



2013 Annual Report

National Information Technology Center
USDA/OCIO Enterprise Data Center



Partnering for Success

To Our Stakeholders



From the ACIO (Acting),

“Thank you for entrusting your business applications and data assets to NITC. We take our responsibility to you seriously and we are focused on continuing to earn your trust and commitment.”

The performance outcomes shown throughout this annual report demonstrate how NITC strives to serve our customers by our straight-forward-business model, attention to lower costs, and a business strategy driven from customer input. I believe that the best strategy in the world will not work without the right people to execute it, and our employees are the backbone of NITC’s success. They continue, year after year, to deliver strong results, and I want to again thank every member of my team for their dedicated support. I have great confidence that they will continue to be the drivers of NITC’s success for many years to come.

I would like to highlight two areas that give me confidence in NITC’s continuing success. First, an enterprise-wide commitment to solve customer challenges and become the service provider of choice. Second, the strength of a straight-forward business model that is anchored in diversification by business, geography, risk and, most importantly, people. Particularly in these challenging times, you can count on us to keep our focus on what matters most – our customers. Serving customers is at the heart of our

business, and the NITC team works extremely hard to build strong and deep relationships with customers to meet your unique needs.

As our collaboration with our customers continues, we will provide seamless and complete solutions that meet our customer demands and needs. We are focusing a significant amount of our development and engineering efforts for the next year to providing more flexible platform offerings, and I am excited at the progress our staff has already achieved and look forward to showcasing those capabilities to you in the near future.

Thank you again for your continued confidence!

Jim Steven
Acting Associate CIO, Data Center Operations
Director, National Information Technology Center

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Serving our Customers

The National Information Technology Center (NITC) is the centralized source for Data Center Solutions for the USDA and other Federal Customers.

In 1972, the NITC introduced centralized, shared computing services to USDA agencies. The 'economies of scale' and growth from centralized computing propelled NITC into a new role for the USDA. The NITC has evolved and grown over the years; yet, it is still reliable for keeping up with and introducing leading edge technologies to the federal space. The web-enabled technologies available today from the NITC allow Government users the ability to access business delivery applications on a 24X7 basis. The NITC mainframe infrastructure provides a reliable interactive processing environment with over 350 commercial off-the-shelf (COTS) vendor products accomplishing customer's data processing needs. NITC assures the confidentiality, integrity, and availability on all server architectures they support by enabling access facilities from their remote locations throughout the United States via secure private and public networks, to support their business requirements and service needs. ***The NITC service Platforms include Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS) and Professional Services (PS).***



The NITC hosting operations are delivered seven days a week, twenty-four hours a day, all year long at the Kansas City MO, St. Louis MO and Beltsville MD locations.

Delivering World Class Platforms for Mission Critical Systems

The NITC headquarters is located in Kansas City, Missouri. The NITC organization includes a St. Louis, Missouri location for disaster recovery, and a Beltsville, Maryland location for Washington, D.C. area disaster recovery (i.e., local file print services), development and test systems only. The NITC specializes in Enterprise Information Technology (IT) Solutions that include products, services, and resources. The business delivery software applications deployed in the NITC environments are national and international in scope, mission critical, and essential for the operations of the United States government.

Financial Analysis

Enabling Our Customers

The NITC continually looks to utilize new technologies to better support and enable our customers. In support of this effort, the NITC has deployed an online Customer Management System (CMS) designed to provide a single source application for all customer requirements, as well as serving as the customer's centralized service portfolio. The NITC CMS provides NITC Customer Account Managers and Financial Analysts with the shared capabilities of capturing customer business and financial requirements, as well as electronic routing and approval capabilities to ensure timely funding and service implementation. The NITC CMS also provides a centralized source to record all customer communications from both the business and financial offices. The NITC CMS integrates usage data with the NITC Customer Billing System (CBS) to enable consolidated reporting and agreement tracking. The Salesforce.com based application enhances the overall NITC customer experience by providing a collaboration tool critical to man-

aging the customer order inventory exceeding 140 agreements. The NITC will continue to engage all customer agencies ensuring a complete application deployment.

\$19,385,046

FY2013 overall

Customer Cost Savings

We continually strive to provide the highest quality service at the absolute best cost to our customers.

22%

FY2013 average

Savings Per Customer

Proven Customer Savings Year over Year

Overall FY2013 Revenue	\$118,056,455
Overall FY2012 - FY2013 Cost Savings	\$19,385,046
FY2013 Average Percentage of Cost Savings Per Customer	22%
Overall FY2010 - FY2011 Cost Savings	\$5,600,000
Overall FY2011 - FY2012 Cost Savings	\$2,900,000
Overall Customer Cost Savings to our customers (last 3 fiscal years)	\$27,885,000

Environmental Responsibility

The NITC's goal is to be known for our industry leading hosting services

Our economies of scale and continued gains in overall efficiencies have provided a platform for affordable rates to the USDA and other Federal Customers.

The NITC continues to provide forward momentum for the Federal Data Center Consolidation Initiative (FDCCI) and multiple Presidential and Secretarial initiatives aimed at realizing cost savings across the Department. These consolidation efforts have allowed the NITC to leverage economies of scale and other efficiencies which have driven down hosting rates by approximately 22% from FY12 to FY13. By year's end, 32 data centers/computer rooms are expected to be consolidated to a shared environment.

Gaining Efficiencies through Green Enterprise IT Initiatives

The NITC has continued to pursue, and implement Green Enterprise IT initiatives in support of our overall mission. Through use of virtualization technologies and the implementation of more efficient power and cooling systems, the NITC has been able to host more customers and services within a smaller "raised floor" footprint, thereby reducing the overall environmental impact of the Enterprise Data Center (EDC).

80 % Overall Efficiencies Gained

The USDA/NITC EDC has implemented new Computer Room Air Conditioning (CRAC) units that are equipped with "water-side economizing" which increases energy efficiency by 80%.

70 % Overall Efficiencies Gained

The USDA/NITC EDC has implemented new CRAC unit direct current-type Electrically Commutated fans, which permit variable speeds and are 70% more efficient than other standard squirrel-cage motors.

60 % Overall Efficiencies Gained

The USDA/NITC EDC has proven energy consumption efficiencies upwards of 60% over the past three years through the Data Center Consolidation Initiative (DCCI) and Virtualization.

40 % Overall Efficiencies Gained

The USDA/NITC EDC has implemented new energy-efficient "multi-stack" modular type chillers, that operates at a 40% overall energy efficiency over other chiller types.



Other Notable Green Initiatives

The NITC EDC has implemented the newest state-of-the-art Uninterruptible Power Supplies that maintain an internal static bypass switch.

The NITC EDC has replaced three (3) of the oldest standby diesel generators at the Kansas City Data Center. These new generators have electronic governors, the latest emission controls, and meet EPA Tier 2 requirements for off-road diesel engines.

The NITC EDC has installed an advanced wireless mesh sensor network which will be utilized to augment our current monitoring environmental control systems at the EDC in St. Louis, MO.

Creating Value

Creating Value Through Compliance

The NITC EDC provides FedRAMP and FISMA accredited hosting and performs that level of compliance for Agencies up through the System (OS) Layer, allowing them to inherit all FISMA certified System Layer Controls including the USDA Authority to Operate (ATO).

The USDA adopted and implemented the FISMA model by centralizing Data Center activities. The National Information Technology Center was chosen as the primary Enterprise Data Center to support these standards easing the burden of FISMA compliance on agencies and to ultimately save overburdened costs and complexities.

The NITC EDC is one of only a very select few organizations that have the capability to provide a full FISMA and FedRAMP compliant platform offering for their customers.

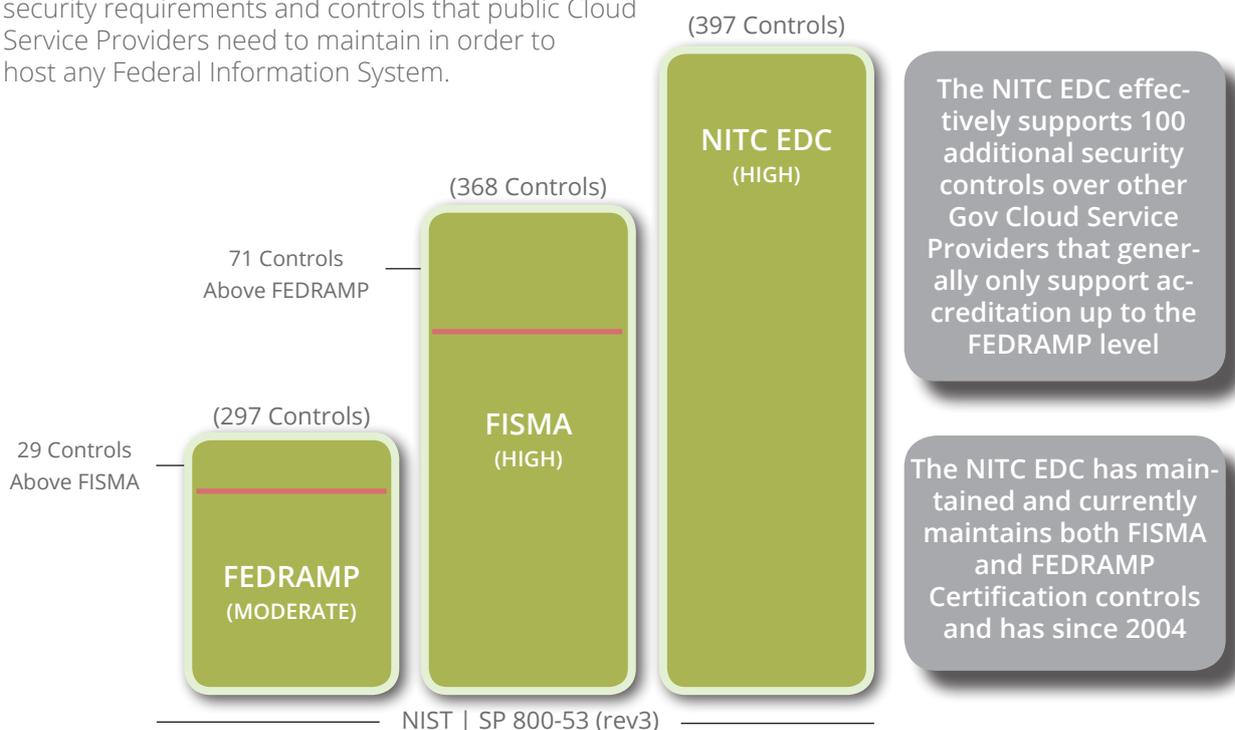


FISMA

The NITC attained its FedRAMP certification in June of 2013 and has maintained FISMA compliance on its PaaS services since 2004.

The USDA EDC meets or exceeds all Federal compliance standards at the highest level

The Federal Information Security Management Act (FISMA) was created in 2002 by the E-Government Act (Public Law 107-347). It was developed to promote the implementation of security standards, guidelines and controls for Information Systems in support of federal agency missions. The NITC EDC has supported and followed FISMA standard guidelines since early 2004 and has built their cloud service offerings with those same standards and controls. FedRAMP was created in 2012 to address the security requirements and controls that public Cloud Service Providers need to maintain in order to host any Federal Information System.



EDC implements the 397 controls from FISMA and includes the additional 29 controls from FedRAMP and maintains all 397 total controls for their customers.

Growing Markets

Growth through Diversity and Flexibility

The NITC EDC customer base continues to grow year after year. USDA organizations and other federal agencies are choosing our cost effective solutions that allow them the ability to deploy diverse, agile and flexible hosting solutions enabling them to meet mission critical business delivery.

The NITC Advantage

The NITC takes our customers requirements' and needs very seriously. Besides our world-class accredited hosting platforms, the NITC also addresses customers concerns pertaining to the confidentiality, integrity and availability (CIA) of their systems. The NITC has implemented a number of trusted technologies and programs that enable the customer's assurance that their data is available and protected at all times.

Security in Depth

Many publications have documented a growing concern within the federal community for adequate security protections for cloud computing environments. To address these concerns, the NITC EDC has developed a unique tiered security approach that includes four levels of monitoring and control. This combined with our disaster recovery capabilities provide our customers with added levels of assurance that their data is secure and available at all times.

USDA NITC Tiered Security Posture

- ✓ USCert Security Monitoring and Awareness
- ✓ AT&T Security Services (USDA UTN)
- ✓ USDA Agriculture Security Operations Center (ASOC)
- ✓ 24x7x365 Network Security Monitoring (NITC EDC)



Disaster Recovery

The NITC established a departmental Disaster Recovery (DR) Enterprise Data Center in St. Louis, Missouri, for the benefit of all agency customers. A fully operational DR capability is now available from the installation of a mainframe, SAN, network connectivity, network security protocol, physical security and redundant power supply. Readiness testing proved that the NITC EDC architecture is fully able to remotely recover Data Center hosting, at the St. Louis facility, from mirrored system volumes from the primary site. Customers can realize a new level of confidence in their computing services acquired through the NITC EDCs.

Staying Competitive

A Portfolio of Excellence

The NITC has a rich history of meeting the demands of the customers and developing services and platform offerings that are not only technically sound, but also cost competitive in the federal market space.

The NITC spends a great deal of time and effort analyzing our platform costs and comparing them with our competitors. Through years of efficiencies, additional footprint and economies of scale, we feel that not only are we cost competitive, in most cases we beat our competitors' prices for like services.

Independent Verification and Validation

In addition to several required federal audits, the NITC funds independent verification and validation studies to ensure our competitiveness. On a biennial basis, the NITC contracts with a third party vendor to perform benchmarking against similar types of data centers in the federal and commercial sectors.

Portfolio Growth Overview

New Available Services Beginning FY 2014

PaaS - Web Content Management (Drupal)
Storage - Cloud Storage (CloudVault/ownCloud)
PaaS Database - Active Dataguard (Oracle)
PaaS Database - Real Application Clustering (Oracle)
Support Services - Web Application Firewall

NITC is committed to continued customer satisfaction

Roadmap of Services for FY2014 - FY2015

IaaS - VDC (Open Source)
IaaS - VDC (VMWARE)
IaaS - x86 Self-Provisioning
PaaS - x86 Metered Service
PaaS - Web Application Server (JBOSS)
PaaS - Database (DB2)
SaaS - Geospatial Hosting (ESRI)
SaaS - Business Intelligence
Support Services - Xen Desktop (Citrix)
Support Services - Enterprise Service Bus
Support Services - Log Aggregation and Management
Support Services - Vulnerability/Penetration Scanning
Support Services - Application Performance Monitoring
Support Services - Customer Portal

NITC invites new service offering suggestions

Insights on Innovation

Innovating for the Future

NITC's customer-centric approach to providing enterprise-class data center hosting solutions at competitive prices has proven to be the key to our business retention and overall growth; but to maintain that growth and to maintain our customers mission results, it is imperative that we are ever evolving our technologies to stay competitive in the marketplace as well as meeting whatever future technological demands our customers require.

The Future of Cloud Computing and Virtualization

Cloud computing and virtualization go hand in hand. As the Cloud continues to evolve, so too must the virtualization platforms that are being utilized to support these Cloud infrastructures. Virtualization must meet the demands of more IO-intensive network and storage workloads, otherwise the traditional sense of scalable on-demand resources and cloud computing will fail.

To provide this level of future growth, the NITC has embarked on an ambitious front to develop a new cost-effective virtualization platform that will take the Data Center to the future of Cloud Computing. This new architecture (developed utilizing the OpenStack platform) provides the ability to offer on-demand computing resources, by provisioning and managing large networks of virtual machines. Besides the immediate cost benefits of the OpenStack platform, this new technology will allow customers the ability to scale to very large environments with little to no impact to their overall platform.

The Benefits of an Open Source Cloud

OpenStack is architected to provide flexibility as you design your cloud, with no proprietary hardware or software requirements and the ability to integrate with legacy systems and third party technologies. It is designed to manage and automate pools of compute resources and can work with widely available virtualization technologies, as well as bare metal and high-performance computing (HPC) configurations.

Popular Use Cases

- Customers who require a more flexible cloud hosting platform
- IT departments acting as cloud service providers for business units and project teams
- Customers who require the ability to process big data
- Providers that require agile scaling of compute resources to meet demand for web applications
- High-performance computing (HPC) environments processing diverse and intensive workloads

The NITC OpenStack platform is currently in a development phase and our Architecture Division is diligently testing the capabilities of the new technologies to see where it would best suit the needs of our customers. We expect to have more information on this new technology and the capabilities it will provide sometime in the near future.



World Class Workforce

People are the most important asset of our organization

Our business success depends on the knowledge and skills of our employees.

For the NITC to remain competitive, it is critical that we create and maintain a workforce with world-class skills. The NITC is focused on technology and process improvements. We attract the best and brightest talent and empower them to design competitive solutions for our customers. Our federal and contract workforce encompasses a global diversity that brings the best ideas to the table.

FEDERAL COMPUTER WEEK TOP 100 GOVERNMENT LEADERS



Kent Armstrong (former NITC ACIO) was named one of the Top 100 leaders in Federal Government by the Federal Computer Week (FCW) for 2013. The award recognized Mr. Armstrong as a Federal consolidation and cloud leader amongst his peers. The FCW article relayed Mr. Armstrong's efforts in helping the USDA meet its data center consolidation objectives as well as reflecting a 40 percent overall savings on hardware and software infrastructure. Overall, Mr. Armstrong's efforts will have saved the taxpayers \$19.4 million a year. We at the NITC are sincerely proud of Mr. Armstrong's accomplishment and his dedication to our organization and wish him the best in his future endeavours.

FEDERAL COMPUTER WEEK 2013 RISING STAR AWARD

The FCW presents the Rising Star Awards program that honors up-and-coming employees in the public and private sectors who have made an early and substantive mark in the government IT community. The program is an opportunity for agencies and contractors to spotlight some extraordinary achievements, both as a reward to the people and as an example to others. This year, NITC's very own, **Mike Meskill**, was selected as one of the 2013 Rising Star Honorees. Mike Meskill was inspired to engineer virtualization levels that exceeded private-sector standards. Mike Meskill is the second NITC employee who has been recognized for the Rising Star Awards.



(ISC)2 2013 GOVERNMENT INFORMATION SECURITY LEADERSHIP AWARD (GISLA)

The NITC received the 2013 GISLA award for the Technology Improvement Category and was recognized for leading the Federal Government as the first, and only, federally owned and operated Cloud Service Provider to achieve FedRAMP certification.

Corporate Recognition

The NITC has been recognized for their FedRAMP certification efforts by multiple media outlets. One article in particular stands out as a testament to the NITC and our dedicated focus and initiative to provide positive results. The article written by FCW "*Secrets of Great Teams*" outlines the history of the NITC and how their established leadership and teamwork continues to produce amazing results. For more information on this article, please visit <http://fcw.com/articles/2013/12/23/secrets-of-great-teams.aspx>

Service to our Community

Community Service is in our DNA

Community Service is our signature of excellence and way of giving back.

Combined Federal Campaign (CFC)

The NITC employees generously donated and pledged over \$35,000 during a time of financial hardship for the Nation during the 2013 CFC campaign.

CFC Day of Caring

The Day of Caring was held June 1, 2013, and it involved more than 3,200 volunteers (over 37 federal agencies), for what has become one of the largest single-day volunteer efforts anywhere in the country. Together, both public and private sector employees tackled 166 different projects throughout the Kansas City metropolitan area.

For the ninth (9th) year, a total of twenty-one volunteers made up of current and former employees of the NITC along with their family members worked at the *Mastin House*. The Mastin House is a group home in Kansas for 'mentally and physically challenged individuals.' This year's tasks included general yard cleanup, mulching and beautification of the grounds.

Blood Drives

The Community Blood Center of Greater Kansas City conducts quarterly blood drives at the Kansas City facility. Our goal of 20 donors is usually reached or exceeded every quarter. Our staff does their part to help save lives by donating blood.

Harvesters Community Food Network

The NITC team supports the Secretary's "Feds Feed Families Food Drive" through food donations to the Harvesters Community Food Network. The NITC, USDA-OIG and Department of Education employees have donated over 8 tons of food to Harvesters over the past 5 years.

Heart of America Annual Stand Down

Concerned employees of the NITC participated in the 20th Annual "Stand Down" for homeless and struggling veterans. Employees were generous with clothing and toiletry donations during the annual drive. On May 31 – June 1, 2013, the Kansas City Federal Community came together to give a "Hand Up" to homeless veterans. The "Stand Down" program provides ID cards, clothing, medical help, warm meals, entertainment, tax preparation and housing assistance for those in need. The "Stand Down" program served 760 of which 665 were male veterans, 37 were female veterans, and 58 were their dependents.



Partnering for Success

NITC Management

Vacant

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Jeffrey Caldwell

Chief, Systems Security Branch

Brad Rounding

Chief, Information Security Branch

Dan Loredo

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David Gatliff

Chief, Budget Management Branch

Charles Koelsch

Chief, Financial Management Branch

Wesley Manning

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Vacant

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Scott O'Hare

Director, Infrastructure Operations Division

Greta Nash

Director, Information Services Division

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Director, Systems Engineering Division

Karol Adams

Chief, IT Service Management Branch

Scott Clark

Chief, Network Services Branch

Jeff Claunch

Chief, Open Systems Branch

Brian Fields

Chief, Systems Integration Branch

Rick Kundiger

Chief, Enterprise Architecture Branch

Chad Bixby

Chief, Service Portfolio Branch

Rachel Mecham

Chief, Storage Management Branch

Dan McCord

Chief, Mainframe Systems Branch

Scott Middendorf

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Rickey Smith

Chief, Systems Network Control Center

Roger Sweeney

Chief, Windows Systems Branch

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For more information about NITC and its services please visit:

www.ocio.usda.gov/products-services/data-center-services/infrastructure-service-iaas/facility-enterprise-data
