



**NATIONAL INFORMATION
TECHNOLOGY CENTER**

Service Catalog

Version 4.7



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**NATIONAL INFORMATION
TECHNOLOGY CENTER**

**U.S. Department of Agriculture
Office of the Chief Information Officer**

Data Center Services

The NITC Enterprise Solutions are developed utilizing government and industry standards and best practices. Our Level IV data center facilities utilize state-of-the-art, enterprise class infrastructure technologies to deliver optimal yet cost-effective solutions. NITC has a diverse and dedicated staff of Information Technology professionals who are proficient in systems architecture and integration, infrastructure management and operation, and disaster recovery. They work with customers to deliver secure and highly available solutions. The NITC secure IT infrastructure consists of virtualized mainframe and midrange platforms as well as virtualized network and storage infrastructure. The systems and applications managed by NITC are national in scope, mission critical, and essential for the operations of the United States government.

- **Infrastructure as a Service (IaaS):** The NITC Infrastructure as a Service provides a virtual machine infrastructure which allows customers the option to maintain control of their operating and general support systems at the system level. IaaS is provided for customers to maintain control of their hosting platform while allowing NITC to control the infrastructure on which it resides. NITC also offers three tiers of IaaS storage that are available to customers on demand.
- **Platform as a Service (PaaS):** The NITC Platform as a Service builds on the IaaS to provide customers with robust hardware platforms that are virtualized for optimal cost efficiency and flexibility. The underlying hardware is coupled with NITC Network and NITC Storage services to provide a fully managed operating platform up to and including one of the supported operating systems. In addition to the supported operating systems, NITC currently also offers various PaaS services including database, web portal, web server etc. The PaaS services include software license management and essential professional services for the products included in the service.
- **Managed Hosting:** For extremely large or unique applications that require dedicated hardware, NITC will manage customer provided servers up through the operating system (OS) in a secure operating environment including systems installation, engineering, administration, and support.
- **Professional Services:** NITC can provide the professional services required for integrating and administering enterprise-class business applications and databases, project management, and planning for technology advancements and disaster recovery.

Why NITC?

Experience

NITC has provided services as a federated data center since 1973 and has performed data center migrations since the 1980s. NITC cross-serves 14 federal departments/bureaus.

Innovation

The NITC-managed Enterprise Data Center is a federally owned Cloud services provider; offering agencies enterprise class infrastructure built from the ground up with market leading technologies. NITC continues to innovate with the introduction of new Cloud services and utilize “green” industry best practices as much as possible to improve energy efficiency and reduce greenhouse gas emissions.

Customer Service

NITC offers 24x7 monitoring and expert technical support to ensure customers can focus on their core business without worrying about IT infrastructure.

CONTACT US

NITCSERVICE@ocio.usda.gov
888-USE-NITC or 816-926-6660



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NITC Cloud Services

NITC offers a broad range of Cloud services using virtualized, multi-tenant operating environments to offer several Platform as a Service (PaaS) and Infrastructure as a Service (IaaS) services. NITC Cloud services offers:

- Rapid elasticity
- Scalable, pay-as-you-go pricing
- Monthly billing and predictable cost (PaaS)
- Hourly Metered Billing (IaaS)
- Periodic hardware refresh
- ≥ 99.9% availability
- Independent audits for OIG, A-123 and inheritable controls

Infrastructure as a Service (IaaS): The NITC Infrastructure as a Service provides a virtual machine infrastructure which allows customers the option to maintain control of their operating and general support systems at the system level. Network, Facility, Security, and Operational Support Services are included with all IaaS offerings.

Server – OpenStack

SAN Storage – Tier 1, Tier 2, Tier 3, Replication

NAS Storage – Direct, Shared, Nearline and Bulk

Backup/Archive Storage - Onsite, Offsite, Replication

Platform as a Service (PaaS): NITC PaaS offerings build upon IaaS offerings enables customers to select from secure, standardized Operating System images that are configured to meet actual processing requirement. Each PaaS offering is fully managed and maintained by NITC. In addition to the supported operating systems, NITC also provides PaaS offerings that include respective software licensing. By utilizing cost-effective platform solutions that are configured and licensed to meet actual application processing requirements, customers need only focus on the development and deployment of their business applications.

Server - Linux™, Windows™, Solaris™, AIX™

Mainframe - zOS™

Web Server - LAMP, LAMP

Web Application & Web Portal Server - WebSphere™

Database - MySQL™, SQL Server™, Oracle™

Web Content & Document Management – Oracle UCM™

Web Search - Google™

Web Accelerator - Akamai™

Cloudvault - ownCloud

Virtual Application Hosting - Citrix™

Why NITC Cloud Services?

Rapid Provisioning

The NITC Cloud services offer virtualized instances of software, servers and storage that can be deployed for the customers within a very short period of time. In addition, virtualized environment supports rapid elasticity.

Predictable Cost Model

NITC Cloud service helps customers eliminate capital expenditure and improve operating efficiencies by using a multitenant hosting environment. Various standard and premium options and templates are offered to meet unique customer demand.

Customer Service

NITC offers dedicated account teams and 24x7 monitoring and expert technical support to ensure customers can focus on their core business without worrying about IT infrastructure.

CONTACT US

NITCServicedesk@ocio.usda.gov
888-USE-NITC or 816-926-6660

Why NITC

Service Desk

The NITC Service Desk is your single Point of Contact (POC) for managing incidents to resolution. The Service Desk facilitates the restoration of normal operational service to minimize business impact to the customer. The Service Desk is available 24 hours a day, 7 days a week, and utilizes Information Technology Service Management (ITSM) best practices to record, route, and manage the timely response to all service requests.

The NITC Service Desk supports customers daily with:

- Incident management
- Problem management
- Information requests
- Service requests
- Password resets
- Account permissions
- Connectivity issues
- Remote access
- Lost equipment notification

When contacting the Service Desk for assistance:

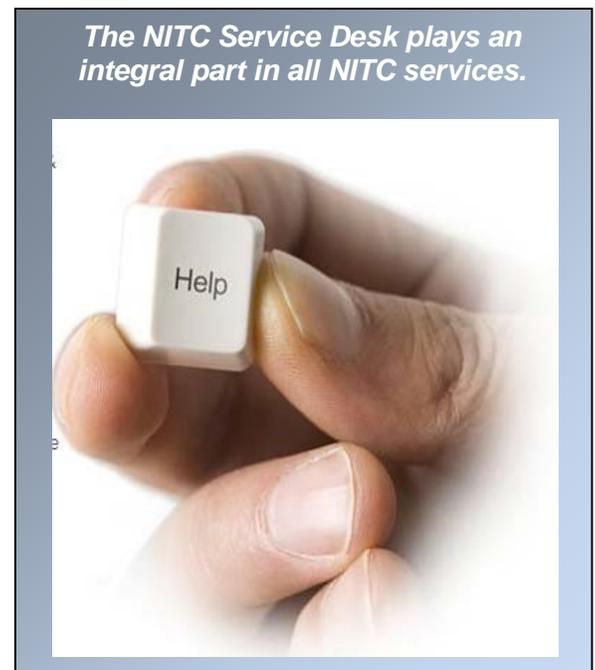
- Be prepared to provide required information
 - Contact information
 - Relevant agency and system information
 - Information related to request
- Provide appropriate authorization for service requests
- Utilize optional email template

The NITC ITIL-based ITSM practices provide:

- Configuration Management Database (CMDB)
- Asset Management
- Configuration Management
- Release Management
- Change Management
- Incident Management
- Problem Management

Contact the NITC Service Desk at:

NITCServicedesk@ocio.usda.gov
888-USE-NITC or 816-926-6660



Why NITC

System and Network Control Center

The NITC System and Network Control Center (SNCC) monitors the performance and availability of NITC managed systems and networks 24 hours a day, 7 days a week.

The NITC SNCC performs:

- System and network monitoring
- 2nd Tier Systems Administration support
 - Mainframe Initial Program Loads (IPLs)
 - System Reboots
 - Hardware Resets
 - Hardware Support
 - Software Support
- Production control functions
- Facility monitoring and management
 - Power and Environmental Equipment Support and Incident Resolution
 - Data Center Security and Access Control
- Tape management
 - Physical tape handling
 - Offsite tape rotation and retrieval
 - Coordination and deployment of media for disaster recovery
- Data component disposal
- 2nd Tier Incident and Problem Management support
- Certification of hardware/software changes

The NITC System and Network Control Center performs 24 x 7 monitoring and operations services.



When contacting the SNCC:

- Be prepared to provide required information
 - Contact information
 - Relevant agency and system information
 - Information related to request
- Provide appropriate authorization for service requests
- Utilize optional email template

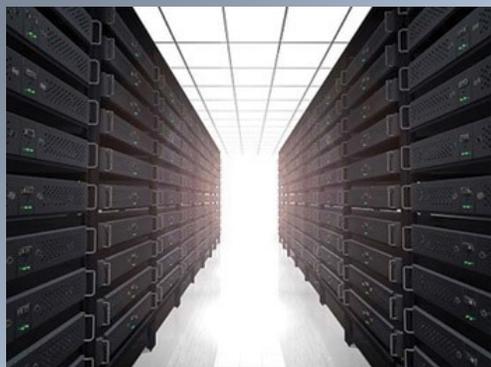
Contact the SNCC via the NITC Service Desk at:

NITCServiceDesk@ocio.usda.gov

888-USE-NITC or 816-926-6660

Virtual Data Center (OpenStack)

Virtual Private Cloud to facilitate a dedicated hosting infrastructure



Service Description

Private cloud with on demand self-service, flexible network capabilities, resource pooling, rapid elasticity and a robust recovery infrastructure. Service is meant to facilitate a dedicated hosting infrastructure in a highly available compute environment.

What is Included

- Broad range of VM sizes to fit any workload
- Hourly metered billing for actual resource usage
- OS licensing for MS Windows and RHEL are included with each VM instance
- Ability to provision networks, routers, firewalls, machine images, disk volumes, load balancers, and virtual machines from a single user interface
- Platform orchestration to provision and scale environment
- Full access to API endpoints enabling integration into DevOps workflows
- Tier 1 Service Desk support
- Secure facility, hardware, and system software
- Performance monitoring at the service layer
- Diagnose and correct problems for all extensions to environments that NITC develops and maintains

How We Charge

The hosting charges are billed hourly based on the actual resources consumed. Standard VM instance sizes are individually priced in hourly increments. Volume-based storage is billed based on average monthly usage and is recorded on an hourly basis. Windows/Red Hat Operating System licensing is included.

Price drivers:

- Size of Virtual Machine
- Single site vs Multi site
- Hours of actual use (rounded to the next hour increment)
- Amount of actual disk storage required
- Any RSA token requirements for Remote Access
- Additional charges may apply for optional Professional Services

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x7
System Availability	≥ 99.9% excluding planned downtime*

* NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays from 1800 to 2400 hours Central Time.

Cost Saving Tips

- Proactively inform NITC of infrastructure requirements
- Proactively inform NITC of disk storage requirements
- Provide key hosting requirements at engagement on-set to take advantage of NITC's capacity planning recommendations.

Additional Information

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

SAN Storage

NITC can provide a virtualized and highly-available disk storage infrastructure.



Service Description

The NITC Storage Area Network (SAN) provides a robust disk storage infrastructure for Collocation, Managed Hosting, and Cloud Service customers. NITC exploits storage virtualization technologies, strict standards, and economies of scale to enable rapid delivery of cost-effective, fully-managed disk storage cost/performance options.

What is Included

- Enterprise-class virtualized disk storage controllers
 - High scalability
 - High performance
 - High availability
 - Robust data replication and migration features
 - Local disk cloning
 - Remote replication for disaster recovery
 - Primary Disk – Continuous
 - Backup Disk – Manual or Scripted
 - Three virtualized disk storage options
- Redundant SAN architecture
 - Dual-fabric architecture
 - Enterprise-class directors and switches
- Security of mission-critical data provided through management of access rights
- Periodic technology refresh
- Fully secured data access and inheritable controls
- Proper disposal of failed data components
- Disaster recovery support for replicated data
- Dynamic load balancing path management software
- Recommended Backup/Archive services are also available

Disk Storage Options

Option	Performance	Application Type
Tier 1	Best	Performance Sensitive
Tier 2	Better	Typical Applications
Tier 3	Good	Backup and Archive

How We Charge

Charges are based on connectivity requirements and actual disk allocations by tier.

Price drivers:

- Number of SAN ports utilized
- Storage Allocation in Gigabytes
- Additional charges may apply for storage allocation associated with any local or remote replication

Service Level Metrics

Measure	Service Level Targets
Infrastructure Monitoring	24 x 7
Incident Response	24 x 7
Infrastructure Availability	≥ 99.9%*

*Target availability does not include any scheduled downtime and requires dual SAN/NAS connectivity to the storage infrastructure.

Cost Saving Tips

- Utilize disk storage tiers appropriately
- Utilize provided path management software or native Operating System capabilities
- Proactively inform NITC of disk storage requirements

Additional Information

- File system and database recovery procedures are typically required for Disaster Recovery

NAS Storage



Service Description

The NITC Network Attached Storage (NAS) service provides a robust disk storage infrastructure for Collocation, Managed Hosting, and Cloud Service customers. NITC exploits storage virtualization technologies, strict standards, and economies of scale to enable rapid delivery of cost-effective, fully-managed disk storage cost/performance options.

What is Included

- Enterprise-class virtualized disk storage controllers
 - High scalability
 - High performance
 - High availability
 - Robust data replication and migration features
 - Local disk cloning
 - Remote replication for disaster recovery
 - Primary Disk – Continuous
 - Backup Disk – Manual or Scripted
 - Four virtualized disk storage options (Direct, Shared, Nearline, Bulk)
- Highly-available NAS infrastructure
 - Utilizes same virtualized disk architecture
 - Supports both NFS and CIFS file sharing
 - Robust data snapshot/replication technology
- Security of mission-critical data provided through management of access rights
- Periodic technology refresh
- Fully secured data access and inheritable controls
- Proper disposal of failed data components
- Disaster recovery support for replicated data
- Dynamic load balancing path management software
- Recommended Backup/Archive services are also available

Disk Storage Options

Option	Performance	Server
Direct	Best	PaaS Server Linux/Windows
Shared	Better	All Server Infrastructure
Nearline	Good	Low Performance Applications
Bulk	Good	Single Site, No Backup

How We Charge

Charges are based on connectivity requirements and actual disk allocations by tier.

Price drivers:

- Storage Allocation in Gigabytes
- Additional charges may apply for storage allocation associated with any local or remote replication

Service Level Metrics

Measure	Service Level Targets
Infrastructure Monitoring	24 x 7
Incident Response	24 x 7
Infrastructure Availability	≥ 99.9%*

*Target availability does not include any scheduled downtime and requires dual NAS connectivity to the storage infrastructure.

Cost Saving Tips

- Utilize disk storage tiers appropriately
- Utilize provided path management software or native Operating System capabilities
- Utilize NAS solutions for highly available file sharing
- Proactively inform NITC of disk storage requirements

Additional Information

- File system and database recovery procedures are typically required for Disaster Recovery

Backup

We provide a robust combination of hardware and software technologies for data protection and archive requirements.



Service Description

The NITC Backup Storage service provides a robust combination of hardware and software technologies for Collocation, Managed Hosting, and Cloud Service customers' data protection and archive requirements. NITC exploits tape virtualization and automation technologies to enable the delivery of cost-effective, fully-managed data protection and data lifecycle storage solutions.

What is Included

- Fully managed data protection and archive solutions
- Both onsite and offsite data storage available
- Enterprise-class virtual tape technology
 - High scalability
 - High performance
 - Remote data replication features
- Automated real tape technology
 - High-capacity tape drives
 - Fully automated tape libraries
- Automated data protection software
 - Network and SAN client software
 - Optional database client software
- Automated Archive Management Software
 - Automated archiving from disk to tape
 - SAN/NAS disk storage required
- Fully secured data access and inheritable controls
- Proper disposal of failed data components
- Disaster recovery support

Standard Backup Schedule and Retention*

Backup Type	Frequency	Onsite Retention	Offsite Retention
Full	Weekly	60 days	60 days
Incremental	Daily	14 days	14 days

*Backup schedule and retention periods are customizable

How We Charge

Charges are based on actual backup/archive data stored.

Price drivers:

- Total amount of data protected
- Change rate of data protected
- Required backup schedule
- Type of archive storage required
- Data retention periods

Service Level Metrics

Measure	Service Level Targets
Infrastructure Monitoring	24 x 7
Incident Response	24 x 7
Infrastructure Availability	≥ 99.9%*

*The NITC Backup/Archive solutions are designed to balance availability and control costs.

Cost Saving Tips

- Follow information lifecycle management best practices
 - Purge unused data
 - Retain only required data

Additional Information

- Customers are responsible for communicating any special backup schedule or retention requirements
- Customer provided equipment utilizing NITC Backup Services must provide additional network connectivity to the EDC Backup Network

Network

We provide robust Local Area Network connectivity and access to the USDA Wide Area Network and the Internet.



Service Description

The NITC Network Services include Local Area Network (LAN) connectivity for hosted systems and applications as well as connectivity to the USDA Wide Area Network (WAN) and the Internet.

What is Included

- Fully managed LAN infrastructure in each NITC Enterprise Data Center (EDC)
- Connectivity to the USDA Universal Telecommunications Network (UTN) WAN and Internet
- Network engineering and design consultation
- Network utilization monitoring and capacity planning
- Network load balancing and high availability solutions
- Fully integrated Network Security services
- Network cabling as required by NITC EDC standards

How We Charge

The cost of this service is included with other hosting services that rely on this service.

Hosting services that include Network Services:

- Platform as a Service
- Infrastructure as a Service
- Managed Hosting services

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	≥ 99.9% excluding planned downtime*

* - NITC reserves the option to schedule its routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The USDA is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

Cost Saving Tips

- Utilize NITC Network Services instead of hosting a private networking solution
- Provide at least 180 days' notice for growth or retraction of processing requirements
- Communicate projected networking requirements on a quarterly basis
- Limit internet usage to business related activities

Additional Information

- Customer provided equipment utilizing NITC Network Services must provide dual network connectivity to the EDC Highly-Available Network
- If optional Backup/Archive services are utilized, network connectivity to the EDC Backup network is also required

Infrastructure as a Service

Facility (Enterprise Data Center)

We provide a secure, undisturbed system environment and data center infrastructure for hosting customer servers.



Service Description

NITC Facility Services provides an optimal Enterprise Data Center (EDC) operating environment for production customer application hosting. All NITC-managed EDCs adhere to USDA EDC standards and include key fault-tolerant characteristics equivalent to *Uptime Institute* Tier standards.

What is Included

Production Enterprise Data Centers

- **Kansas City, Missouri (Production)**
Tier IV - Fault Tolerant Site Infrastructure
A Fault Tolerant data center has multiple, independent, physically isolated systems that have redundant capacity components and multiple, independent, diverse, active distribution paths simultaneously serving the computer equipment.
- **Saint Louis, Missouri (Disaster Recovery)**
Tier III - Concurrently Maintainable Site Infrastructure
A concurrently maintainable data center with redundant capacity components and multiple, independent distribution paths serving the computer equipment.

Development, Test, and Disaster Recovery Center

- **Beltsville, Maryland**
Tier 1 – Basic Site Infrastructure
A basic data center with non-redundant capacity components and a single, non-redundant distribution path serving the computer equipment.

How We Charge

The cost of this service is included with other hosting services that rely on this service.

Hosting services that include Facility Services:

- Platform as a Service
- Infrastructure as a Service
- Managed Hosting services

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7 x 365
Incident Response	24 x 7 x 365
Facility Availability *	Beltsville (Tier 1) Saint Louis (Tier III) Kansas City (Tier IV)

* - NITC reserves the right to schedule occasional infrastructure downtime and maintenance activities to accommodate growth and ensure optimal availability.

Cost Saving Tips

- Utilize NITC Enterprise Data Centers to obtain optimal business application availability
 - Kansas City for Production applications
 - St. Louis for Disaster Recovery

Additional Information

- Escorted access to the data center for authorized customer personnel can be scheduled to perform necessary operational tasks
- Certified DOJ Level IV Secure Facility
- USDA DM 3510-01 Physical Security Standards for Information Technology Compliant
- Security measures include:
 - Guard stations
 - Parking lot and exterior building surveillance
 - Computer room entry and egress surveillance
 - Computer room entry and egress secured with buffer zone and biometric access control

Platform as a Service

Server

We provide standard virtualized operating platforms to securely host customer applications.



Service Description

The NITC Platform as a Service (PaaS) Server offering provides standard virtualized operating platforms to securely host customer applications. NITC utilizes advanced server virtualization technologies, strict standards, and economies of scale to enable rapid delivery of cost-effective, fully-managed operating platforms with expanded inheritable security controls.

What is Included

- Fully managed operating platform infrastructure
 - State-of-the-art server hardware
 - Standardized operating systems
 - SAN/NAS disk storage as required
 - Backup/Archive services as required
 - Highly available Network services
 - Redundant server hardware
 - Periodic technology refresh
- Full platform administration services
 - Virtual server configuration
 - Virtual OS installation
 - Virtual OS upgrades and patching
 - Security hardening per NIST standards
 - Application software installation
 - User management and audit log review
 - Virus protection and vulnerability mitigation
 - Disaster recovery support
 - Incident and problem resolution
- Systems engineering based on application requirements
- Related inheritable management controls
- Optional Virtual Desktop Platform as a Service
- Optional Professional Services such as
 - Database Management
 - Application Integration

Platform Options

Platform	Windows	Linux	AIX	Solaris
x86	X	X		
pSeries			X	
Sparc				X

How We Charge

Hosting charges are based on the number of virtual servers provided and actual allocated resources.

Price drivers:

- Number and type of virtual servers
- Amount of actual CPU and memory required
- Amount of actual Backup/Archive data retained
- Amount of actual SAN/NAS disk storage required
- Any RSA token requirements for Remote Access
- Additional charges may apply for optional Professional Services

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x7
System Availability	≥ 99.9% excluding planned downtime*

* NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays from 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

Cost Saving Tips

- Be prepared to provide key hosting requirements to expedite the planning process

Additional Information

- Customers must allow NITC to maintain/update the Operating System to ensure vendor supportability
- Transitional IaaS is also available for application development and as a temporary solution to support Enterprise Data Center Consolidation

Mainframe

The NITC Mainframe Platform as a Service offering provides a fully managed platform for applications.



Service Description

The NITC Mainframe Platform as a Service includes a fully managed operating platform for mainframe-based applications. This fully-managed service includes systems engineering services, software tools, storage services, technology refresh, and disaster recovery.

What is Included

- Fully managed NITC Network Services and infrastructure
- Fully managed zOS™ operational environment
- Third party software tools, utilities, and support
- System security administration and support
- Capacity planning and performance tuning
- 24x7 system and network monitoring and support
- Fully managed disk and tape storage services
- Fully managed Disaster Recovery of the operating platform
- Application data recovery support
- Customer certification testing support
- Job scheduling and related monitoring
- Standard database administration activities
- Systems engineering and consulting services
 - Install, configure, customize, and maintain the Operating System and system utilities
 - Research, coordinate, and apply OS maintenance
 - Management, analysis, and review of OS system audit logging
 - Troubleshoot and resolve OS-related problems
 - Disk and Tape storage administration
 - Perform system tuning within the limits of NITC configuration standards
- Related inheritable management controls

How We Charge

Hosting charges are based on actual usage measurements.

Price drivers:

- Prime time and non-prime time CPU usage
- High, Normal, Medium, or Deferred Priority
- Amount of disk storage utilized
- Amount of tape storage utilized
- Additional charges may apply for
 - Specialized software
 - Database administration
 - Application support

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	≥ 99.9% excluding planned downtime*

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

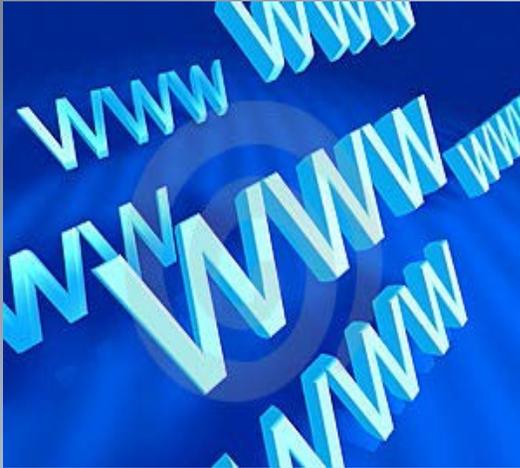
Cost Saving Tips

- Adhere to the scheduled maintenance window
- Provide at least 180 days' notice for growth or retraction of processing requirements
- Communicate project processing requirements on a quarterly basis
- Participate in scheduled disaster recovery testing
- Archive data only when necessary
- Delete any unnecessary data
- Utilize standard tools and applications

Platform as a Service

Web Server

We provide a full service Web Server solution for static web applications.



Service Description

NITC provides an enterprise-class web server solution that meets agency requirements for light-weight web applications that require very little dynamic data. This offering includes simple scripting capable of supporting light-weight database updates and data retrieval.

What is Included

- Single Midrange Platform as a Service virtual server
 - Red Hat Enterprise Linux
 - Apache Web Server
 - PHP and Perl scripting modules
 - MySQL Database as required
- Key NITC Technical Services to install, patch, and upgrade software components
- System-level Database Administration services for MySQL component when required
- Additional virtual CPU, memory, and storage resources when required
- Optional Fault Tolerant and Disaster Recovery capabilities
- Optional Planning and Integration services
- Optional Application Integration services

Configuration Options

- LAP (Linux, Apache, and PHP)

How We Charge

Hosting charges are based on the number of virtual servers provided and actual virtual resources allocated.

Price drivers:

- Number of LAP or LAMP base configurations required
 - Additional CPU, Memory, and/or Storage
 - Optional Fault Tolerance
- Optional Disaster Recovery
- Actual amount of optional Professional Services

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	≥ 99.9% excluding planned downtime*
Website Metrics	Weekly log delivery

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements
- Forecast response time and load expectations
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Platform as a Service

Web Application Server

We provide a full service Web Application Server environment for application hosting.



Service Description

NITC provides an enterprise-class web application server environment for robust, fault-tolerant web application hosting based on Java 2 Platform Enterprise Edition (J2EE) that includes:

JDK, EJB, Servlet, JSP, JMS, JDBC, JAX-RPC, SAAJ, Web Services for J2EE, JAXR, Java Authorization Contract for Containers, J2EE Management, J2EE Deployment, and J2EE Connectors

What is Included

- Single Midrange Platform as a Service (PaaS) virtual server
- WebSphere™ Application Server software licensing and maintenance
- Key NITC Professional Services to install, patch, and upgrade software components
- System-level Database Administration services for database component of web application server
- Additional virtual CPU, memory, and storage resources as required
- Optional Fault Tolerant and Disaster Recovery capabilities
- Optional Planning and Integration services
- Optional Application Integration services

How We Charge

Hosting charges are based on actual number of virtual servers and resources utilized.

Price drivers:

- Number of Web Application Servers required
- Additional virtual server resources required (CPU, Memory, and Storage)
- Optional Fault Tolerance requirements
- Optional Disaster Recovery requirements
- Actual amount of optional Professional Services

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	≥ 99.9% excluding planned downtime*
Website Metrics	Weekly log delivery

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

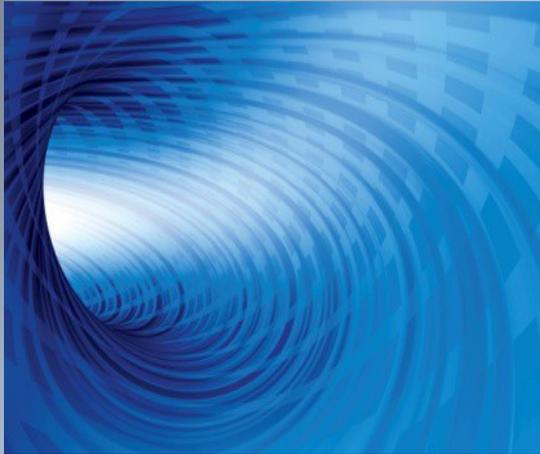
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Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements
- Forecast response time and load expectations
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Web Portal

NITC provides a full service Web Portal solution for integrated web applications and content.



Service Description

NITC provides an enterprise-class portal solution for web application hosting that allows aggregation of applications and content for delivery as a single, role-based application.

What is Included

- Midrange Platform as a Service virtual servers
- WebSphere™ Portal Server software licensing and maintenance
- Key NITC Technical Services to install, patch, and upgrade software components
- System-level Database Administration services for database component of web portal server
- Additional virtual CPU, memory, and storage resources when required
- Optional Fault Tolerant and Disaster Recovery capabilities
- Optional Planning and Integration services
- Optional Application Integration services

How We Charge

Hosting charges are based on actual number of virtual servers and resources utilized.

Price drivers:

- Number of Web Portal servers required
- Additional virtual server resources required (CPU, Memory, and/or Storage)
- Optional Fault Tolerance requirements
- Optional Disaster Recovery requirements
- Any additional Professional Services

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	≥ 99.9% excluding planned downtime*
Website Metrics	Weekly log delivery

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

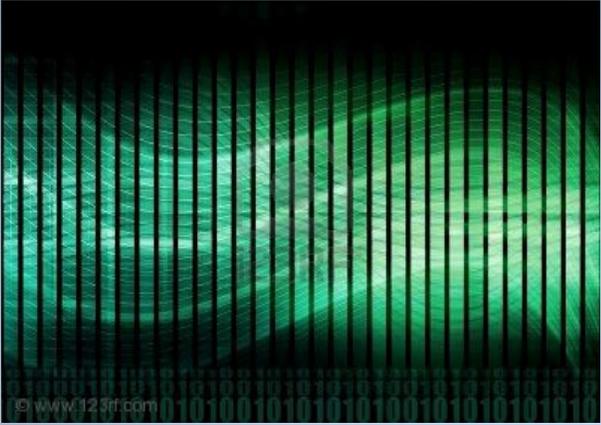
Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements
- Forecast response time and load expectations
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Platform as a Service

Database

NITC provides a fully managed Database platform solution for use as an integral part of an application hosting environment.



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Service Description

The NITC Database Platform as a Service offering provides a fully managed platform solution for use as an integral part of an overall customer application hosting environment. The offering provides scalable database services that provide required performance, reliability, and functionality while also providing cost savings associated with the overall ease of management and the economies of scale associated with a common, standardized solution.

What is Included

- Fully managed database server
- Fully managed virtual server
 - Standardized storage configurations
 - Data Files
 - Transaction Logs
 - Database Backups
 - Database software licensing and maintenance
 - Database software installation and configuration
 - Database operations, patching, and maintenance
 - Operating System and Database Administration
 - Software installation and maintenance
 - System-level patching and support
 - Full database and transaction log backups for Point-In-Time database recovery
 - System and Database monitoring services

Database Software Options

- Microsoft™ SQL Server™
- Oracle™
- MySQL™

How We Charge

Hosting charges are based on the number of virtual servers provided and actual allocated resources.

Price drivers:

- Number of Database virtual servers required
 - Optional High Availability
 - Optional Disaster Recovery
- Amount of actual CPU and memory required
- Amount of data storage required in 10GB increments
- Additional charges for optional data retention periods
- Additional charges for optional Professional Services

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	≥ 99.9% excluding planned downtime*
Notification Services	Available upon request

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Enterprise Content Management



Service Description

The NITC Enterprise Content Management solution enables all authorized users within an organization to create, capture, store, manage, publish, view, search, archive all types of documents, and provides the ability to support the entire content management lifecycle.

Contributors are granted the ability to publish content directly, without a web masters intervention, vastly increasing the speed of making information available on the web.

What is Included

- Midrange Platform as a Service virtual server resources
- Oracle™ Universal Content Management software licensing and maintenance
- Key NITC Technical Services to install, patch, and upgrade software components
- System-level Database Administration services for database component of web content management
- Additional virtual CPU, memory, and storage resources when required
- Optional Fault Tolerant and Disaster Recovery capabilities
- Optional Planning and Integration services
- Optional Application Integration services

How We Charge

Hosting charges are based on actual number of virtual servers and resources utilized.

Price drivers:

- Actual number of Web Content Management solutions required
- Additional virtual server resources required (CPU, Memory, and/or Storage)
- Optional Fault Tolerance requirements
- Optional Disaster Recovery requirements
- Any additional Professional Services

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	≥ 99.9% excluding planned downtime*
Website Metrics	Weekly log delivery

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements
- Forecast response time and load expectations
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Platform as a Service

Document Management

NITC provides a full service Document Management solution.



Service Description

The NITC document management solution allows organizations to effectively and efficiently capture, secure, share and distribute digital and paper-based documents. The solution includes a workflow process to mirror the review of information and supports process automation for document creation, review, and revision.

What is Included

- Single Midrange Platform as a Service virtual server
- Oracle™ Universal Content Management software licensing and maintenance
- Key NITC Technical Services to install, patch, and upgrade software components
- System-level Database Administration services for database component of Document management
- Additional virtual CPU, memory, and storage resources when required
- Optional Fault Tolerant and Disaster Recovery capabilities
- Optional Planning and Integration services
- Optional Application Integration services

How We Charge

Hosting charges are based on actual number of virtual servers and resources utilized.

Price drivers:

- Number of Document Management solutions required
- Additional virtual server resources required (CPU, Memory, and/or Storage)
- Optional Fault Tolerance requirements
- Optional Disaster Recovery requirements
- Any additional Professional Services

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	≥ 99.9% excluding planned downtime*
Website Metrics	Weekly log delivery

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements
- Forecast response time and load expectations
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Platform as a Service

Web Search



Service Description

The NITC Enterprise Search offering provides customizable, web search-engine functionality for web applications. The solution can be configured to search collections of web pages that are customized per application. These collections can include anything from the entire domain to a single web page. The search catalog offers services for public facing and protected sites using USDA's SSO (eAuthentication) system.

What is Included

- Best-in-class appliance-based search
- Cross-site, cross-agency, cross-department search capability
- Customizable search based on website logical design
- Customizable search result output
- File system, Web repository, Database, Feed, Connector, OneBox module-based crawl ability
- Secure site crawl-ability (eAuthentication)

How We Charge

Hosting charges are based on the following factors:

- Actual number of website URLs crawled
- Setup fee for highly customized integrations

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	≥ 99.9% excluding planned downtime*
Website Metrics	Weekly log delivery

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements
- Forecast response time and load expectations
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Platform as a Service



Service Desk: 888-USE-NITC

IdeaJam

We provide a full service Web Application Server environment for application hosting.

Service Description

IdeaJam™ is a fully customizable ideation and collaboration tool that provides a place where people can share their ideas and gauge the marketability, popularity and viability with input from others.

When an idea gets posted, others can help promote or demote the idea and provide comments. Popular ideas will rise to the top of the site based on votes. Leaderboards, multiple views of ideas, and statistic charts allow a business owners to evaluate the activity of users.

What is Included

- Integrated IdeaJam™ Solution
- Initial setup and configuration of site
- Multi-node, highly available architecture
- Production and non-Production environment
- Integration with USDA eAuthentication single sign on protection
- IBM Collaboration Application Server

How We Charge

Hosting charges are based on actual number of instances utilized

Price drivers:

- Number of instances utilized
- Actual amount of optional Professional Services

Service Level Metrics

Measure	Target SLA
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	99.99% excluding planned downtime*
Website Metrics	Weekly log delivery

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered 99.997% availability.

Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements
- Forecast response time and load expectations
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Platform as a Service



Service Desk: 888-USE-NITC

USDA Connect

We provide a full service Social Networking suite for collaboration among USDA Employees.



Service Description

NITC provides an enterprise-class turn-key Social Networking Solution that enables interaction and collaboration of all Department associates, partners and customers.

What is Included

- Communities – Allows collaboration between community members using activities, blogs, wikis, and forums and shared files.
- Documents – Both personal and community files can be shared with other members.
- Wikis – Multiple members can collaboratively edit content
- Blogs – Members can present their ideas in a Weblog and gain feedback from other interested members.
- Activities – Gather all your emails, IM Chats, documents, messages and other information in a central repository to accomplish your goals.
- Homepage – Update your Connect homepage with the communities, blogs, forums and activities that are important to your daily goals.

How We Charge

Service charges are based on actual number of Agency employees.

Service Level Metrics

Measure	Target SLA
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	99.99% excluding planned downtime*
Website Metrics	Weekly log delivery

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered 99.997% availability.

Platform as a Service

Web Accelerator (Akamai)

NITC can provide Web Accelerator service to further enhance web application performance and availability.



How We Charge

Hosting charges are based on the following factors:

- Actual usage of licensed service based on bandwidth and storage consumption
- Actual number of optional Akamai professional service hours

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	≥ 99.9% excluding planned downtime*
Website Metrics	Weekly log delivery

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

Service Description

NITC can provide 3rd party Akamai Web Accelerator service to further enhance web application performance and availability as well as deliver static websites. Front end redundancy and geographically dispersed nodes for last loop efficiency are included.

Built upon Akamai's EdgeAdvantage™ platform, Akamai's Dynamic Site Accelerator™ solution introduces intelligent content generation and comprehensive site delivery at the edge and provides E-businesses with the optimal solution for dynamic website availability, scalability and performance.

What is Included

- Akamai's global Content Delivery Network (CDN)
- Basic and Encrypted (SSL) content acceleration
- Live and on-Demand streaming
- NetStorage for online storage
- Management Console to manage content
- Optional Akamai professional services support

Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements
- Forecast response time and load expectations
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

CloudVault



Service Description

NITC can provide collaboration on the cloud through its secured cloud based storage service. This cloud based remote storage capability is accessible from the Internet through mobile device, browser, or thick client which will provide agencies/organizations the capability to have their own private cloud storage. Users of cloud storage can share content with other cloud storage users within that domain.

What is Included

- NITC PaaS and Storage Services
- Web based interface to securely upload and download files
- Version control
- Sharing of files with both registered and no-registered users
- Secure file sharing with password and expiration date
- Downloadable sync clients to sync from your desktop , laptop and mobile devices

How We Charge

Hosting charges are based on the following factors:

- Number of registered users within CloudVault
- Actual storage used within CloudVault

Service Level Metrics

Measure	Target SLA
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	99.99% excluding planned downtime*

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered 99.997% availability.

Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements
- Forecast response time and load expectations
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Platform as a Service

Virtual Application Hosting (Citrix)



Service Description

The NITC Virtual Application Hosting service provides the technology necessary to enable the hosting of business applications remotely in the NITC Enterprise Data Center. Combined with other key enabling NITC cloud services, the Virtual Application Hosting service can provide a traditional end user experience for business applications.

What is Included

- Fully managed and maintained infrastructure
 - State-of-the-art server hardware & software
 - Periodic technology refresh
- Managed solutions available
- Citrix™XenApp™
 - Virtual presentation of business applications
 - Secure Telework capabilities
- Citrix™XenDesktop™
 - Virtual presentation of complete desktop
 - Provides users with desktop functionality

How We Charge

Costs are based on actual application hosting requirements and virtual application integration services required.

Price drivers:

- Actual dedicated hosting requirements
- Number of concurrent users of XenApp™ integrated applications
- Number of XenDesktop™ integrated desktops
- Application integration services as required (Professional Services)

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	≥ 99.9% excluding planned downtime*

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

Cost Saving Tips

- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Application Integration

NITC can provide key integration and application administration services.



How We Charge

Charges are based on actual numbers of professional services hours.

Price drivers:

- Scope and timeframe of integration project
- Required software licenses
- Additional charges may apply for
 - Platform as a Service
 - Infrastructure as a Service
 - Other Professional Services

Service Level Metrics

Measure	Service Level Targets
Incident Response	24 x 7

Service Description

NITC can provide the professional services required for integrating and administering enterprise-class business applications.

What is Included

- Application architecture planning
- Application integration expertise and consultation
- Application software installation, maintenance, and support
- Supported Applications Services include:
 - IBM HTTP Web server™
 - IBM WebSphere Application Server™
 - IBM WebSphere Portal™
 - Oracle/Stellent Content Management™
 - Google Enterprise Search™
 - IBM MQ Series™

Cost Saving Tips

- Avoid greater costs associated with high priority service
- Engage project team early to document requirements
- Minimize changes during project delivery
- Avoid historical project cost estimation
- Ensure that all requirements are documented

Additional Information

- Customer acceptance of deliverables is required
- Administration and support for other application software is considered on a case-by-case basis

Professional Services

Database Management



NITC can provide Database administration and consulting services.

Service Description

NITC Database Management services can provide the necessary professional expertise to install, configure, operate, and maintain industry standard database software.

What is Included

- Database engineering and architecture design
- Database software installation and configuration
- Database operations, patching, and maintenance
- Initial database installation and integration
- Database backup and recovery
- Pre-production and testing support
- Management of privileged user accounts to manage tables, indexes, and other data structures
- Problem and incident management
- Performance tuning and troubleshooting

The full suite of standard offerings includes:

Database	Platform		
	Midrange	z/OS	z/Linux
DB2	x	x	x
Oracle™	x		x
SQLServer	x		
MySQL	x		

How We Charge

Charges are based on actual number of professional services hours.

Price drivers:

- Size and number of database instances
- Number and frequency of database refreshes
- Actual software licensing and maintenance
- Additional charges may apply for
 - Platform as a Service
 - Infrastructure as a Service
 - Other Professional Services

Service Level Metrics

Measure	Service Level Targets
Incident Response	24 x 7

Cost Saving Tips

- Utilize standard software platforms
- Establish archive and purge criteria to minimize storage requirements

Additional Information

- Support for non-standard Database requests will be evaluated on a case-by-case basis

Project Management

NITC can provide experienced project managers to ensure timely success of service delivery projects.



Service Description

Project managers work closely with customers, vendors, and NITC functional areas to coordinate efforts and provide necessary project management functions to ensure timely project success.

What is Included

- Development of Project Charter
- Development of project plan and schedule
- Coordination and scheduling of project activities across customer and NITC functional areas
- Consultation on operational and infrastructure requirements, standards and configurations
- Assistance with standard requests for service
- Facilitate project status meetings
- Timely project status reporting
- Address project issues with NITC functional areas and management
- Escalation of significant issues to customers and NITC executive management
- Manage project scope and deliverable requirements
- Document changes to project scope and schedule
- Facilitate and document project closeout
- Access to the Project Management Resource Center

How We Charge

Current pricing is based on time and materials. Customer will only be billed for actual hours worked.

Price drivers:

- Complexity and scope of the project
- Number of functional areas involved

Cost Saving Tips

- Avoid higher costs associated with high priority service
- Engage project team early to document requirements
- Minimize changes during project delivery
- Avoid historical project cost estimation
- Ensure that all requirements are documented

Additional Information

- Customer signoff of deliverables and releases is required
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Disaster Recovery

NITC can provide Disaster Recovery planning and coordination services.



How We Charge

Charges are based on actual numbers of professional services hours.

Price drivers:

- Frequency and complexity of DR planning
- Frequency and complexity of DR testing

Service Level Metrics

Possible Disaster Recovery Options

Service / Option	RTO	RPO*
Database Replication	2 hours	2 hours
Disk Replication	4 hours	2 hours
Tape Replication	24 hours	24 hours
Offsite Tape Rotation	72 hours	72 hours

* - Actual RPO is dependent on critical component availability for the timely replication of data.

Service Description

NITC can provide assistance to customers with their Disaster Recovery (DR) planning, coordination, and incident response based on the Customer's Business Impact Analysis (BIA), Recover Point Objectives (RPO), Recovery Time Objectives (RTO), and overall recovery priority.

What is Included

- Facilitation, planning, and coordination with NITC and Customer technical staff and coordinators to:
 - Assist with customer application Business Impact Analysis
 - Co-develop customer application Disaster Recovery Plans and recovery procedures
 - Participate in table-top Disaster Recovery Exercises
 - Participate in functional Disaster Recovery Exercises
 - Assist with documenting customer Test, Training, and Exercise (TT&E) programs and After Action Reports

Cost Saving Tips

- Purge or archive unused data
- Perform a Business Impact Analysis to determine application RTO and RPO requirements
- Ensure the appropriate data protection solution is utilized to meet actual RTO and RPO requirements.

Additional Information

Typical Recovery Options and Relative Costs

Technology	Recovery Scenario	Recovery Time	Potential Data Loss	Cost
Redundancy / Clustering	Hardware Failure	Very fast	None	\$\$\$\$\$
Remote Replication	<ul style="list-style-type: none"> • Hardware Failure • Disaster 	Very fast, but application dependent	Minimal	\$\$\$\$
Continuous Data Protection	<ul style="list-style-type: none"> • Hardware Failure • Application Corruption • User Error 	Fast but depends on the error	Minimal / None	\$\$\$
Point-in-Time Copy	<ul style="list-style-type: none"> • Hardware Failure • Application Corruption • User Error 	Fast but depends on the error	Data after PIT copy is made may not be recovered. Recovery is not guaranteed	\$\$
Backup	<ul style="list-style-type: none"> • Hardware Failure • Disaster • Application Corruption • User Error 	Bit faster Slow	Data after backup may not be recovered	\$\$ \$

Planning and Integration

NITC can provide the technical expertise to help design, plan, and integrate enterprise-class solutions.



Service Description

NITC can provide key professional services to assist customers in the design, planning, and integration of enterprise-class solutions. These key services help eliminate project risk and deliver robust technology solutions based on industry-best practices.

What is Included

- Insight into industry and department
 - Technology roadmaps
 - Strategic plans
 - Best Practices
 - Lessons learned
- Integration and project planning support
- Business requirements analysis
- Technical requirements identification
- Technical architecture solution design
- Project risk identification and prioritization
- Definition of Enterprise Data Center (EDC) standards
- Standard architecture governance
- Technical disaster recovery planning
- Capital investment analysis
- Technology and system integration cost estimation

How We Charge

Charges are based on actual number of professional services hours.

Price drivers:

- Scope and timeframe of technology project
- Additional charges may apply for
 - Platform as a Service
 - Infrastructure as a Service
 - Other Professional Services

Cost Saving Tips

- Avoid greater costs associated with high priority service
- Engage project team early to document requirements
- Minimize changes during project delivery
- Avoid historical project cost estimation
- Ensure that all requirements are documented

Additional Information

- Customer acceptance of deliverables is required
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Network Bandwidth (Managed ISP)

To provide a cost effective, secure customer connectivity alternative to higher cost dedicated circuit solutions.



How We Charge

A flexible cost structure based on bandwidth utilization that allows customers to pay only for what they use.

- Monthly L3 service line costs along with maintenance costs charged by bandwidth utilization
- One Time circuit setup fee

Service Level Metrics

Measure	Target SLA
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	99.5% excluding planned downtime*

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

NOTE: NITC utilizes Level 3 Network for Managed ISP services. The Level 3 is contractually guaranteed to be 99.5% available but with dual-site/DR connectivity, it can be better than 99.5%.

Service Description

In partnership with Level 3 Communications, NITC will provide a lower cost, Internet based, and secure customer connectivity option for small to moderate sized application hosting requirements.

What is Included

NITC will be responsible for all network and security hardware, software, maintenance and support on the NITC side of the Level 3 Minimum Points of Presence at the KC and St. Louis data centers. This NITC support will encompass

- Customer ISP circuit setup and test
- Customer ISP circuit troubleshooting
- Customer ISP service re-provisioning
- Security establishment and monitoring
- Establishment of Interagency Security Agreements
- Interface with Level 3 on behalf of customer

ASOC will be responsible for the establishment and ongoing maintenance and support of any NITC ISP service monitoring they may require. NITC provided the ASOC a server to host the ASOC monitoring tool(s).

Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements
- Forecast response time and load expectations
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale

Colocation Racks



Service Description

NITC's Midrange Colocation Service provides customers with facilities, physical security, and in the case of "on-network" colocation customers, network security. NITC will not provide any OS administration services to colocation customers.

What is Included

- Colocation Services include:
 - Facilities planning
 - Standard rack
 - 2 L6-30 power whips to rack with PDUs
 - 4Kw power for rack
 - NITC will provide power to the rack. Standard power takes full advantage of computer room power redundancies. Additional power outside of what is provided to the rack will be an additional charge to install the power whips.
 - Physical system resets upon customer request
 - Customer notification of facility related incidents
 - Physical equipment installation assistance (funding may be required)
 - External rack cabling services to NITC shared services (see Network Cabling below)
 - Optional customer asset disposal
 - Physical security monitoring

How We Charge

Charges are based on a per rack usage and power in excess of 4Kw.

Price drivers:

- Number of racks
- Power usage in excess of 4Kw per rack
- Additional charges may apply for
 - Power whips beyond the base 2 L6-30 per rack
 - Other Professional Services

Service Level Metrics

Measure	Service Level Targets
Incident Response	24 x 7

Cost Saving Tips

- Engage project team early to document requirements
- Ensure that all requirements are documented

Additional Information

- Customer acceptance of deliverables is required
- All equipment must be dual corded if this is not an option the customer is responsible for providing appropriate rack-mounted Automatic Transfer Switches (ATSs) to power single corded devices.
- The customer must submit a NITC Service Desk Request for any hardware activity such as adding, removing, and relocating hardware SD-0030.
- The customer is responsible for all copper and fiber network cabling within their rack(s). For all network connections outside the customer rack(s), the agency must submit a NITC Service Desk Request (see below URL for assistance) detailing the requirement(s). Only NITC authorized cable installers may install copper or fiber cabling from agency racks to any NITC shared services. The customer must coordinate all other external rack cable installations with all involved service providers (e.g., the OCIO/Enterprise Network Service, OCIO/Client Technology Services, Local Exchange Carriers, etc.). The customer is responsible for funding all external cabling requirements.

Other Hosting Services

Managed Hosting

We manage your servers up through the Operating System while providing a secure operating environment.



Service Description

NITC will manage customer-provided servers up through the Operating System (OS) in a secure operating environment including systems installation, engineering, administration, and support.

What is Included

- NITC enterprise class Facility services
- Availability and utilization monitoring
- Customer notification of related incidents
- Physical equipment installation assistance
- Cabling services per Enterprise Data Center standards
- Optional customer asset disposal
- Full Operating Systems administration services
 - Limited systems engineering
 - OS installation and customization
 - OS upgrades and patching
 - Security hardening per NIST standards
 - Application software installation assistance
 - User management and audit log review
 - Virus protection and vulnerability mitigation
 - Disaster recovery support
 - Incident and problem resolution
- Optional SAN/NAS disk storage services
- Backup/Archive services with customizable retention
- Network services
 - Local and Wide Area Networking
 - Network Security Services
- Related inheritable management controls
- Optional Professional Services such as:
 - Planning and Integration
 - Application Integration
 - Database Management
 - Project Management

Supported Operating Systems

Operating System	Server Platform		
	x86	Sparc	pSeries
VMWare™	x		
Windows™	x		
Redhat™	x		
Solaris™	x	x	
AIX™			x

How We Charge

Hosting charges are based on the number of physical and virtual servers managed.

Price drivers:

- Amount of actual cabling and rack space required
- Amount of actual Backup/Archive data retained
- Additional charges may apply for
 - Optional SAN/NAS disk storage
 - Optional Professional Services

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7
System Availability	Varies by customer environment

NOTE: NITC utilizes the USDA Universal Telecommunication Network (UTN) for Wide Area Network services. The UTN is contractually guaranteed to be 99.9% available but has historically delivered over 99.99% availability.

Cost Saving Tips

- Utilize NITC Network services
- Utilize NITC SAN/NAS and Backup/Archive services
- Utilize server virtualization to reduce hosting costs

Additional Information

- Customers are required to adhere to NITC Enterprise Data Center power, racking and cabling standards.
- Customers are required to adhere to NITC Network vulnerability mitigation policy
- Customers must allow NITC to maintain/update the Operating System to ensure vendor supportability

Security Services



Service Desk: 888-USE-NITC

Information Systems and Network Security

NITC provides key information and network security services to ensure a safe operating environment for business applications.



Service Description

NITC provides Information Systems and Network Security services that provide safe network access, security administration, monitoring and assessment to meet data security management requirements.

What is Included

NITC performs the following system security tasks for systems physically and/or logically located within the NITC Enterprise Network boundaries:

- Enterprise Network Firewall and Access Control List administration
- Enterprise Network Remote Access and Admission Controls administration
- Enterprise Network Intrusion Detection System (IDS) monitoring
- Enterprise Operating System (OS) vulnerability scanning and reporting to the Customer System Security Officer
- Enterprise compliance scanning to ensure the systems are maintained with proper baseline configuration standards and patch management
- Identity and Access Management administration which includes:
 - OS level security in the form of User ID/Password verification
 - Enforce strict security policies regarding system access
- Optional Application Scanning is available for an additional cost

How We Charge

With the exception of Application Scanning, the cost of this service is included when NITC Network Services are utilized.

Hosting services that include Network Security Services:

- Platform as a Service
- Infrastructure as a Service
- Managed Hosting services

Costs associated with optional Application Scanning services are based on software license fees and amount of actual professional services hours incurred

Service Level Metrics

Measure	Service Level Targets
System Monitoring	24 x 7
Incident Response	24 x 7

Cost Saving Tips

- Utilize NITC Network Services instead of hosting a private networking solution
- Provide at least 180 days' notice for growth or retraction of processing requirements
- Communicate projected networking requirements on a quarterly basis
- Limit internet usage to business related activities

Additional Information

NITC also provides Security Governance Services that include limited control documentation, control inheritance, and audit support.

Security Services

Central Authentication and Role Based Access Controls Service

NITC provides key information and systems security services to ensure a safe operating environment for business applications.



Service Description

The Central Authentication service uses a Microsoft Active Directory domain installed on Windows 2012 R2 servers leveraging virtual machine infrastructure dispersed among multiple data center locations for high availability and fault tolerance. The Central Authentication System (CAS) provides a highly available authentication and directory services solution for PAAS, IAAS, and Managed Hosting customers.

What is Included

The primary focus of the CA-RBAC service is to establish Elevated Privilege (EP) controlled access into hosted resources. All data center infrastructure and hosted customer systems inside the data center’s logical security boundaries use the system today. For servers and various other forms of resources which reside within the USDA UTN TIC such as IAAS or Managed Hosting, the CA-RBAC service can be extended into other boundaries for customers. If a domain trust is required to establish pass-through authentication services from a different credential store or identity provider, the NITC’s CA-RBAC system can support that type of interconnectivity.

How We Charge

- A flexible cost structure that allows customers to pay only for the devices that are connected to the Central Authentication System.
- All maintenance is inclusive in the monthly utilization fee.

Service Level Metrics

Measure	Target SLA
Authentication Service	24 x 7
System Monitoring	24 x 7
Incident Response	24 x 7

* - NITC reserves the option to schedule routine infrastructure maintenance activities on Sundays between 1800 to 2400 hours Central Time.

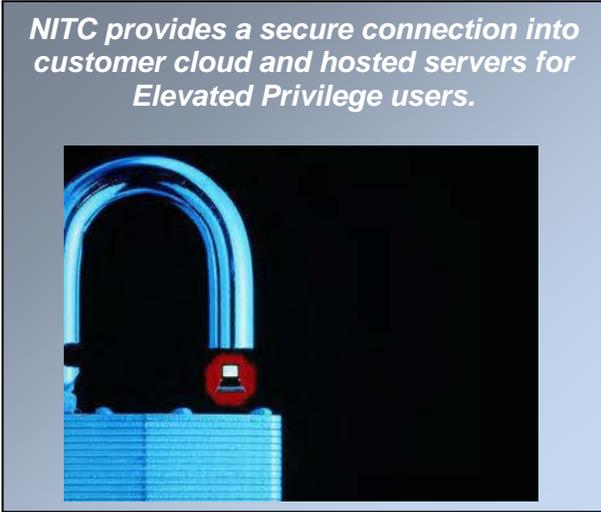
Cost Saving Tips

- If device no longer used, make sure to request decommission so that device is no longer billed for CA-RBAC service.

Additional Information

- If external authentication or RBAC systems need to interface with the CA-RBAC service, an Interconnection Security Agreement (ISA) will be established between organizations. The ISA will define how the interconnectivity will be used, any risks, and what security controls are associated with the interconnectivity for both parties.

Remote Access VPN



Service Description

The Remote Access Virtual Private Network (RA VPN) service securely connects customer Elevated Privilege (EP) users to their server and applications in NITC's PaaS, IaaS, Managed Hosting, and other cloud and hosting services. For flexibility and security, the RA VPN service can reverse proxy a remote session or allow full packet pass-through from end user systems to servers. A host checking feature, network policy based access controls, and multi-factor authentication reinforces least privilege access to customer systems. The RA VPN service is integrated with NITC's Central Authentication & Role Based Access Controls (CA-RBAC) service. This tightly coupled integration enables customers to provision remote access for their EP users through a self-service interface and offers RA VPN users the ability to reset their passwords.

What is Included

The Remote Access VPN service offers a browser based access or thick client for end user connectivity. As users establish remote access sessions, their inspected at the machine level and required to use approved credentials before login. The RA VPN appliances known as the Network Access Gateways (NAG), are built to be highly available as clusters per city and span multiple cities in support of disaster recovery services.

In support of federal government remote access requirements, all remote access traffic is encrypted and routed through the VPN tunnel. This insures customer data in transit is appropriately inspected and protected.

How We Charge

- Customers are billed using a daily usage based rate per server. This service charge may be bundled in other NITC service offerings, check with your account manager for further details.
-
- Customers pay for the remote access VPN service to provide them a secure connection into their hosted server while using an Elevated Privilege (EP) account.
-
- Billing starts when a customer server is built and stops when a server is decommissioned.
-
- All licensing, software upgrades, and maintenance to the RA VPN infrastructure is included in the rate.

Service Level Metrics

Measure	Target SLA
RA VPN Service	24 x 7
System Monitoring	24 x 7
Incident Response	24 x 7

Cost Saving Tips

- If a server is no longer required, make sure to decommission the asset so it stops the billing.

Additional Information

- Each customer is provided a separate remote access IP address pool which is filtered through firewall policies control access into their hosted networks and systems.
- To compliment the RA VPN Service network access controls, NITC offers a server-level Role Based Access Controls (RBAC) integrated solution. Customers who purchase a PaaS server automatically get the best of both network and system role based access control solutions as a value add.
- For customers subscribing to the Disaster Recovery service, the Remote Access VPN service integrates to meet customers DR and DR testing requirements.

Federation Services - Hosting Provider Gateway



Service Description

NITC's Federation Services (FDS) provides Microsoft or Open System users with credential access to web systems and applications located across organizational boundaries. It uses a claims-based access control authorization model to maintain application security and implement federated identity authentication into hosted applications. The solution provides a gateway for all hosted web service systems to use their preferred identity provider credential.

What is Included

NITC's federation gateway supports customers who want to use eAuthentication, their federal desktop domain, or other identity provider credentials with their hosted systems and applications within the PaaS and IaaS environments for Single Sign On (SSO).

- Web Application and System Integration
 - One time initial setup of customer application system with credential attributes with NITC's FDS solution.
- URL Connector Management and Monitoring
 - Update claims, proxy rules, and directory services interface in FDS system based on customer requirements
 - FDS monitoring, troubleshooting URL issues, infrastructure management, maintenance and incident management.
- High availability clusters support COOP/DR needs

How We Charge

- A flexible cost structure for federation services that allows customers to pay only for integrated URLs. Each URL is billed as a per URL per month fee.
- Once integrated, access rule updates, enhancements, system maintenance and federation infrastructure monitoring is inclusive in the monthly utilization fee.

Service Level Metrics

Measure	Service Level Targets
Authentication Service	24 x 7
System Monitoring	24 x 7
Incident Response	24 x 7

Cost Saving Tips

- Engage NITC early in the scoping phase of a new project to identify all business and technical requirements.
- Utilize other OCIO service offerings to minimize application integration efforts and reduce costs through economies of scale.
- Get in early with federation services to receive future enhancements as the technology use cases rapidly expand.

Additional Information

- As large departments seek to expand and interconnect systems, federation services will be a viable technology to address future requirements.
- NITC's Federation Services Hosting Provider Gateway solution supports the native Security Assertion Markup Language (SAML) protocol without server agents to achieve SSO for customers who desire web service authentication transparency.

Security Services

Digital Certificate Issuing for Private and Public Key Infrastructure (PKI) Services



Service Description

NITC’s digital certificate issuing service offers customers the ability to leverage Public Key Infrastructure (PKI) and establish trustworthy connections for their application requirements. This service can be used throughout NITC’s PaaS, IaaS, and Managed Hosting offerings as well as with special requests. NITC is able to issue digital certificates to support: web services, client authentication, code signing, and domain controllers. Certificates are issued from a private hosting domain certificate authority or a public trust certificate authority for customers with internet facing systems. NITC’s issued digital certificates support HTTPS, SSL, and TLS using PKI V2 infrastructure. This service enables the use of encryption and digital signature services across a wide variety of systems and applications.

What is Included

NITC can issue the following digital certificate types:

- Internal Private PKI Digital Certificates
 - Web Server TLS/SSL
 - Client Authentication
 - Code Signing
- External Public PKI Digital Certificates
 - Web Server TLS/SSL
 - Client Authentication
 - Wild Card
 - Multi-Domain EV / UC / SAN

How We Charge

- A flexible cost structure for digital certificates which customers pay only for certificates they’re issued.
- Digital certificates are billed as a one-time fee for the lifespan of that certificate.
- Certificates are typically issued for a 2 year period and remain valid through their expiration date.

Service Level Metrics

Measure	Target SLA
Public Key Infrastructure Service	24 x 7
System Monitoring	24 x 7
Incident Response	24 x 7

Cost Saving Tips

- Internal private certificates can be issued if your system is not internet accessible (meaning only accessed by internal systems or users).
- Multi-domain certificates may cost less and have a longer life-cycle than a Wild Card certificate.

Additional Information

- For security and authenticity, certificates are only issued from a Certificate Signing Request (CSR). Certificates are issued rapidly once a CSR is received.
- Once issued, certificates can be installed and managed by NITC or customer application administrators.
- To initiate the renewal process, notifications are established 30 days prior to expiration.
- NITC can register public domains on the customer’s behalf through an authorization process.

Token Services with System Integration



Service Description

The NITC Token service can integrate with data center infrastructure, NITC hosted servers or applications, and external systems or applications in which multi-factor authentication is desired.

What is Included

NITC would like to support customers who want to consolidate their token solutions, reduce infrastructure costs, and provide a flexible alternative in establishing multi-factor authentication capabilities to complement their HSPD-12 smartcard solutions.

- Token solution capabilities
 - Hard (fobs) tokens have 6-8 year battery
 - Soft tokens for Smartphones
 - Emergency Temp tokens can be issued
 - Self-Service PIN reset capabilities using challenge questions for verification
- Integration with the NITC Token solution for each system / application.
 - Integration costs cover interconnection documentation and connectivity token system configuration, and technical service hours.
- High Availability between NITC’s Kansas City and St. Louis data centers.

How We Charge

- A flexible cost structure for token utilization that allows customers to pay only for what they use. Tokens are billed as a per token / per month fee.
- No maintenance or fob replacement costs, it’s inclusive in the monthly utilization fee.
- For external systems or any application, a One-Time Fee (OTF) is charged for integrating with the NITC Token solution.
- For token services associated with remote access into PaaS and Managed Hosting environments, the token integration fee is included, utilization token fees still apply.

Service Level Metrics

Measure	Service Level Targets
Authentication Service	24 x 7
System Monitoring	24 x 7
Incident Response	24 x 7

Cost Saving Tips

- If a user is finished with the token, turn it in to reduce token utilization charges.

Additional Information

- Tokens can be delivered as hard fobs usually within 24-48 hours to a user or they can be installed and registered on smartphone as secure applications usually within 1- 4 hours.

Security Services



Service Desk: 888-USE-NITC

Security Governance

NITC can provide information and assurance that NITC services comply with mandatory security controls.

NIST Special Publication 800-53A

NIST
National Institute of Standards and Technology
U.S. Department of Commerce

Service Description

NITC provides information and assurance that NITC services comply with mandatory security controls.

What is Included

- FISMA compliance for NITC-provided services
- Standards and guidelines, including minimum requirements, for providing adequate information security for all agency operations and assets
- Supervision and oversight of NITC activity to ensure enforcement and monitor usage of information system access controls
- Security controls review to enable more consistent, comparable, and repeatable assessments
- Annual internal and 3rd party audits and assessments of security controls to determine overall control effectiveness
- Risk Management Framework for security categorization, security control selection and implementation, control assessment, information system authorization, and control monitoring
- More complete, reliable, and trustworthy information for organizational officials, to support security accreditation decisions, information sharing, and FISMA compliance

How We Charge

This critical value-added service is included with NITC Hosting Services.

Hosting services that include Security Governance:

- Platform as a Service
- Infrastructure as a Service
- Managed Hosting services

Service Level Metrics

Measure	Service Level Targets
Inquiry Response	8 x 5
Audit Results	Annual
Control Inheritance Matrix	Upon Request*
Control Descriptions	Upon Request*

* - Documentation provided is controlled and For Official Use Only (FOUO)

Cost Saving Tips

- Utilize a full complement of NITC services to obtain the most inheritable management controls

Relative Control Inheritance

NITC Service	NITC Network	NITC Storage	Inheritable Controls
Managed Hosting	No	No	✓ ✓ ✓ ✓
	Yes	No	✓ ✓ ✓ ✓ ✓ ✓
	Yes	Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
Infrastructure as a Service	Yes	Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
Platform as a Service	Yes	Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

Additional Information

A full matrix of inheritable management controls that identifies which controls are potentially inheritable as part of NITC's other hosting services is available upon request.

Business Management

NITC Account Managers help translate individual business needs into technical requirements and help customers find their way to optimal service delivery.



Service Description

Account Managers dramatically enhance the overall NITC customer experience by assisting with the translation of business application needs into technical hosting requirements and by providing an escalation point for customer services issues.

What is Included

- Ongoing customer relationship management
 - Develop an understanding of customer business functions
 - Identify customer business requirements
 - Assist with the definition of technical requirements
 - Represent NITC functional areas and the overall service delivery process
 - Provide an escalation point to customer service delivery issues
 - Ensure that key issues are escalated to NITC executive management
- Provide information about available NITC services and related costs

- Facilitate customer meetings regarding new projects with NITC functional areas
- Provide pricing estimates for new projects and changes to existing services
- Establish and maintain formal customer service agreements
 - Financial analysis to forecast usage and growth/retraction requirements
 - Monitor actual billing and make changes to agreements as necessary
- Monitor the overall Service Management lifecycle from establishment through retirement
- Provide information regarding planned changes to NITC services for strategic planning purposes
- Collect planned capacity and technical requirements and ensures information is included in NITC strategic planning and capacity forecasts

How We Charge

This key value-added service is included with other NITC services at no extra cost.

Cost Saving Tips

- Provide thorough business and technical requirements
- Utilize Planning and Integration Services to architect the hosting solution and identify all potential costs
- Utilize NITC Project Management Services to ensure timely project delivery
- Utilize Disaster Recovery Services to plan and coordinate DR testing
- Minimize changes during project delivery
- Avoid historical project cost estimation
- Keep Account Managers informed of planning changes and capacity requirements



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