



2015 

Annual Report

National Information Technology Center
USDA/OCIO Enterprise Data Center



Partnering for Success

To Our CUSTOMERS



From the ACIO

As we ring in the New Year, our enthusiasm continues to grow and renew. I have the greatest assurance and certainty that through the persistent commitment and dedication of the NITC workforce, we will continue to earn your business through collaboration and provide competitive services in meeting your mission goals.

In my second year with the NITC, I continue to rely on the commitment, dedication and outstanding service this organization provides to all its customers. The on-going motivation and vision of senior leadership and their remarkable staff, are just a few of the many reasons that make me proud to be the ACIO. I'm looking forward to furthering our collaborative working relationships and will continue to help you meet your mission goals throughout the year.

In reflection of all that we have accomplished together, this New Year looks to be very exciting. The incredible commitment, innovation, and work ethic of the men and women that represent the NITC is irrefutable. The outstanding devotion and resolve of this organization provides me with the utmost confidence that the possibilities are limitless as to what we, as an organization, can accomplish.

The performance results shown throughout this annual report demonstrate how the NITC continually endeavors to support our customers' mission objectives, and how we are continually

developing rigorous business strategies driven by customer collaboration. It is my belief that the most important strategies in our industry come directly from our stakeholders.

As our customer collaboration efforts progress, we will continue to enhance our established service platforms and provide seamless and comprehensive solutions that meet customer requirements and demand. We will continue to focus a substantial amount of our development and engineering efforts on the future generation of flexible self-service platform offerings, and we look forward to demonstrating those experiences to you in the coming months.

Thank you again for your business, your continual service and your continued collaboration!

A handwritten signature in black ink that reads "Richard Coffee".

Richard Coffee
Associate Chief Information Officer (ACIO)

Contents

Inside This Report

Serving our Customers	Page 5
Financial Analysis	Page 6
Environmental Responsibility	Page 7
Creating Value	Page 8
Growing Markets	Page 9
Staying Competitive	Page 10
Significant Accomplishments	Page 11
World Class Workforce	Page 12
Service to our Community	Page 13
NITC Management	Page 14

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 responsible for keeping up with and introducing leading edge technologies to the federal space. The web-enabled technologies available today from the NITC provide government users the ability to access and deliver their business 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 supported server architectures by enabling remote access to hosted environments via secure private and public networks, to support customer business and service requirements.

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 local file/print services, and test/development hosting. The NITC specializes in enterprise Information Technology (IT) solutions that include products, services, and resources. The business delivery software applications deployed within the NITC are mission critical environments of national and international importance, and essential for United States government operations.

Financial Analysis

Enabling Our Customers

During the year, the NITC continued to streamline operations while reducing costs. These reductions saved customers nearly \$1M in FY 2015 when compared to the FY 2014 service 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 enhances the overall NITC customer experience by providing a collaboration tool critical to managing the customer order inventory of 200 agreements.

NITC continues to expand the capabilities of our online Customer Management System (CMS) to enable customers to have a "one-stop" source for their agreements. CMS properties include the implementation of automated workflow routing

and electronic approvals. Customers now use the NITC CMS as the authoritative source for all document retention and billing activity.

NITC's 2015 Service Request Management (SRM) Portal launch gave customers the ability to self-initiate and monitor service requests. The system also provides access to important documentation and popular requests.

\$30,901,333

last 5 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

Overall FY2015 Revenue	\$145,564,996
Overall FY2014 - FY2015 Cost Savings	\$958,034
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 5 fiscal years)	\$30,901,333

Environmental Responsibility

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

Gaining Efficiencies through Green Enterprise IT Initiatives

The NITC continues to pursue, and implement Green Enterprise IT initiatives in support of our overall mission. Through the 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 footprint (raised floor), 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 efficiency over other generation systems.

40% Overall Efficiencies Gained

Under FDCCI, NITC EDCs have reduced overall server energy consumption by over 40% while consolidating hundreds of existing racks from hundreds of agency computer rooms into NITC EDCs.

25 % Overall Efficiencies Gained

The USDA/NITC EDC has installed cold aisle containment systems 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

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 following:

- Currently designing our newest Kansas City pod with a project goal of lighting all aisles with LED lamps powered from roof-mounted solar collectors.
- Installation of motion-sensing automatic on/off light switching in EDC raised floor areas

Creating Value

Creating Value Through Compliance

The NITC provides FedRAMP and FISMA authorized hosting and performs these levels 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 NITC was chosen as the primary Enterprise Data Center to support these standards easing the cost and complexity burden of FISMA compliance on agencies. In 2015, NIST SP800-53 Rev. 4 controls were implemented into all NITC General Support Systems. The NITC is one of only

a select few organizations that have the capability to provide a full FISMA and FedRAMP compliant platform offering for their customers.



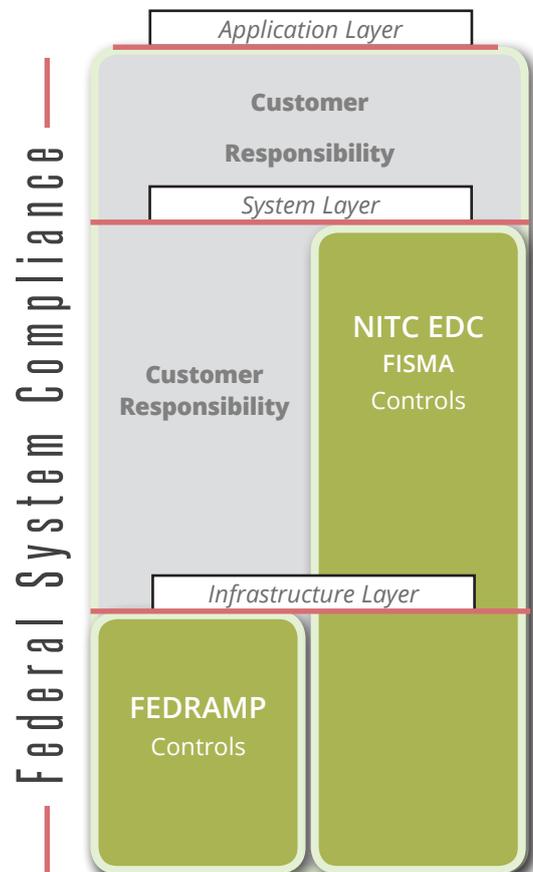
FISMA

The NITC achieved FedRAMP Certification in 2015 for our IaaS vDC platform offering. Both of our PaaS and IaaS offerings are maintained at the FISMA High security control level.

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

The Federal Information Security Management Act (FISMA) was adopted in 2002 under 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 must maintain in order to host any Federal Information System.

The NITC EDCs support dozens of additional security controls over other Gov Cloud Service Providers that generally only support authorization up to the FEDRAMP level



NIST | SP 800-53 (rev4)

Growing Markets

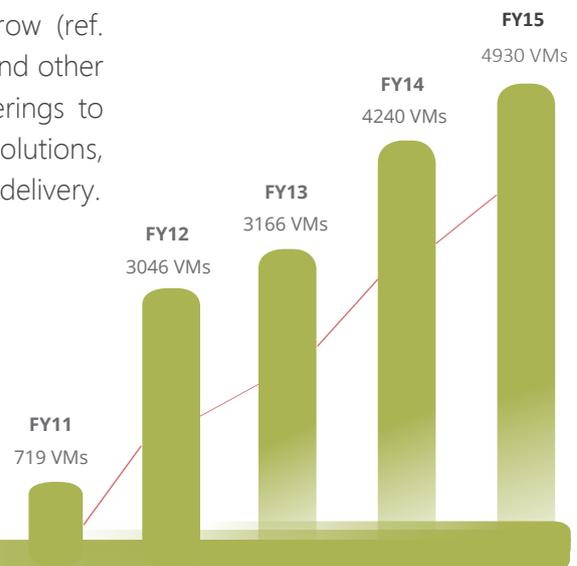
Growth through Diversity and Flexibility

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 (ref. chart of virtual machines). USDA organizations and other federal agencies choose our cost effective offerings to facilitate diverse, agile and flexible hosting solutions, thereby enhancing their 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

The NITC has a rich history of meeting the demands of its 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, smart growth, 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. Every other year, 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 FY2016

Self-service provisioning across "as-a-service" environments
Live/Live connectivity between Kansas City and St. Louis EDCs
LINUX PaaS Server x86 (RHEL7 version)
Database-as-a-Service - MS SQL (2014 version)
Off-Network Co-location Hosting
Target (Bulk) and Archive Storage

NITC is committed to continued customer satisfaction

Roadmap of Services for FY2016 - FY2017

SaaS - Geospatial Hosting (ESRI)
Support Services:
SaaS - Business Intelligence
Citrix Xen Desktop
Enterprise Service Bus
Authentication & Role-Based Access Control (RBAC)
Log Aggregation and Management
Vulnerability/Penetration Scanning
Application Performance Monitoring

NITC invites new service offering suggestions

Significant Accomplishments

Staying Agile 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 continually evolve our technology offerings to stay competitive in the marketplace, as well as meeting whatever future technological demands our customers require.

Significant Accomplishments this Fiscal Year

Achieved FedRAMP compliance certification for the newly launched IaaS vDC – OpenStack offering, as well as, our Platform as a Service (PaaS) offering. Also, rapid deployment of Virtual Machines (VMs) with vCloud Automation Center (vCAC) version 6 was enabled. This allowed for rapid provisioning of servers within 30 minutes; a substantial decrease from 24 days.

Approximately \$400K in savings for VMware and RedHat software licensing was realized in 2015 by consolidating workloads onto our PaaS Server x86 (Linux/Windows) environment. Additionally, we decommissioned more than 50 physical hosting servers and more than 500 unnecessary virtual machines (while increasing the overall VM count by 579).

Security Operations created three service offerings: digital certificates using Secure Sockets Layer (SSL), Entrust tokens for multi-factor authentication into servers and applications which include integrated self-service password reset & token PIN reset capability, and federation services to allow applications to use native SAML protocols for web services logins leveraging the customer's preferred user credential store.

Security Operations implemented a new Fortigate firewall infrastructure in Kansas City and Saint Louis that enabled firewall redundancy at both enterprise data centers providing faster Disaster Recovery failover/failback support.

Facility engineers kick started a major improvement to our St Louis datacenter's floor layout to increase rack space density. This effort will create approximately 150 rack spaces within the current footprint and defers a multi-million dollar floor expansion project.

The Data Center Consolidation Office collaborated with customer USDA agencies, in closing 59% of USDA's reported data centers. Since the USDA reported 2,271 non-core data centers, and given OMB's Federal Data Center Consolidation Initiative (FDCCI) FY 2015 closure target of 40% - our 59% closure rate was a major achievement for the USDA and NITC.

Enterprise Application Services (EAS) created a highly reusable, best practices Drupal content management system, enabling seamless IaaS & PaaS deployments, dramatically reducing customer licensing & maintenance costs. This system was adopted by the Office of Communication for use by all USDA websites and GSA for their entire website portfolio.

Partnered with Rural Development (St. Louis) to design and deploy NITC emergency power to critical RD equipment. The RD funded project provided connections to NITC generators as a "last resort power provider" while allowing RD critical equipment to operate efficiently when using normal power sources.

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.

MULTIPLE AWARDS - JUSTIN PALMER



Enterprise Architecture
Branch (EAB) Chief

Mr. Palmer received the Federal Executive Board's Public Employee Recognition Day Award - Technology Category. The NITC began a new initiative to develop a state-of-the-art cloud-based service offering centered on OpenStack's framework, for hosting mission critical systems. Justin helped lead these efforts to embrace technology and to leverage innovation in order to build this new cloud platform for all agencies within the USDA, and for external federal departments. This enabled the USDA to extend its cloud services as a shared service to all of the federal government.

Justin was also nominated for the Fedscoop – Digital Innovation Award for his efforts on the EAB-lead Atmosphere Tiger Team. The Digital Innovation Award is the first of its kind to celebrate the digital disruptors leading federal government into the 21st century. American citizens demand around-the-clock digital services in all walks of life, and these innovators recognize that federal agencies must elevate their digital influence to better serve the public and achieve mission success.

EMPLOYEE OF THE YEAR AWARD - WES CARPENTER



Network Services Br.
(NSB) Network Spec.

Congratulations to Mr. Carpenter, winner of NITC's employee of the year award! Wes was recognized for his continuous efforts supporting the NSX system within our cloud network "as-a-Service" offerings. And, his availability to answer numerous calls after hours and during weekends to address networking issues. Wes is known for taking ownership of problems and seeing them through to solution and for his keen customer support skills. He regularly takes charge during stressful situations and always delivers a high quality product and solution to both customers and management. Wes is a true asset to the NITC team, as well as, an inspiration to others and is respected throughout the USDA.

Federal Innovation Honors

The NITC took 1st place honors at the 2015 Federal Innovation Connection Showcase sponsored by the Kansas City Federal Executive Board. NITC's IaaS Cloud (Atmosphere) presentation was selected among seven finalists by a panel of guest judges from federal agencies throughout the Kansas City area.

AgLearn Honors

The AgLearn business line under EAS, earned two awards in 2015. AgLearn won a Brandon Hall Group's Excellence in Learning/Talent Award (eLearning Magazine). They also won a Skillssoft 2015 Innovation Award for influencing learning in the public sector. These awards reflect the AgLearn success in learning innovations, process improvement, marketing, and general program management.

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)

NITC employees generously donated and pledged over \$34,249 in 2015 and exceeded our 2014 CFC campaign donations by about \$1,200.

CFC Day of Caring

Twelve NITC volunteers donated numerous charitable hours at the Kansas City Harvesters Food Bank. These volunteers consisting of employees and family members sorted 8,868 pounds of frozen meats.

Welfare and Recreation Committee

The NITC formed the Welfare & Recreation Committee last year and continued in 2015 by organizing social events such as an employee picnic, annual holiday party, and various fund-raising events throughout the year. The positive effect of the committee's dedication is evident through improved morale and comradery.

Director's Cup

The 2015 Director's Cup Challenge year-long event involved numerous activities organized by employees, ranging from physically challenging (football, softball, cricket etc.) to mentally challenging games (chess, checkers, etc.). Each winner or winning team received points, and at the end of each quarter, the winner received a small trophy. At the end of the year, the employee with the most points was awarded the Director's Cup.

Heart of America Annual 2015 STAND DOWN

Fourteen employees of the NITC participated in the 2015 Annual "STAND DOWN" events for homeless and struggling veterans in need of support. Employees were generous with clothing and toiletry donations during the annual drives and volunteered at the STAND DOWN events. At the summer and fall STAND DOWNS, the Kansas City Federal Community of Greater Kansas City 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 & vocational services, social security assistance, clothing distribution, hygiene support, housing assistance, warm meals, and much more, for those in need.



Partnering for Success

NITC Management

Richard Coffee

Associate CIO, Data Center Operations

Kim Jackson

Deputy ACIO, Business Development & Finance

Pamela Yancey

Director, Resource Management Division

David Gatliff, Chief, Budget Management Branch

Chuck Koelsch, Chief, Financial Management Branch

Wes, Manning, Chief, Customer Account Management Branch

Jean Oyler, Chief, Resource Support Services Branch

Bryan Dixon

Director, Data Center Consolidation & Customer Relations Office

Steve Sanders

Director, Project Management & Process Engineering Office

Tony Cossa

Director, Cloud Strategy and Policy

Todd Schroeder,

Chief, Digital Service Center

Victoria Turley

Principal Deputy ACIO, EDC Operations & Application Services

Ed Reyelts

Deputy ACIO, Data Center Operations

Chuck Gowans

Director, Architecture and Integrations Division

Brian Fields, Chief, Systems Integration Branch

Justin Palmer, Chief, Enterprise Architecture Branch

Greta Nash

Director, Information Services Division

Scott Clark, Chief, Network Services Branch

Rachel Mecham, Chief, Storage Management Branch

Scott Middendorf, Chief, Database Management Branch

Scott O'Hare

Director, Infrastructure Operations Division

Bobby Boucher, Chief, Service Operations and Support Branch

Kim Hull, Chief, IT Service Management Branch

Rickey Smith, Chief, Systems Network Control Center

Jeff Claunch

Director, Systems Engineering Division

Fernando Jimenez, Chief, Windows Systems Branch

Dan McCord, Chief, Mainframe Systems Branch

Vacant, Chief, Open Systems Branch

Greg Schmitz

Deputy ACIO, Security Operations

Rob Arentsen, Chief, Security Governance Branch

Jeffrey Caldwell, Chief, Systems Security Branch

Quint Consani, Chief, Information Security Branch

Chris North

Deputy ACIO, Enterprise Application Services

Gary Klesner

Director, Application Engineering Division

Elizabeth McKenna

Director, Applications Solutions Division



National Information Technology Center

8930 Ward Parkway
Kansas City Mo, 64114

(816) 926-6516 (General Office)
(888) USE-NITC (24x7 Service Desk)

For more information about NITC and its services please visit:

www.ocio.usda.gov/nitc