

Lanny Creedle  
August 22, 2013

**GETS Education Program**

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**WELCOME**

# Review of last month

## Topic: Storage

### Learning Objectives

- Understand Storage services provided by GETS
- Understand the way charges are calculated in a GETS invoice for Storage
- Become familiar with the primary processes and tools to manage an agency's usage of the Storage Resource Units

### Learning Objectives Evaluation

- You have copies of the evaluation summary and attendance report
- Please take the time to complete these evaluations at the end of each session, we want to ensure we are meeting the learning objectives

# Additional GETS Education News

- **The additional GETS Dispute Process education session you requested will be held August 28, 2013, 10 to 11am**
  - Trinity Ground Floor Conference Rooms or Webinar
  - Appointments were sent on July 31, come see me if you need more information
- **GETS Education 2 – Extending GETS Education to Agency Staff**
  - If you have any additional staff that you would like to add to the email list, let me know today
- **Change in Curriculum**
  - September session will be Voice and LAN/WAN
  - October session will be an 2013 GETS Education Summary and 2014 Next Steps

# 2013 GETS Education Program

Month	Topic	Month	Topic
Feb 28	Introduction	Aug 22	Mainframe
March 28	Invoice Overview	Sep 26	Voice & LAN/WAN
April 25	Transformation & How to work with GTA	Oct 24	Summary and Next Steps
May 23	EUC and Service Desk	Nov	No training
July 25	Storage	Dec	No training

Dean Johnson  
Kevin Schultz  
August 22, 2013

**GETS Education Program**

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# **MAINFRAME**

## Ensuring our common understanding

- **The learning objectives for this session will ensure you:**
  - Understand Mainframe services provided by GETS
  - Understand the way charges are calculated in a GETS invoice for Mainframe services
  - Become familiar with the primary processes and tools to plan and manage an agency's usage of the Mainframe Resource Units
  
- **After this session, you will be asked to complete a feedback form demonstrating your understanding of the material**

# Ensuring our common understanding

- **We will review your feedback**
  - If there is a group need for information, we will incorporate it into the curriculum or have an additional training session
  - If the need is specific to an individual or agency – we will schedule a one-on-one session to ensure you get the information you need
- **We are committed to your success!**

# Agenda

- **Better understanding of your GETS Mainframe services**
- **Understand the Resource Units and charges for the Mainframe Tower**
- **Understand how to leverage primary processes and tools to better plan and manage your service usage in this tower**

# The GETS Model: A Paradigm Shift

**In 2009, the state moved from buying and maintaining hardware to purchasing IT *services*.**

**GETS model is consumption-based.**

**The agency pays for only the services it consumes.**

**The agency is enabled and empowered to own and manage consumption of services.**

# GETS Glossary for Mainframe

<b>ABEND</b>	Sudden failure of a computer program, i.e. abnormal end
<b>Batch Processing</b>	Execution of a series of programs without manual intervention
<b>CICS</b>	Customer Information Control System middleware that supports rapid, high-volume online transaction processing
<b>CPU</b>	Central processing unit is the hardware in a computer that carries out the instructions of a computer program
<b>CPU Hours</b>	The unit of measure for application jobs running on the mainframe CPUs. This differs from wall clock hours. Each job may use the CPU for less than a second at a time, but all those microseconds are added together to measure CPU usage.
<b>General Purpose Engine</b>	An IBM 2094-705 processor (or equivalent) that operates at a known throughput and availability for the processing of Applications
<b>zIIP Engine</b>	z Integrated Information Processor, a special processor that provides a higher throughput and lower cost, if applications can utilize zIIP

# GETS Glossary for Mainframe

<b>CRM</b>	Customer Relationship Management
<b>DASD</b>	Direct access storage device
<b>Database</b>	Organized collection of data DB2
<b>DB2</b>	IBM Database 2, a relational model database
<b>ERP</b>	Enterprise Resource Planning
<b>Mainframe</b>	Highly stable, reliable computer designed to handle very high volume throughput (e.g. bulk data or transaction processing)
<b>TCP/IP</b>	Transmission Control Protocol/Internet Protocol is the basic communication language or protocol of the Internet
<b>Thread-safe</b>	In computer programming, a program portion or routine that can be called from multiple programming threads without unwanted interaction between the threads
<b>Throughput</b>	Amount of data processed in a specific amount of time
<b>Tuning</b>	Improving system performance, usually to handle a higher load

# Key Differences

## Server vs. Mainframe Environment

Category	Server	Mainframe
Transaction/Data Volume	Low to Medium	High
Planning Horizon	Shorter cycle	Longer cycle
Hardware Services Charges	Separate HSC	No HSC
Software Services Charges	Separate SSC	No SSC
Billing Metric	Use billed by Server Instance	Use billed by CPU hours
Service Levels	Based on Tier of Server Instance	Consistent for all mainframe systems
Security Parameters	Agencies have different server environments due to security needs	All agencies use the same mainframe systems – security at database level

# How Mainframe compares to Server?

## Big Iron Mainframes Versus x86 Servers: What You Need to Know

### Server Consolidation

About the size of a refrigerator, the z10 Enterprise Class system can replace up to 1,500 x86 servers with an 85 percent smaller footprint and up to 85 percent lower energy costs, according to IBM.



Cite: "IT & Network Infrastructure: Big Iron Mainframes Versus x86 Servers: What You Need to Know" by Jeffrey Burt, published 8/12/2009 eWeek.com

# Mainframe Tower

- **Recovers charges for Mainframe Services provided by IBM**
  - Operations
    - Job processing – CPU Hours
    - Print
    - Storage
    - Backup
    - Incident Management
  - Maintenance
  - Hardware Refresh every three years
  - Capacity Management

# Mainframe Tower: Before and After GETS



Before GETS	After GETS
GTA ran two shared mainframes	IBM runs the one shared mainframe
Offsite disaster recovery with tapes	Real-time, data-sync offsite disaster recovery (Boulder)
Mainframe hardware updated every 5 years	Mainframe updated every 3 years (Current hardware minus 1)
Operating system updated regularly, but no oversight or verification.	Operating system updated regularly (Current OS minus 1). Systematic process for updates and patching that is verified and monitored by GTA. Specific SLAs apply.

# Mainframe Services Resource Units (RUs)

## CPU Hours

- **Application CPU Hour RU (General)**
  - IBM - Application CPU Hour
  - CICS Transaction CPU Hour
  - CICS Region Management CPU Hours
  - DB2 Transaction CPU Hour
  - DB2 Region Management CPU Hours
- **zIIP Application CPU Hour RU (less costly)**
  - zIIP - IBM - Application CPU Hour
  - zIIP - DB2 Transaction CPU Hour
  - zIIP - DB2 Region Management CPU Hours
  - zIIP - Region Management CPU Hours

# Mainframe Services Resource Units (RUs)

## Storage Back Up Archive

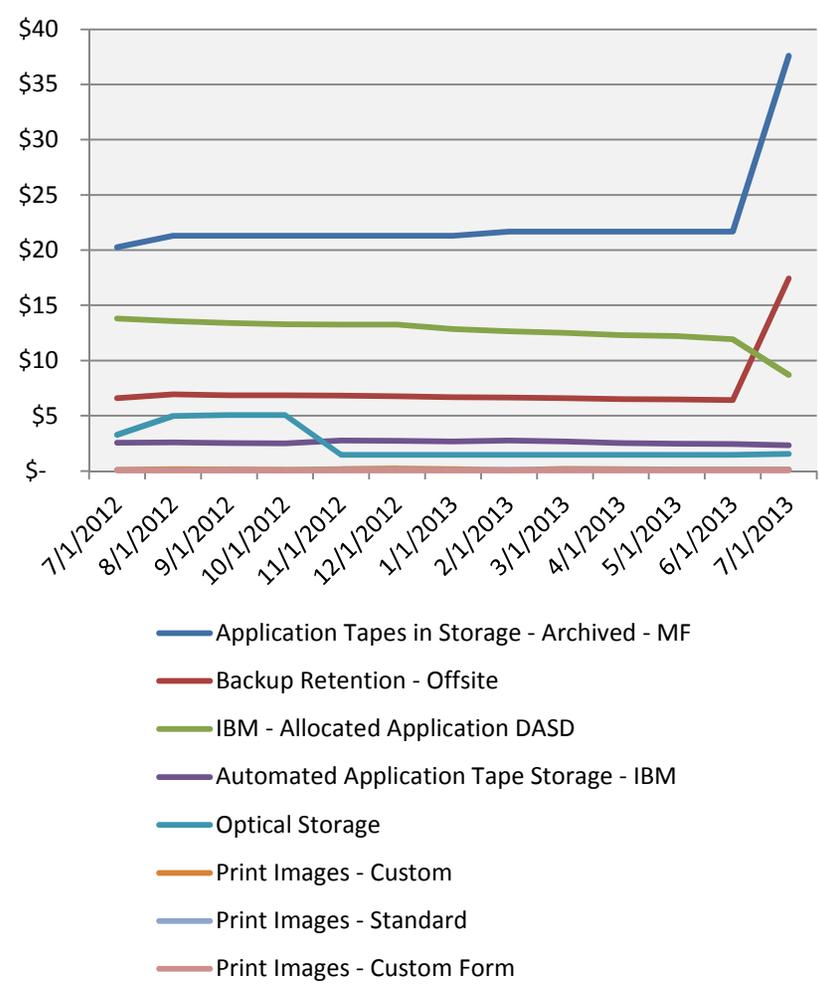
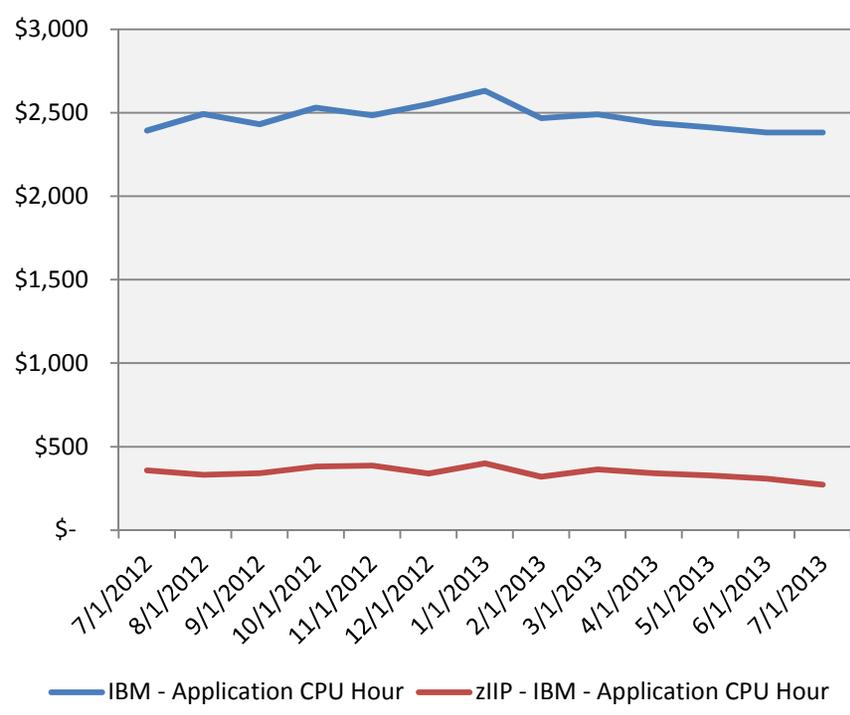
- Application Tapes in Storage - Archived - MF
- Automated Application Tape Storage - IBM
- Backup Retention - Offsite
- IBM - Allocated Application DASD
- Optical Storage

## Print

- Print Images - Custom
- Print Images - Custom Form
- Print Images - Standard

# Rate History

In general, rates are stable.



# Best Practices in Consumption Management

- One of the Agency's key roles: *Reconcile your bill*

	Units	Unit Rate	Amount	GTA Admin Fee	Charge
IBM - Application CPU Hour	<a href="#">420.8146</a>	2,381.9816	1,002,372.50	85,402.14	1,087,774.64
CICS Region Management CPU Hours	<a href="#">209.2454</a>	2,381.9816	498,418.60	42,465.27	540,883.87
CICS Transaction CPU Hour	<a href="#">368.7162</a>	2,381.9816	878,274.74	74,829.01	953,103.75
DB2 Region Management CPU Hours	<a href="#">97.3049</a>	2,381.9816	231,778.44	19,747.52	251,525.96
DB2 Transaction CPU Hour	<a href="#">156.9800</a>	2,381.9816	373,923.18	31,858.25	405,781.43
zIIP - IBM - Application CPU Hour	<a href="#">32.4592</a>	272.9840	8,860.81	754.94	9,615.75
zIIP - DB2 Transaction CPU Hour	<a href="#">218.1250</a>	272.9840	59,544.54	5,073.19	64,617.73
zIIP - Region Management CPU Hours	<a href="#">71.0153</a>	272.9840	19,386.06	1,651.69	21,037.75
IBM - Allocated Application DASD	<a href="#">5,130.6202</a>	8.6885	44,577.38	3,797.99	48,375.37
Automated Application Tape Storage - IBM	<a href="#">87,625.4648</a>	2.3273	203,930.69	17,374.89	221,305.58
Application Tapes in Storage - Archived - MF	<a href="#">64.0000</a>	37.6049	2,406.72	205.05	2,611.77
Backup Retention - Offsite	<a href="#">663.0000</a>	17.4233	11,551.65	984.20	12,535.85
Print Images - Standard	<a href="#">2,955,212.0000</a>	0.1104	326,255.07	27,796.93	354,052.00
Print Images - Custom	<a href="#">537,094.0000</a>	0.1339	71,916.85	6,127.32	78,044.17
Print Images - Custom Form	<a href="#">217,229.0000</a>	0.0442	9,601.58	818.05	10,419.63
Optical Storage	<a href="#">1,703.0000</a>	1.5328	2,610.36	222.40	2,832.76
<b>Mainframe Services</b>			<b>3,745,409.15</b>	<b>319,108.86</b>	<b>4,064,518.01</b>

# Best Practices in Consumption Management

- **CPU hours vs. actual clock hours**
  - A CPU Hour is the equivalent of 1 hour's worth of 100% CPU time dedicated to a program
  - Actual clock hours is the elapsed real time for processing. Elapsed real time includes I/O time and all other types of waits incurred by the program.
- **Reconciling CPU hours on your mainframe bill**
  - *How do I know I used the CPU Hours I see on my bill?* The mainframe keeps a meticulous record of this usage that is trusted by most large companies who use mainframes.

# Best Practices in Consumption Management

- **What do agencies have direct control over to control cost?**
  - Ensure correct indexes on their DB2 tables
  - Review CPU utilization in both batch and on-line jobs to target jobs that may be using excessive CPU
  - Applications that can make use of zIIP
  - Review jobs for changes to reduce usage
    - Reduce database queries where practical
    - Reduce unnecessary or outdated print jobs
- **What do agencies have indirect control over to control cost?**
  - Forecasting CPU utilization increases
  - Offloading data and transaction processing to zIIP is performed by the Workload Manager. Eligible workloads include business intelligence, ERP and CRM, and network encryption, SQL requests from applications that access DB2 by TCP/IP

# Best Practices in Consumption Management

## *Goal 1: Reduce CPU hours*

- **Maintain / Optimize and tune applications such as increasing the efficiency of DB2 and/or CICS code**
- **Review frequency and scheduling of batch jobs**
- **Select or upgrade to applications that run on less costly zIIP processor (~\$500 per hour vs. ~\$2500 per hour general CPU)**

## **Best Practices in Consumption Management**

### ***Goal 2: Right size storage, back up, and archive:***

- **Terminate redundant back ups since GETS provides real time back up offsite**
- **Follow appropriate retention schedules**
- **Eliminate data redundancy to minimize storage**
- **Use Standard printing when possible**

### ***Goal 3: Long Term – migrate applications to non-mainframe where applicable***

# Managing Mainframe Services

- **Submit Request for Solution (RFS) to:**
  - Add or remove applications
  - Add, change, or reduce storage (Optical, Tape)
- **Engage a third-party as needed to maintain, tune, optimize applications and databases**

# Reports

- **Mainframe Report Group Invoice Detail**
  - Report designed with agency input
  - Currently emailed to GETS agencies
  - Pivot tables included in Excel reports for ease of analysis
  - See Addendum for more detail

# How to Address Discrepancies

## **What if the agency discovers a discrepancy in the detail of its Mainframe Resource Units?**

- If the agency identifies a discrepancy, its Asset Manager uses the “Change an Attribute to an existing Asset” product in the OrderNow! online service catalog to change Asset Attributes in Maximo

## **What if the agency identifies resource units incorrectly assigned to the agency or devices remaining on the invoice after a decommission order has been completed?**

- Submit a dispute to [chargebackadmin@gta.ga.gov](mailto:chargebackadmin@gta.ga.gov) with the required documentation

# GTA's Role in Mainframe Management

- **Governance of Mainframe Tower**
  - Process improvement, verification, and reporting
  - Service level agreement (SLA) validation and management
  - Transparency in total cost of services, negotiating competitive rates
- **Dispute Resolution**
  - Submission through [chargebackadmin@gta.ga.gov](mailto:chargebackadmin@gta.ga.gov) with the required documentation
  - Escalation through **Customer Relationship Manager (CRM)**
- **Empowering Agencies with knowledge and tools**

# Current Initiatives

- **GTA conducted assessment of Mainframe environment in 1st Qtr 2013**
- **Actions taken based on the assessment:**
  - Added additional zIIP engine in March; utilization of specialty engine resulted in processing cost savings
  - Upgrade DB2 v10 compatibility mode, scheduled for September; should result in processing saving opportunities
- **Other potential opportunities**
  - Implementation of CICS Thread-safe
  - Implementation of DB2 Thread-safe
  - Focus on batch job ABEND reductions

# **Mainframe Consumption Management Summary**

**The Agency is enabled and empowered to perform consumption management for the mainframe:**

- **Maintain, tune, and optimize applications and databases**
- **Select or upgrade applications to run on zIIP processors**
- **Eliminate data redundancy**
- **Determine and enforce data retention requirements**

**QUESTIONS???**

# Preview of What's Ahead

- **Next Education Topic: Voice & LAN/WAN**
- **Learning objectives:**
  - Better understanding your GETS services
  - Knowing the charges (Resource Unit) for your GETS services
  - Knowing how to leverage processes and tools to better manage your service usage

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## Close

- **Please complete your Learning Objectives Evaluation**
- **Next GETS Education Session – September 26, 2013**
  - Voice & LAN/WAN



# ADDENDUM

## Mainframe Report Group Invoice Detail Report

- **Details include**

Resource Description	Agency Defined Description	Connection Name
Invoice Number	Cost Center	Stop Date
Usage Start Time	Cost Center Description	Work ID
Usage End Time	Job Name	Collection Date
Units	Type	DSN Node 1
Amount Charged	System ID	DSN Node 2
GTA Admin Fee	Region ID	Job Completion Date
Total Amount Charged	RACF User ID	Job Number
Agency Code	Authorization ID	Form Number
Agency Defined	Transaction ID	Printer ID

# Mainframe Report Group Invoice Detail Report Sample



Resource Description	Invoice Num	Usage Start Time	Usage End Time	Units	Amount Char	GTA Admin F	Total Amount Char	Agency Cl	Agency Defi	Agency Defined Descripti	Cost Center
zIIP - DB2 Transaction CPU Hour	943-980007-13	2013-06-03 12:39:36	2013-06-03 14:46:58	0.00001	\$0.00	\$0.00	\$0.00	98000	00000000	Georgia Technology Authority	000000098011118
zIIP - DB2 Transaction CPU Hour	943-980007-13	2013-06-04 10:50:40	2013-06-04 13:45:20	0.0001	\$0.03	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098011118
zIIP - DB2 Transaction CPU Hour	943-980007-13	2013-06-05 09:54:57	2013-06-05 15:43:23	0.00027	\$0.07	\$0.01	\$0.08	98000	00000000	Georgia Technology Authority	000000098011118
zIIP - DB2 Transaction CPU Hour	943-980007-13	2013-06-09 10:44:18	2013-06-09 12:23:26	0.00005	\$0.01	\$0.00	\$0.01	98000	00000000	Georgia Technology Authority	000000098011118
IBM - Application CPU Hour	943-980007-13	2013-06-01 00:06:22	2013-06-01 17:24:50	0.00222	\$5.29	\$0.45	\$5.74	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-01 16:25:00	2013-06-01 16:25:06	0.0003	\$0.71	\$0.06	\$0.78	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-01 16:26:00	2013-06-01 16:26:09	0.00045	\$1.07	\$0.09	\$1.16	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-01 16:23:00	2013-06-01 16:23:15	0.00015	\$0.36	\$0.03	\$0.39	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-01 16:23:00	2013-06-01 16:23:12	0.00019	\$0.45	\$0.04	\$0.49	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-01 16:24:00	2013-06-01 16:24:06	0.00008	\$0.19	\$0.02	\$0.21	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-02 08:00:00	2013-06-02 08:00:05	0.00005	\$0.12	\$0.01	\$0.13	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-03 17:27:00	2013-06-03 17:27:07	0.00005	\$0.12	\$0.01	\$0.13	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-03 19:20:00	2013-06-03 19:21:19	0.00021	\$0.50	\$0.04	\$0.54	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-03 09:52:00	2013-06-03 09:52:07	0.00038	\$0.91	\$0.08	\$0.98	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-03 09:05:00	2013-06-03 09:05:04	0.00007	\$0.17	\$0.01	\$0.18	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-03 08:34:00	2013-06-03 08:34:06	0.0003	\$0.71	\$0.06	\$0.78	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-03 10:11:00	2013-06-03 10:11:07	0.00016	\$0.38	\$0.03	\$0.41	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-03 20:00:00	2013-06-03 20:00:09	0.00037	\$0.88	\$0.08	\$0.96	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-03 20:51:27	2013-06-03 20:51:28	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-03 20:51:30	2013-06-03 20:51:31	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-03 20:51:34	2013-06-03 20:51:34	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-03 20:51:36	2013-06-03 20:51:37	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-04 23:00:00	2013-06-04 23:00:06	0.00018	\$0.43	\$0.04	\$0.47	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-04 20:00:00	2013-06-04 20:00:06	0.00007	\$0.17	\$0.01	\$0.18	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-04 20:05:00	2013-06-04 20:05:03	0.00005	\$0.12	\$0.01	\$0.13	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-04 20:00:00	2013-06-04 20:00:03	0.00005	\$0.12	\$0.01	\$0.13	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-04 20:50:36	2013-06-04 20:50:37	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-04 20:50:39	2013-06-04 20:50:40	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-04 20:50:42	2013-06-04 20:50:43	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-04 20:50:45	2013-06-04 20:50:46	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-05 05:00:00	2013-06-05 05:00:26	0.00011	\$0.26	\$0.02	\$0.28	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-05 20:00:00	2013-06-05 20:00:06	0.00007	\$0.17	\$0.01	\$0.18	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-05 20:00:00	2013-06-05 20:00:08	0.00008	\$0.19	\$0.02	\$0.21	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-05 20:45:01	2013-06-05 20:45:02	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-05 20:45:04	2013-06-05 20:45:04	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-05 20:45:07	2013-06-05 20:45:07	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-05 20:44:57	2013-06-05 20:44:59	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-06 19:17:00	2013-06-06 19:17:03	0.00007	\$0.17	\$0.01	\$0.18	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-06 23:28:37	2013-06-06 23:28:39	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-06 23:28:40	2013-06-06 23:28:41	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-06 23:28:43	2013-06-06 23:28:44	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-06 23:28:46	2013-06-06 23:28:47	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240
IBM - Application CPU Hour	943-980007-13	2013-06-07 14:59:00	2013-06-07 14:59:16	0.00022	\$0.52	\$0.04	\$0.57	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-07 20:00:00	2013-06-07 20:00:05	0.00008	\$0.19	\$0.02	\$0.21	98000	00000000	Georgia Technology Authority	0000000980CHMNX
IBM - Application CPU Hour	943-980007-13	2013-06-07 21:00:10	2013-06-07 21:00:11	0.00001	\$0.02	\$0.00	\$0.03	98000	00000000	Georgia Technology Authority	000000098020240