NEW YORK STATE CHIEF INFORMATION OFFICER
CIO/OFT
NEW YORK STATE OFFICE FOR TECHNOLOGY

inSERVICE
CIO/OFT Customer Care Center

Central Server Hosting – Service Detail

Overview:

CIO/OFT's Data Centers hosts more than 1,800 operating system instances on over 1300 physical servers in centralized centers and more than 350 servers in field offices. Both our Central server and Turnkey Server hosting services include installation, configuration, and maintenance of hardware and software along with environmental management, technical consulting and comprehensive operating system administration. We also provide data backup and recovery and a tiereddata storage solution for additional fees.

Server Hosting

Server Hosting Services support customers that wish to deploy distributed systems servers on a robust and secure network infrastructure within a secure data facility without having to develop and maintain this environment on their own. Additionally, Server Hosting Services support customers by providing proactive 24x7 monitoring of production applications. We maintain a Customer Care Center and incident management service, and a tiered data storage offering to best fit the technical and financial requirements of each application.

CIO/OFT hosts and monitors servers in the CIO/OFT Data Center. We coordinate the installation and configuration of the hardware and software for distributed systems servers, including any problem diagnosis associated with this environment. Following industry best-practices, the State Data Centers provides a common Enterprise System Management (EMS) to notify customers of pending or current events impacting their application. Also, all hosted applications use a centralized storage solution as a central repository for critical data supporting customer applications. Our focus is to provide a stable environment in which the servers reside and the level of administration and monitoring which meets the needs specified by each customer.

Features:

We offer hosting of customer owned servers, both physical and virtual, as well as a Turnkey Server service which enables a customer to lease a virtual server without the need to purchase or install their own server in the data center.

Server hosting support for customer owned servers is provided on two levels:

- Basic Support is available during normal business hours for certain non-production environments and requires the customer agency to assume responsibility for certain software and application management tasks.
- Standard Support is operational support for Enterprise System monitoring, including Level 2 support, on a 24x7 basis.

Server hosting support for Turnkey virtual servers is provided on three levels:

- Silver Support is operational support during normal business hours from 7am until 5pm Monday through Friday excluding state holidays. Servers with silver support are not monitored and initial response to issues is on a

best-effort basis. This level might be selected for development or test servers.

- Gold Support is operational support during normal business hours from 7am until 5pm Monday through Friday excluding state holidays. Servers with gold support are monitored and initial response to Severity 1 and Severity 2 issues is within two (2) hours. This level might be selected for non-24x7 production applications.

- Platinum Support is operational support 24x7 including state holidays. Servers with platinum support are monitored 24x7and initial response to Severity1 and Severity 2 issues is on a best-effort basis. This level would be selected for your most critical and highly available applications.

Some of our basic and standard support activities include:

- Environmental Management including power, cooling, physical security, coordination of installation, and cabling of new equipment in the CIO/OFT Data Center.

- Technical consulting including design and integration of hardware and software infrastructure and implementation of the design.

- Comprehensive Operating System (O/S) administration and maintenance including monitoring and application of patches and upgrades as available, security upgrades, server hardening, virus protection, and enterprise backup client installation. Customers will be notified when patches are needed so they can be reviewed and jointly scheduled.

- Change control management for hardware, Operating Systems, networking equipment, ESM, and backup software. Changes are performed during standard maintenance windows or at another time as mutually agreed. Changes to environments shared by CIO/OFT customers will be communicated to all users.

- Troubleshooting of issues related to hardware or operating system with CIO/OFT IATS Level II and applications with Customer Level II.

- Backup and recovery infrastructure including configuration, monitoring, recovery, and media management.

- Establishment and maintenance of approved firewall rules, routing and VPN tunnels to ensure application connectivity and ensure a secure network environment.

- Load balancing services based on documented rules for use.

- Enterprise Systems Monitoring of servers using CIO/OFT Tivoli architecture supported by the State Data Center operational staff available 24x7.

- Triage of problems, run diagnostics, ping servers, reboot servers, and recycle applications.

- Performance monitoring and alerts.

- Installation, configuration, and ongoing application software maintenance above the O/S including patches, fixes, and upgrades not administered at

the Customer level.

- Installation and configuration of ESM agents to facilitate monitoring.
- Working with customer to define and implement appropriate system management alerts and notifications to the CIO/OFT Command Center and customer application and database staff.
- Provide Level II and Level III response, as appropriate, to ESM alerts related to hardware and the operating system.
- Technical consulting and project team participation, limited to staff availability.

Enterprise Systems Monitoring is a required service for all production servers in the CIO/OFT Data Center. Through the use of monitoring software, the data center infrastructure that end user applications run on is continually monitored and, when necessary, alerts are generated to initiate corrective or pro-active actions. The products utilized for this service include: Tivoli Enterprise Console (TEC) functions as event correlation engine and operations interface; IBM Tivoli Monitoring (ITM) is utilized to monitor software components of UNIX and Windows servers; IBM Tivoli Netview to monitor all data communications components of the data center network for availability; and IBM Director to monitor all hardware for IBM X86 servers.

Facilities Monitoring, Operation, Planning & Setup
State-of-the-art data facilities require a robust physical environment. An environment that guarantees physical assets are protected and running at optimal capacity.

Features:

CIO/OFT Data Centers are environmentally monitored, controlled and operated day and night, 7 days a week, 365 days a year. Facilities monitoring and operations take care of physical attributes such as heating, ventilation and air conditioning (HVAC), electrical power, power supply protection, smoke detection, fire suppression and water leak detection. Some sites also provide diesel generator backup in case of commercial power failure.

The Planning and Setup aspects provide the help customers need for the planning and placement of their customer-owned equipment, managed by CIO/OFT in our Data Centers. This service includes site preparation, installation planning, and ongoing facilities maintenance.

CIO/OFT offers installation and maintenance of a wide selection of hardware to meet customer needs. We will also notify customers when hardware the customer is operating may be impacted by an upgrade and will negotiate a mutually agreeable schedule. Any new requests for hardware will be analyzed for appropriateness to the overall architecture.

Distributed Systems Backup

Our distributed systems backup and recovery help to simplify the day-to-day management of backup and disaster recovery requirements and improve business continuity by providing faster access to data to keep business functions operating

efficiently. Distributed Systems Backup is billed on a usage based model, dependent on the amount of data and the frequency of change to that data. With a few exceptions, all servers within the CIO/OFT data center are backed up.

Features:

With data protection being a top priority in our business, CIO/OFT provides complete management of the backup and recovery infrastructure from configuration, monitoring, and recovery to helping customers with capacity planning and media management.

- Configuration: Technical support staff will install and configure the server backup application software and assist in the installation of the client agent software on CIO/OFT supported operating environments.
- Monitoring: CIO/OFT will monitor daily backups of customer server environments, restart failed backups, and work with server administrators and customers to resolve persistent backup related problems.
- Recovery: Technical support staff will provide individual or complete server recovery services.
- Capacity Planning: Technical support staff will monitor backup infrastructure resource utilization (server, tape library and networks) and reconfigure, tune or expand the infrastructure as necessary to make resources available.
- Media Management: CIO/OFT will provide media management services including recycling and replacement of tapes and development of an offsite tape service.

Data Storage

CIO/OFT offers several tiers of data storage to our customers to allow our customers to match performance and availability requirements with cost to result in the best performance for the cost. CIO/OFT provides the best value of any storage offering and utilizes 100% of available storage capacity. Data Storage is billed based on allocated amount of disk on a monthly basis.

Features:

Data Storage – Tier 1

IBM Tier 1 is designed for the highest availability and performance requirements. It is built on completely redundant components with features for online firmware upgrades to minimize downtime. It uses the most current disk technology and is based on a cache-centric design that provides fastest response times while sustaining a large number of data transfers. Tier 1 is most often selected for Business critical 24x7 Databases, fileservers and e-mail applications as well as for I/O intensive applications such as data warehouses.

Data Storage - Tier 3c

Tier 3c is designed as inexpensive magnetic storage used for long-term storage of fixed content, archived or reference data. The storage is normally characterized by much lower performance than Tier 2 and Tier 1 storage. Data in Tier 3c is automatically mirrored and does not require backup to tape. Tier 3c is most often selected for storage of images, documents, static content, archived data and reference data such as GIS data. It is recommended as the replacement for optical storage and for use with applications such as FileNet, Documentum, and IBM Content Manager.

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Data Storage - Tier 3i

Tier 3i is designed as inexpensive magnetic storage used for test, quality assurance, development, or production application server environments. The storage is normally characterized by lower performance than Tier 1. It provides for the use of less expensive ATA disk drives and ethernet interfaces using the iSCSI protocol or as Network Attached Storage (NAS – NFS only). The Disk Subsystem uses a private, secure, and redundant Ethernet Data LAN rather than fiber channel as used by Tier 1 disk. Some uses may be as disk for Windows and Unix Tier 2 applications, SQL databases, Windows file servers, and e-mail applications.

CIO/OFT provides complete management of provisioning, monitoring, performance, capacity planning, architecture/design, and reporting/billing.

- Provisioning: Adding or removing distributed systems servers from the SAN and/or allocate and reallocate disk volumes from servers or mainframe systems as required. Configuring and expanding storage network and disk resources as required.

- Monitoring and Problem Resolution: Actively monitor the storage network and disk infrastructure for impending failures and resolve storage infra-structure problems. Work with vendors to upgrade firmware and patches associated with the SAN and Disk Subsystems as required.

- Performance: Review the storage infrastructure performance within the SAN and the disk subsystems and work with customer and system administrators to identify storage related performance issues and resolve or recommend solutions.

- Capacity Planning: Review storage infrastructure resource utilization and reconfigure, tune or expand the infrastructure as necessary to make resources available to meet customer requirements.

- Architecture and Design: Architect and design cost effective SAN and tiered disk solutions based on best practices for security, performance, availability and scalability.

- Reporting and Billing: Track disk resource utilization by customers and provide monthly billing reports.

Additional Information:

Please contact CIO/OFT Customer Relations at customer.relations@cio.ny.gov or 1-866-789-4638 or see our website at www.cio.ny.gov for additional information.