled Job or Event

**Service Owner**  
Keller, Jared  
*Click to email the Service Owner a question.*

**Standard**  
Not Applicable

**Responsibility**  
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<tr>
<td>Understanding of and timely delivery of scheduling requirements for jobs, series of jobs</td>
<td>RASCIVO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Translation of scheduling requests into computerized scheduling product(s).</td>
<td>I</td>
<td>RSC</td>
<td>RASCVO</td>
</tr>
<tr>
<td>Monitoring of workloads including the delivery of alerts where scheduling or throughput anomalies occur.</td>
<td>RIV</td>
<td>RSC</td>
<td>RASCV</td>
</tr>
<tr>
<td>Scheduling Software Technical Support</td>
<td>RASCV</td>
<td></td>
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**SLO**

**Requests:**  
**Individual job requests – Same Day**
- Multiple job and small job series scheduling changes – 3 Business Days
- Large Job Series scheduling changes – 5 Business Days

**Availability**  
99.9% Availability 24/7

**Incident**  
All circumvented incidents resolved the same day

**Impact/Priority**  
High/High

**Usage**

**3.13 Million Jobs / Scripts Scheduled (FY 2023)**
- Non-Mainframe platforms ......................... 1.4 Million Jobs.
- Mainframe.................................................. 1.73 Million Jobs.

**Reports**  
Monthly IOT Performance Metrics – Click [here](#)

**Order**  
Click [here](#) to request this service.

**Cancel**  
Click [here](#) to cancel your existing service.
**Name**: Disk Storage Subsystem

**Service Code**: 1092

**Purpose**

**Data Storage on Disk**: Mainframe disk storage measured in megabytes measured daily.

**Included**

**Usage**:
- ✓ Entry Sequenced (Flat) Files
- ✓ Indexed Files
- ✓ Relative Record Files

**Note**: Improved Performance available for the above using Virtual Storage functions.
- ✓ Data Base Extents; Any database operation including available DB2
- ✓ Wide variety of user specified files

**Hardware**: IBM Disk Storage Subsystem Model 8910 (DS8910F)

**Available storage**: 10 TB

**High Performance**: Average response time of just over one microsecond with the vast majority of input/output operations completing, on average, in less than a microsecond.

**Retention Policy**: Determined by agency and applied to file properties at time of allocation.

**Dynamic Recoverability**:
- ✓ Available depending on data type and usage.
- ✓ Conducted by the agency; Convenience!
- ✓ IOT assist support available as needed

**User Data Set Retention**:
- ✓ Retained online for 180 days
- ✓ Migrated to tape for 3 years
- ✓ Final Disposition: Deleted.

- ✓ Dynamically recoverable by data set owner; Convenience!

**Disaster Recovery**: Synchronous replication of all disk data to the Disaster Recovery site in Bloomington, Indiana using local retention polices. See **Mainframe Services**, here, for description of mainframe Disaster Recovery services.

**Dependencies**

System Security Authorization to allocate disk data sets.

**Rate**

$0.0002 Per MB Stored Per Day

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<td>IC</td>
<td>RSC</td>
<td>RASCIVO</td>
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**Service Owner**

Keller, Jared [Click to email the Service Owner a question.]

**SLO**

**Request**: Available within 3 Business days.

**Availability**: 100% Availability during regular scheduled mainframe operation

**Incident**: 90% Resolved within 16 IOT Business Hours (6am-6om, M-F excl. Holidays)

**Impact/Priority**

High/High

**Usage**

*Does not include database activity*

Approximately ........ 32 Million files opened annually. (FY 2023)
- 14 Million Files allocated for Output
- 18 Million Files opened for Input

Approximately .... 3,786 Billion Input / Output Operations annually (FY 2023)

Approximately ..... 86,733 Trillion Bytes of data transferred annually (FY 2023)
- 23,457 Average bytes transferred in each I/O Operation

**Reports**

Monthly IOT Performance Metrics – Click here
Name: Tape Storage Subsystem (Gigabytes of Consumed Tape Storage)

Service Code: 1094

Purpose: Supply Virtual Tape storage access to all mainframe workloads measured by individual mounting of any subsystem virtual tape.

Included:
- Hardware: IBM Tape Storage Subsystem Model 7760 (TS7700)
  No Mylar/Oxide tapes – High Reliability – High Performance – High Availability
- High Performance Throughput: Processing at the speed of disk
- Virtual Tape Storage Capacity: 140 TB
- Virtual Tape Volumes: 300,000 maximum
- Individual Tape Volume Capacity: 6GB
- Maximum Virtual Tapes Mounted: 512 at once (256 at Disaster Recovery Site)

Disaster Recovery: Grid Communication for asynchronous replication of all virtual tape data to a TS7760 at the Disaster Recovery site in Bloomington, Indiana using local retention policies. See Mainframe Services, here, for description of mainframe Disaster Recovery services.

High Availability: Three TS7760 cluster operations, two in Indianapolis and one in Bloomington, provide seamless and immediate access, via Grid Communication, for local mainframe operation to all replicated tape volumes at the Disaster Recovery site in Bloomington, Indiana for any failure occurring to either of the two local TS7760s in operation.

Dependencies: System Security Authorization to allocate tape data sets.

Rate: $0.0478 Per Gigabyte of Consumed Storage

Standard: Not Applicable

Responsibility: R=Responsible, A=Accountable, S=Supportive, C=Consulted, I=Inform, V=Verifies, O=Sign-Off

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</thead>
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<tr>
<td>Technical skills to code work that accesses virtual tape services.</td>
<td>IC</td>
<td>SC</td>
<td>RASIVO</td>
</tr>
<tr>
<td>Supply Available Storage Upon Demand</td>
<td>ICVO</td>
<td>SC</td>
<td>RAS</td>
</tr>
<tr>
<td>Ensure High Performance Throughput at all Times.</td>
<td>IC</td>
<td>SC</td>
<td>RASIVO</td>
</tr>
<tr>
<td>Provide disaster recovery of Tape Storage Subsystem</td>
<td>IC</td>
<td>SC</td>
<td>RASIVO</td>
</tr>
<tr>
<td>Request changes to access control for Tape Resources</td>
<td>RAVO</td>
<td>SC</td>
<td>SCI</td>
</tr>
<tr>
<td>Manage access control to Tape resources</td>
<td>SCIVO</td>
<td>SC</td>
<td>RAVO</td>
</tr>
<tr>
<td>Maintain hardware reliability and current microcode levels</td>
<td>IC</td>
<td>RSC</td>
<td>RASCIVO</td>
</tr>
</tbody>
</table>

Service Owner: Keller, Jared [Click to email the Service Owner a question.]

Metric: 100% Availability during regular scheduled mainframe operation

SLO:
- Request: Completed within 3 Business days.
- Availability: 100% Availability during regular scheduled mainframe operation
- Incident: 90% Resolved within 16 IOT Business Hours (6am-6am, M-F excl. Holidays)

Impact/Priority: High/High

Usage:
- Approximately ............ 6 Million tape mounts annually. (FY 2023)
  -- 4.2 Million Mounts for Input
  -- 1.8 Million Mounts for Output
- Approximately ............ 98.4 Billion Input / Output Operations annually (FY 2023)
- Approximately ......... 2,429 Trillion Bytes of data transferred annually (FY 2023)
  - 24,654 Average bytes transferred in each I/O Operation

Reports: Monthly IOT Performance Metrics – [Click here]

Order: [Click here] to request this service.

Cancel: [Click here] to cancel your existing service.
**Name** | Batch / System
---|---
**Service Code** | 1206

**Service Index**
- Database Services
- File Management
- Alert Services

| Service Code | 24 / 7 / 365 Support | Modernized COBOL |
---|---|---|
- | | |

**Service Purpose**
Highly configurable, highly reliable, highly recoverable, high performance and cost controlled operation in all areas of application system throughput and delivery. The following services are **immediately available** for customer assignment or Proof of Concept anywhere IOT Network services are found:

- **Time Sharing Option** – (TSO) Highly configurable interactive access and operation for a variety of work and in a variety of scripting and programming languages. Interfaces with various aspects of the operating system including the ability for various forms of interactive SQL in DB2.
- **Java / Node.js** – Support for development and operation of this popular language.
- **C++** - Support for development and operation of this popular language.
- **Apache / WebSphere Application Services** – Host your Web applications here.
- **Modernized COBOL** development and operation
- Sophisticated development program **library management** and change control.
- **IBM’s File Manager** - User friendly tools for comprehensive file management and data manipulation, working with many file structures and databases present or operating on the IBM System z mainframe. Among File Manager capabilities is the definitions of files, browsing, editing, copying and printing of data stored in a variety of forms:
  - Unix files
  - Flat files
  - Virtual Managed files (VSAM)
  - Indexed files
  - **CICS** Storage Resources
  - **DB2** – Various data and resources
  - **IMS** – Manipulate elements and data
  - Map record elements
  - Sort data
  - Perform Sophisticated Comparisons
  - Invoke REXX routines; Automation
  - 140 TB of tape storage
  - 10 TB of disk storage
  - Includes separate semi-daily disk snapshots for a total of three off-site versions
  - Semi-Daily disk snapshots permit full Disaster Recovery event testing without impact to continuous live operation in Indianapolis; zero impact.

- **Alert Services** for anomalous change in application system or subsystem operation delivered by eMail.
- **Report Distribution** – On-demand delivery directly from mainframe operation to network printers and eMail boxes in a variety of formats.
- **24 / 7 / 365 Support** – Continuous operational staffing for response to all operational needs.
- **Virtual Tape Library** - No Mylar/Oxide tapes - High Reliability - High Performance - 140 TB
  - Click [here](#) to access **Virtual Tape Library** service
- **Comprehensive Disaster Recovery (DR) – Included**
  - **A Twin IBM System z** mainframe operation, located at the University of Indiana, operating as disaster recovery warm site.
  - **Nearly Instantaneous Replication** of all disk and tape storage to DR operation in Bloomington, Indiana.
    - 140 TB of tape storage
    - 10 TB of disk storage
    - Includes separate semi-daily disk snapshots for a total of three off-site versions
    - Semi-Daily disk snapshots permit full Disaster Recovery event testing without impact to continuous live operation in Indianapolis; zero impact.
Available three times each calendar year for disaster recovery assurance testing

- Hardware, Software and Operation included in the service rate.
- DR testing services are a collaboration between the Agency, Mainframe Services, and Middleware Operational service teams organized, managed, conducted and documented by DR Project Management Services. Click here for additional Disaster Recovery information from IOT.

- Complete Network Access to live or test DR operation from anywhere IOT Network services are found.
- Recovery Time Objective (RTO – Downtime) - This requirement directs restoration of service 6 hours from the time the CIO declares an actual disaster upon advice from the Governor.
- DR Recover Point Objective (RPO – Data loss) will be worked agency specific, as they may vary with the agency system

Extended Services Available for development and customization to user specification without procurement. Arrangement by Service Owner.

Performance Metrics Reporting

- Highly detailed and/or summarized reporting, delivered to customer inboxes, is available on a variety of performance, throughput and resource consumption metrics. From transaction response time to data throughput, reporting demonstrates that SLA requirements, determined and agreed upon by IOT and the customer, are being met. Reporting is also available for customer application performance tuning. A wealth of performance and throughput reporting is available.

Obtainable Services Available for procurement or development by arrangement of Service Owner.

Linux High Performance Hosting

- Host Linux applications, application suites or databases on a high performance Linux operation, participating as a local or distributed operation. When operating, this extended service includes Disaster Recovery services.

Application Program Interface

- SOAP or RESTful API interface to mainframe application operation. Deliver APIs to a variety of application services including HTTP.

API Management

- Manage, deliver and secure APIs.

Rate $0.0383 Per CPU Second

Explanation: Product 1206 consist of the accumulated CPU seconds for both the TSO and Batch transaction records found in the SMF Type 30 records that are generated from activity occurring on the mainframe. Below you will find the record detail and subtypes definition.

SMF Type 30 - Contains z/OS address space accounting information

- Subtype 1 - Address Space Start
- Subtype 2 - Activity through previously recorded interval - Intermediate accounting record
- Subtype 3 - Activity for the last interval before step termination
- Subtype 4 - Step Totals
- Subtype 5 - Address Space Termination
- Subtype 6 - System Address Space

Service Owner Keller, Jared  Click to email the Service Owner a question.

Standard Not Applicable
### Responsibility

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<th>Service Name / Activities</th>
<th>Agency Partners</th>
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<th>IOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a computer with network access and appropriate terminal emulator software for access to the IBM System z</td>
<td>RAIVO</td>
<td>SC</td>
<td>RSIV</td>
</tr>
<tr>
<td>Knowledge and Skills to develop and implement executable programs and interpreted scripts</td>
<td>RAIVO</td>
<td>SC</td>
<td>RSIV</td>
</tr>
<tr>
<td>Provision of coded program compilers customized to Agency Partner subsystem as noted in the IOT Service Catalog</td>
<td>IVO</td>
<td>SC</td>
<td>RASIV</td>
</tr>
<tr>
<td>Provide operating system documentation related to all aspects of batch processing including subsystem interfacing</td>
<td>RIVO</td>
<td>SC</td>
<td>RASCIV</td>
</tr>
<tr>
<td>Knowledge and Skills to develop all aspects Job Control Language to render a batch job stream</td>
<td>RAIVO</td>
<td>SC</td>
<td>RSIV</td>
</tr>
<tr>
<td>Knowledge and Skills to diagnose and interpret and resolve basic and complex operating system abnormal end codes</td>
<td>RAIVO</td>
<td>SC</td>
<td>RSIV</td>
</tr>
<tr>
<td>Collaboration and cooperation with IBM System z administrators at IOT and IOT Computer Operations as needed for guidance in composition, parameter definition and operation of batch work</td>
<td>RAIVO</td>
<td>SC</td>
<td>RSCIV</td>
</tr>
<tr>
<td>Provide IBM System z support of all aspects of Agency Partner development effort and for live, production operation</td>
<td>IVO</td>
<td>SC</td>
<td>RASCIV</td>
</tr>
<tr>
<td>Provide method for implementation of new and updated batch work</td>
<td>IVO</td>
<td>SC</td>
<td>RASV</td>
</tr>
<tr>
<td>Provide standard and appropriate requests to IOT Operations standard for managing to manage implementation, update and deletion of batch work. Includes Product 1066 - Production Jobs</td>
<td>RAIV</td>
<td>SC</td>
<td>RSV</td>
</tr>
</tbody>
</table>

### Metric

99.9% Mainframe Availability 24/7 – IBM, IMS, DB2 – See Reports below.

### Impact/Priority

High/High

### Lead Time

**None Required.** Immediately available for operating mainframe application systems.

### Measurement

Mainframe operating system IBM System z Operating System; z/OS Version 2 Release 3 TSO ----- 45.8 Million Standard Business Day Transactions (FY 2023) – 47.2 Million Total

### Reports

Monthly IOT Performance Metrics – Click [here](#)

### Dependencies

None
Name: Relational Database – DB2
Service Code: 1207
Service Index: Java / Node.js

Service Purpose:
Highly configurable, highly reliable, highly recoverable, high performance and cost controlled DB2 operation in all areas of application system throughput and delivery. The following services are immediately available for customer assignment or Proof of Concept anywhere IOT Network services are found:

- **Java / Node.js** – Support for development and operation of this popular language.
- **DB2 Relational Database Services**
  - z/OS - Operates on IBM’s System z flagship operating system, z/OS
  - Linux - Operates on IBM System z Integrated Facility for Linux (IFL)
  - Available to JDBC/ODBC connectivity as identified herein.
    - Utilization of SOAP and RESTful APIs via JSON (See Obtainable Services, here)
  - Application Interfaces
    - Within various exploitations or limitations, DB2 on the IBM System z interfaces with:
      - **Local Operation**: Application systems contained within IBM System z mainframe operation.
      - **Remote/Distributed** application program products and services running on virtually any operating system platform that requires relational database services by an extensive selection of application development products. Remote operating systems include:
        - Other IBM System z operations
        - **Linux** Application Servers, including high performance Linux operation available, contained within the current IBM System z mainframe operation.
        - **UNIX** Application Servers, including high performance UNIX operation available, contained within the current IBM System z mainframe operation.
        - **Windows** Application Servers
        - IBM AIX operation
        - Others
      - **Application Development Products**:
        - .Net including Visual Basic, both Microsoft or third party
        - C, C++, C#, Python
        - Java - Any Provider of Java
        - Perl
        - JavaScript
        - Many others...

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- CICS Storage Resources
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Click here to access Virtual Tape Library service

**Extended Services** Available for development and customization to user specification without procurement. Arrangement by Service Owner.

**Performance Metrics Reporting**

- Highly detailed and/or summarized reporting, delivered to customer inboxes, is available on a variety of performance, throughput and resource consumption metrics. From transaction response time to data throughput, reporting demonstrates that SLA requirements, determined and agreed upon by IOT and the customer, are being met. Reporting is also available for customer application performance tuning. A wealth of performance and throughput reporting is available.

**Obtainable Services** Available for procurement or development by arrangement of Service Owner.

**Linux High Performance Hosting**

- Host Linux applications, application suites or databases on a high performance Linux operation, participating as a local or distributed operation. When operating, this extended service includes Disaster Recovery services.

**Application Program Interface**

- SOAP or RESTful API by JSON interface to existing or newly developed mainframe application operation. Deliver APIs in HTTP to a variety of application services on any platform.

**API Management**

- Manage, deliver and secure APIs.
**Rate**  
0.0145 Per CPU Second

**Explanation:** Product 1207 consists of the accumulated CPU seconds for all DB2 transactions records found in the SMF Type 101 records that are generated from activity occurring on the mainframe. Below is the record description.

**SMF Type 101 - DB2 - Account for resources during a transaction**

<table>
<thead>
<tr>
<th>Service Owner</th>
<th>Keller, Jared</th>
<th>Click to email the Service Owner a question.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Responsibility</td>
<td>R=Responsible, A=Accountable, S=Supportive, C=Consulted, I=Inform, V=Verifies, O=Sign-Off</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Name / Activities</th>
<th>Agency Partners</th>
<th>Supplier Partners</th>
<th>IOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Database Administration - (production databases)</td>
<td>RV</td>
<td>SC</td>
<td>RASV</td>
</tr>
<tr>
<td>Physical Database Administration - (development databases)</td>
<td>RAV</td>
<td>SC</td>
<td>SC</td>
</tr>
<tr>
<td>Logical Database Administration - (all subsystems)</td>
<td>RAV</td>
<td>SC</td>
<td>SC</td>
</tr>
<tr>
<td>Database System Administration - (all subsystems)</td>
<td>CI</td>
<td>SC</td>
<td>RAS</td>
</tr>
<tr>
<td>Request changes to access control</td>
<td>RAV</td>
<td>SC</td>
<td>CS</td>
</tr>
<tr>
<td>Manage access control to DB2 resources</td>
<td>I</td>
<td>SC</td>
<td>RAS</td>
</tr>
<tr>
<td>Produce appropriate requests for product services (for example: requests to Physical DBA for production subsystems)</td>
<td>RV</td>
<td>SC</td>
<td>RASV</td>
</tr>
<tr>
<td>DB2/QMF or other mainframe software Version or Version level upgrades</td>
<td>IVO</td>
<td>SC</td>
<td>CRASV</td>
</tr>
<tr>
<td>DB2 Runtime client (on agency servers)</td>
<td>RAVO</td>
<td>SC</td>
<td>SC</td>
</tr>
<tr>
<td>DB2 Runtime client (on IOT servers)</td>
<td>IV</td>
<td>SC</td>
<td>CRASVO</td>
</tr>
<tr>
<td>Other agency server software connecting to DB2 subsystems</td>
<td>RA</td>
<td>SC</td>
<td>SC</td>
</tr>
<tr>
<td>Monitoring software</td>
<td>I</td>
<td>SC</td>
<td>CRASVO</td>
</tr>
</tbody>
</table>

**Metric**  
99.9% Mainframe Availability 24/7 – IBM, IMS, DB2 – See Reports below.

**Impact/Priority**  
High/High

**Lead Time**  
*None Required.* Immediately available for operating mainframe application systems.

**Measurement**  
Mainframe operating system IBM System z Operating System; z/OS Version 2 Release 1  
DB2 ----- 75 Million Standard Business Day Transactions (Fy 2023) – 76.5 Million Total

**Reports**  
Monthly IOT Performance Metrics – Click here

**Dependencies**  
None

**References**  
DCS........ Viswanath Atluri  
FSSA........ Sandy Mowery  
FSSA....... Rick Shull
**Name**  
CICS

**Service Code**  
1209

**Service Index**  
Transaction Server

**Service Purpose**  
IBM’s Customer Information Control System – CICS Transaction Server
- A First Class application transaction server
- Including operation of transactional Java applications – Node.js
- Utilization of SOAP and RESTful APIs (See Obtainable Services, here)
- Read more about the CICS Transaction Server here

**Extended Services**  
Available for development and customization to user specification without procurement. Arrangement by Service Owner.

**Performance Metrics Reporting**
- Highly detailed and/or summarized reporting, delivered to customer inboxes, is available on a variety of performance, throughput and resource consumption metrics. From transaction response time to data throughput, reporting demonstrates that SLA requirements, determined and agreed upon by IOT and the customer, are being met. Reporting is also available for customer application performance tuning. A wealth of performance and throughput reporting is available.

**Obtainable Services**  
Available for procurement or development by arrangement of Service Owner.

**Application Program Interface**
- SOAP or RESTful API (JSON) to existing or newly developed mainframe application operation. Deliver APIs in HTTP to a variety of application services on any platform.

**API Management**
- Manage, deliver and secure APIs.

**Rate**  
$0.0688 Per CPU Second

**Explanation:** Product 1209 consists of the accumulated CPU seconds for all CICS transactions records found in the SMF Type 110 records which are generated from activity occurring on the mainframe. Below is a description of this record type.

**SMF Type 110** - CICS Transaction Server - Transaction data collected at event monitoring points

**Service Owner**  
Keller, Jared  
Click to email the Service Owner a question.

**Responsibility**  
R=Responsible, A=Accountable, S=Supportive, C=Consulted, I=Inform, V=Verifies, O=Sign-Off

**Service Name / Activities**

<table>
<thead>
<tr>
<th>Service Name / Activities</th>
<th>Agency Partners</th>
<th>Supplier Partners</th>
<th>IOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a Computer with Network Access</td>
<td>RAI/VO</td>
<td>RSC</td>
<td>RSC</td>
</tr>
<tr>
<td>Install, maintain, configure, implement, and support CICS system software</td>
<td>SIVO</td>
<td>RSC</td>
<td>RASCVY</td>
</tr>
<tr>
<td>Install, maintain, and support all CICS related program products</td>
<td>SIVO</td>
<td>RSC</td>
<td>RASCVY</td>
</tr>
<tr>
<td>Implement new maintenance and fixes in a manner which minimizes risk and Agency Partner impact</td>
<td>SIVO</td>
<td>RSC</td>
<td>RASCVY</td>
</tr>
<tr>
<td>Plan, coordinate, and deploy new CICS related program products and/or update existing CICS software</td>
<td>SIVO</td>
<td>RSC</td>
<td>RASCVY</td>
</tr>
<tr>
<td>Perform System Administrator functions for all CICS systems</td>
<td>SCIVO</td>
<td>RSC</td>
<td>RASCVY</td>
</tr>
<tr>
<td>Develop, test, and deploy CICS applications</td>
<td>RASCIVO</td>
<td>RSC</td>
<td>RSCIV</td>
</tr>
<tr>
<td>Resolve CICS application problems</td>
<td>RASVO</td>
<td>RSC</td>
<td>RSC</td>
</tr>
</tbody>
</table>

**Metric**  
99.9% Mainframe Availability 24/7 – IBM, IMS, DB2 – See Reports below.

**Impact/Priority**  
High/High

**Lead Time**  
**None Required.** Immediately available for operating mainframe application systems.

**Measurement**  
Mainframe operating system IBM System z Operating System; z/OS Version 2 Release 3
CICS ..... 46.6 Million Standard Business Day Transactions (FY 2023) – 47.2 Million Total

**Reports**  
Monthly IOT Performance Metrics – Click here

**Dependencies**  
None