



Defense Information Systems Agency

A Combat Support Agency

# Storage Directions

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# Agenda

- **Storage Capacity Services**
- **Rate Changes**
- **Mainframe Platform**
- **Open System Platform**
- **Questions/Open Discussion**



# Storage Capacity Services

**Acquire as a service provided by vendor**

## 232 Orders Completed:

- 9 – Tape Libraries Installed
  - 204 Drives, 13,450 Slots
- 44 – Disk Arrays Installed
  - 3,225 TB's Capacity
    - Tech Refresh 1,735TB's
    - New Business 1,490TB's
- 5,262 – FIBRE Ports
- \$3M Infrastructure Total



**Pay only for what we use!**



# Rate Changes

Rate Description	FY09	FY10 Proposed	RTO/RPO
<b>Server</b>			
Local Basic - L1	\$3.7248	\$2.8182	72 hours +
Local Operational - L2	\$1.0067	\$0.8908	< 24 Hours
Local High Availability - L3	\$1.8960	\$1.4484	< 8 hours
Local Non-Disruptive - L4	\$2.6684	\$2.5444	RPO 1 Sec RTO 30 minutes
Remote Basic - R1	\$0.9890	\$0.9252	72 hours +
Remote Operational - R2	\$2.7936	\$2.2651	< 24 Hours
Remote High Availability - R3	\$3.3523	\$3.1780	< 8 hours
Remote Non-Disruptive - R4	\$4.2205	\$3.8147	RPO 1 Sec RTO 30 minutes
<b>Mainframe</b>			
Mainfram DASD	\$0.0014	\$0.0006	
Mainframe Cart Tapes STR MB Days	\$0.0004	N/A	

- **Open System Local Basic Rate decreased by 32%**
- **Mainframe Storage Rates consolidated into a single rate**



# Everything in the Rates

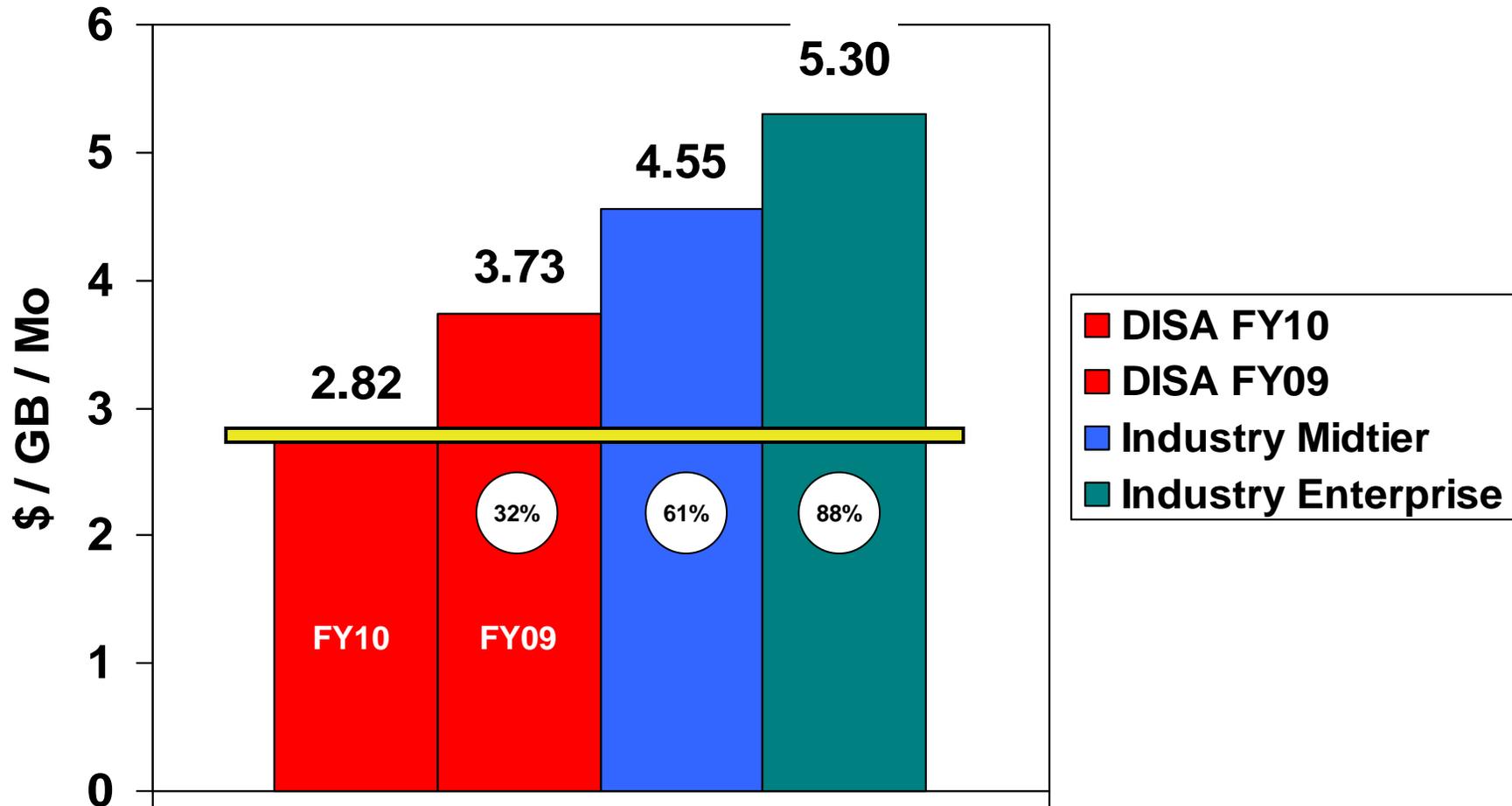
- **Storage Related Services**

- **Hardware**
  - Depreciation
  - Maintenance
  - Infrastructure costs – FC & IP switches, backup media, etc.
  - Racks, cables, etc
  - Capacity service based contracts
- **Software**
  - SOE Products & other storage resource products
  - Hardware-specific related products
- **Labor**
  - Storage Administration
  - OST support
- **Back-up Services**
  - Standard weekly backups (1 copy onsite, 1 copy offsite, retain 5 weeks)
  - Incremental daily backups (retain 2 weeks on site)

- **Data Center Services**

- **Security**
  - Info Assurance / STIG
  - “Behind The Gate” Facilities
  - Military Police
  - Regulatory Compliance
    - SAS 70
    - DoD IG
    - NSA
- **Facility Measures**
  - Conditioned / Redundant Power Feeds
  - A/C
  - Floor Space
- **Networks**
  - Circuits
  - Secure, Reliable & Monitored Network
  - 24x7x365 Support
- **Service Level Agreements**
- **Planned Tech Refresh**
- **Help Desk**
  - Customer Service Agents
  - Engineers On-call
- **Culture**
  - We Are Part of The DoD Family
    - Are Here to Support Customers
    - Not Profit Oriented

# Gartner Benchmarking



Notes:

- 1) DISA rate includes all Basic Storage services & is fully burdened
- 2) It is assumed Industry rates are fully burdened
- 3) Circled #s represent % over DISA's storage rate



# Mainframe Platforms

- **Why Tech Refresh**

- **Current disk technology at end of its financial and technical life**
- **Increased storage capacity in smaller footprint**
- **Increased throughput**
- **We need to perform the migration before the personnel needed for this effort are tied up with the next round of z/OS and processor upgrades**



# Mainframe Platforms

- What WILL change with Tech Refresh
  - Larger standard volume size
  - Emphasis on System Managed Storage (SMS) to improve storage operation and management
  - Elimination of storage pools dedicated to particular customers; if dedicated storage pools are required, the customer will bear the costs for the entire pool
  - Increased use of disk for migration level 1 (ML1) data
  - Improved COOP/DR data posture



# Mainframe Platforms

- What WILL NOT change with Tech Refresh
  - Mainframe processors
  - Disk architecture
  - Standard JCL
  - Operating systems



# Mainframe Platforms

- **When will Tech Refresh occur**

<b>Task</b>	<b>Target Date</b>	<b>Completion Date</b>
Installation of test USP-V at Mechanicsburg	Oct 08	10 Oct 08
Installation of FICON infrastructure at STL	Jan 09	30 Jan 09
Installation of 2 <sup>nd</sup> USP-V at Mechanicsburg	Apr 09	In progress
Installation of two (2) USP-V at Ogden	Apr 09	In progress
Installation of USP-V at STL	Apr 09	In progress
Data Migration to new DASD	Jul 09	TBD

- **Sites will develop migration schedules and may require customer participation for data migration**



# Mainframe Platforms

- **Future Tape Direction**

- **Eliminate all 18-track and 36-track tapes drives**
- **Encourage full-utilization of 9840 tape drives**
- **Technical refresh of tape library technology**
- **Migrate all customer tape data to virtual tape, fully-utilized 9840 tape or disk**
- **Add high speed, high capacity, tape encryption solution via STK 9840D**



# Open System Platforms

- **Tech Refresh**
- **Data De-duplication**
- **Storage virtualization**
- **Tape futures**

# Questions/Open Discussion



