



# 2014 Annual Report

National Information Technology Center  
USDA/OCIO Enterprise Data Center



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Partnering for Success

# To Our Stakeholders



## From the ACIO

***As we embark on a new year, our resolve has never been greater. I have nothing but the utmost confidence and belief that through the continual commitment and dedication of the staff of the NITC we will continue to earn your trust and confidence and provide you the world class services that we are recognized for.***

Although I am new to the organization, I have known for years the commitment, dedication and outstanding service the NITC provides to its customers. This, along with the great focus and vision of executive leadership and the amazing staff, are just a few of the reasons I have decided to pursue this new opportunity as ACIO. I am looking forward to working with each and every one of you in the near future and hope to help continue the success of this incredible organization.

Looking back at everything we have accomplished, even in the short time I have been here, is very inspiring. The tremendous commitment, creativity, and work ethic of the men and women that make up the NITC is undeniable. The outstanding dedication and resolve of this team provides me with the greatest confidence and that there are no limits to what we, as an organization, can achieve.

The performance outcomes shown throughout this annual report demonstrate how the NITC continually strives to support our customers' mission objectives, and how we are continu-

ally developing sound business strategies driven from customer input. I personally believe that the best strategies in the world come directly from the customers that consume our services.

As our collaboration with our customers continues, we will further enhance our already established service platforms and provide seamless and complete solutions that meet our customer demands and needs. We are continuing to focus a significant amount of our development and engineering efforts on the next generation of our flexible platform offerings, and I look forward to showcasing those capabilities to you in the near future.

Thank you again for your trust, your continual service and your continued confidence!

A handwritten signature in black ink that reads "Richard Coffee". The signature is written in a cursive, flowing style.

Richard Coffee  
Associate Chief Information Officer (ACIO)

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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 primary data center is headquartered in Kansas City, Missouri, with two additional data centers in St. Louis, Missouri, and Beltsville, Maryland. The St. Louis, MO, location is primarily used for disaster recovery, and the Beltsville, MD, location primarily serves the Washington, D.C., area for disaster recovery, local file and print services, and development and test systems. 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

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During this fiscal year, the NITC continued to streamline operations and reduce costs wherever possible. The results of these reductions saved customers nearly \$2.1M in FY 2014 when compared to the same level of service at FY 2013 rates.

Providing a centralized source to record all customer communications from both the business and financial offices has been a priority for the NITC for a number of years. The NITC Customer Management System (CMS) integrates usage data with the NITC Customer Billing System (CBS) to enable consolidated reporting and agreement tracking. NITC also utilizes a Salesforce-based application which also enhances the overall NITC customer experience by providing a collaboration tool critical to managing the customer order inventory (exceeding 140 agreements today).

NITC has expanded the capabilities of our online Customer Management System (CMS) during FY 2014 to enable customers to have a “one-stop” source for their agreements. A major improvement was the implementation of automated workflow routing and electronic approvals. Customers can now use the NITC CMS as the authoritative source for all document retention and billing activity.

**\$29,943,299**

last 4 fiscal years

*Customer Cost Savings*

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

## Proven Customer Savings Year over Year

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Overall FY2014 Revenue	\$125,524,619
Overall FY2013 - FY2014 Cost Savings	\$2,058,253
Overall FY2012 - FY2013 Cost Savings	\$19,385,046
Overall FY2011 - FY2012 Cost Savings	\$2,900,000
Overall FY2010 - FY2011 Cost Savings	\$5,600,000
Overall Cost Savings to our customers (last 4 fiscal years)	\$29,943,299

# Environmental Responsibility

## The NITC continues to be known for its leverage on green technologies

### Gaining Efficiencies through Green Enterprise IT Initiatives

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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).

#### 40 % Overall Efficiencies Gained

The USDA/NITC EDC has installed a new generator in St. Louis, Missouri, with improved emissions controls (EPA Tier 2 compliant) which provides 40% more fuel efficiencies over other generation systems.

#### 40 % Overall Efficiencies Gained

Under FDCCI, NITC EDCs have reduced overall server energy consumption by over 40% while consolidating approximately 200 existing racks from 41 Data Centers into NITC EDCs.

#### 25 % Overall Efficiencies Gained

The USDA/NITC EDC has installed a new cold aisle containment system in Kansas City, Missouri, which reduces Computer Room Air Conditioning (CRAC) Unit energy consumption by 25%.

#### 22 % Overall Efficiencies Gained

22% of all energy consumed by the NITC EDC in St. Louis, Missouri, is generated from renewable energy sources.

#### 14 % Overall Efficiencies Gained

14% of all energy consumed by the NITC EDC in Kansas City, Missouri is generated from renewable energy sources.

#### 13 % Overall Efficiencies Gained

13% of all energy consumed by the NITC EDC in Beltsville, Maryland, is generated from renewable energy sources.



### Other Notable Green Initiatives

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NITC is dedicated to incorporating the latest, most energy efficient, state-of-the-art technology into the electrical and mechanical infrastructure of NITC EDCs during equipment refresh, as evidenced by the installation of:

- New UPSs with internal static by-pass switching, capable of operating with 99% energy efficiency using proprietary eBoost® technology when compared with a traditional on-line double-conversion mode of UPS operation.
- Cold aisle containment, along with aligning computer server rack rows and configuring accessible floor systems as a means of conserving and optimizing the use of our most precious Data Center infrastructure commodity: cold air.

# 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.



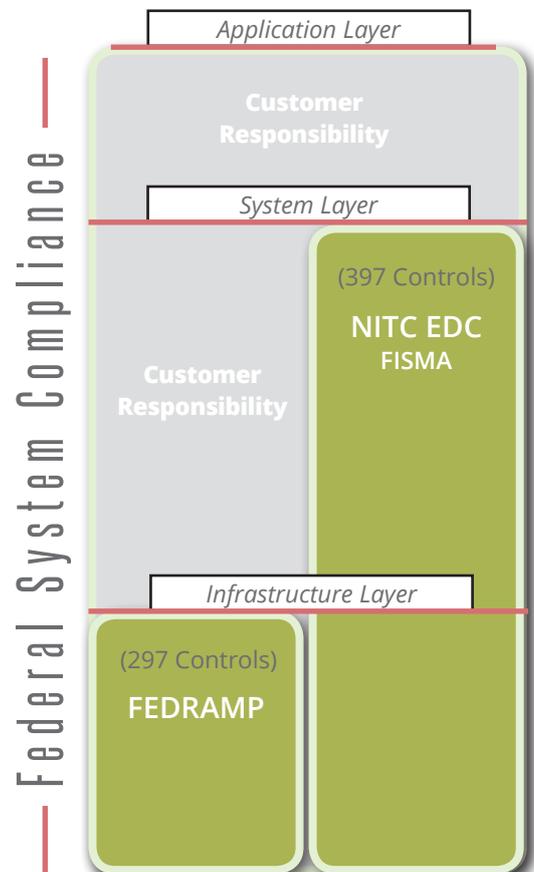
# FISMA

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.

*The NITC EDC effectively supports 100 additional security controls over other Gov Cloud Service Providers that generally only support accreditation up to the FEDRAMP level*



NIST | SP 800-53 (rev3)

# Growing Markets

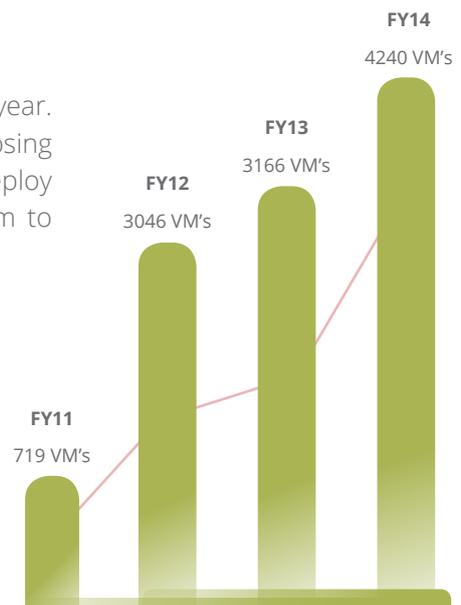
## Growth through Diversity and Flexibility

The NITC takes our customers' requirements and needs very seriously. Besides growing our world-class accredited hosting platforms, the NITC continues to implement a number of trusted technologies and programs that enable the customer's assurance that their data is available and protected at all times.

### Continual Growth

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.

Data Center growth allows for economies of scale, which provides overall cost savings to all NITC EDC customers.



### Taking Security Seriously

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, provides 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)



# Staying Competitive

## A Portfolio of Excellence

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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 Services Coming in FY 2015

- IaaS - Virtual Data Center (VDC)
- Tokens as a Service
- Digital Certificate Management Service
- Archive Storage
- Off-Net Co-Location Services
- Application Monitoring

NITC is committed to continued customer satisfaction

### Roadmap of Services for FY2015 - FY2016

- Database as a Service - PostgreSQL
- SaaS - Geospatial Hosting (ESRI)
- SaaS - Business Intelligence
- Support Services - RBAC
- 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

# Significant Accomplishments

## Staying Agile for the Future

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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.

### Significant Accomplishments this Fiscal Year

Achieved rapid provisioning and enhancement of Platform As A Service (PaaS) by implementation of vCloud Automation Center within the PaaS VMware environment. This improves time to delivery of systems to customers and allows for increased automation of the delivery of systems.

Completed migration of VMware PaaS Linux/Windows Servers to more modern HP Blade Hardware. This allows for a more densely hosted option for our PaaS virtual machines (VMs), increasing customer system availability and reducing the floor space required to host a large amount of VMs. NITC is currently hosting about 2000 VMs on this equipment.

Implemented a dedicated replication network using Level 3 10GigaByte (GB) waves between KC and STL. This improved our ability to replicate data to a remote location in a timely manner without impacting production workload, and allows for faster disaster recovery efforts since the data is already available at the alternate site.

Completed a major DB2 v10 upgrade on the mainframe ahead of schedule by 4 months. This enabled NITC to maintain compliance with software version upgrades to provide additional features and functions for customers.

Automated database patching utilizing BladeLogic tool set for MS SQL. Also, used Grid for Oracle Opatch database automation. This resulted in significant time savings for Database Administrator staff.

Achieved approximately \$19K in maintenance cost savings by eliminating invalid entries in the Webfarm Cisco maintenance inventory list.

Migrated over 50% of the Legacy network to the High Availability network to improve network performance and reliability as well as shut down obsolete technology.

Avoided approximately \$20K in costs by re-purposing fiber cables pulled from decommissioned hardware and not having to procure new cables.

Implemented a new cloud storage solution using repurposed devices and implemented a cloud storage solution for both internal and external customers, saving thousands of dollars in procurements costs.

Implemented new backup target technology by installing DD990 appliances in KC and STL. Moved NITC workload from the obsolete SEPATON devices to the new backup target appliances. NITC is now replicating data from KC to STL and STL to KC using NetBackup's AIR technology.

# 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.

### 2014 FedSCOOP50 - DISRUPTOR OF THE YEAR NOMINEE - JUSTIN PALMER

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Mr. Palmer has been with the USDA for 5 years and is the team leader for the Open Systems Branch. He has been a key component of the development of a Cloud IaaS platform, which is based on OpenStack. As the lead Linux expert, Mr. Palmer conducted extensive research on possible options prior to proposing OpenStack; he performed complex installations, customizations, and integrations of various software options. Additionally, he installed and configured OpenStack well before commercialized distributions provided simpler methods; and he developed a working proof-of-concept within 90 days of the start of the effort. Mr. Palmer also performed expertly in his development of scripts and code to enable the integration of Software Defined Networking (SDN) nearly 1.5 years prior to commercial integrations of these technologies being generally available. The result of Mr. Palmer's efforts has culminated in the creation of a new USDA IaaS cloud offering with integrated SDN, which integrates with all governmental security systems and is compliant with FedRAMP and FISMA. Without Mr. Palmer's knowledge and can-do attitude, the USDA would not be as far ahead as it is with its cloud offering leveraging OpenStack and SDN leading technologies. Mr. Palmer is an expert in his field and is always ready to tackle new challenges as he looks for new and innovative ways to solve unique and complex problems. His efforts reflect great credit upon himself, the USDA, and the IT industry within the U.S. government as a whole.

*(EXCERPT FROM FEDSCOOP.COM)*

### 2014 SECRETARY'S HONOR

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The NITC received the 2014 Secretary's Honor Award for exceptional service for its achievements throughout 2014 and for exemplary service to the U.S. Department of Agriculture. This award was given in recognition to the NITC's efforts of its FedRAMP accreditation.

### 2014 CSO40 AWARD

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The NITC received the 2014 CSO40 award for our excellence in developing security projects that delivered outstanding business value. This award was given in recognition to the NITC's efforts of its FedRAMP accreditation.

# Service to our Community

## Community Service is in our DNA

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

### **Combined Federal Campaign (CFC)**

The NITC employees generously donated and pledged over \$33,000 during a time of financial hardship for the Nation during the 2014 CFC campaign (\$2,643 over our goal!).

### **CFC Day of Caring**

The Day of Caring was on June 7, 2014. Nearly 450 volunteers donated over 2,000 hours to assist 14 local organizations in the Greater Kansas City area. These volunteers were employees and family members of 16 Federal agencies.

For the tenth (10th) year, a total of 11 volunteers made up of current 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.

### **Welfare & Recreation Committee**

In February 2014, NITC formed the Welfare & Recreation Committee. This committee is responsible for organizing social events such as an employee picnic, the annual holiday party, and various fund-raising events throughout the year. The positive effect of the committee's hard work is the increase in employee morale.

### **Director's Cup**

September 2014 was the kick-off for the Director's Cup Challenge. This is a year-long event, with numerous activities organized by employees, ranging from physical (football, softball, etc.) to mentally-challenging games (chess, checkers, etc.). Each winner or winning team receives points, and at the end of each quarter, the winner receives a small trophy. At the end of the year, the employee with the most points is awarded the Director's Cup.

### **Heart of America Annual 2014 STAND DOWNS**

The employees of the NITC participated in the 2014 Annual "STAND DOWNS" for homeless and struggling veterans in need of support. Employees were generous with clothing and toiletry donations during the annual drives and volunteering at the STAND DOWN events. At the summer STAND DOWN on June 6th and 7th and fall STAND DOWN on November 7th, the Kansas City Federal Community of the Greater Kansas City area came together to give a "Hand Up" to veterans that need to rebuild their lives with short and long term resources. The "STAND DOWN" program provides health and medical services, VA benefits counseling, ID cards, IRS tax assistance, legal assistance, substance abuse counselors, educational and vocational services, social security assistance, clothing distribution, hygiene support, housing assistance, warm meals, and much more for those in need. The 2014 "STAND DOWN" programs served 1,016 male veterans, female veterans, and their dependents.



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Partnering for Success

# NITC Management

**Richard Coffee**, Associate CIO  
National Information Technology Center

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**Kimberly Jackson**, Deputy ACIO  
Business Development & Finance

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**Pamela Yancey**  
Director, Resource Management Division

**Bryan Dixon**  
Data Center Consolidation & Customer  
Relations Office

**Steven Sanders**  
Project Management & Process Engineering  
Office

**Charles Koelsch**  
Chief, Financial Management Branch

**David Gatliff**  
Chief, Budget Management Branch

**Jean Oyler**  
Chief, Resource Support Services Branch

**Wesley Manning**  
Chief, Customer Account Management Branch

**Chris North**, Deputy ACIO  
Enterprise Application Services

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**Elizabeth McKenna**  
Applications Solutions Division

**Gary Klesner**  
Director, Application Engineering Division

**Vacant**, Principal Deputy ACIO  
Data Center Operations & Application Services

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**Ed Reyelts**, Deputy ACIO,  
Data Center Operations

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**Chuck Gowans**  
Director, Architecture, and Integrations Division

**Greta Nash**  
Director, Information Services Division

**Scott O'Hare**  
Director, Infrastructure Operations Division

**Victoria Turley**  
Director, Systems Engineering Division

**Brian Fields**  
Chief, Systems Integration Branch

**Dan McCord**  
Chief, Mainframe Systems Branch

**Fernando Jimenez**  
Chief, Windows Systems Branch

**Jeff Claunch**  
Chief, Open Systems Branch

**Kim Hull**  
Chief, IT Service Management Branch

**Rachel Mecham**  
Chief, Storage Management Branch

**Rickey Smith**  
Chief, Systems Network Control Center

**Robert Boucher**  
Chief, Service Operations and Support Branch

**Scott Clark**  
Chief, Network Services Branch

**Scott Middendorf**  
Chief, Database Management Branch

**Vacant**  
Chief, Enterprise Architecture Branch

**Greg Schmitz**, Deputy ACIO,  
Security Operations

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**Jeffrey Caldwell**  
Chief, Systems Security Branch

**Rob Arentsen**  
Chief, Security Governance Branch

**Vacant**  
Chief, Information Security Branch



## National Information Technology Center

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For more information about NITC and its services please visit:

[www.ocio.usda.gov/nitc](http://www.ocio.usda.gov/nitc)