Overview and Operations

J Travis Howerton, NNSA Chief Technology Officer
David Jarrell, OCIO Chief Operations Officer
Delivering revolutionary business transformation within a government agency requires navigating a complex maze.
RightPath takes a lean and agile approach that provides integrated and effective technology solutions to business problems.
To deliver solutions through the RightPath framework, we have partnered the best of the NNSA and OCIO capabilities into one integrated team:

- Program Manager – Travis Howerton, NNSA
- Architecture – Anil Karmel, NNSA
- Operations – Robbie Green, OCIO
- Policy/Partnerships – Peter Tseronis, OCIO
- Cybersecurity – Mary Hitson, NNSA
What is RightPath?

- A service delivery framework for enterprise IT projects
- A mechanism for providing transparency and effective communications related to IT transformations
- An alignment and integration vehicle that ensures technology investments deliver true business transformations
People, Processes, and Technology
Initial Pilot

Technology

2NV

Wireless

Mobility
2NV

Collaborate
Wireless

Connect
Mobility

On a device of your choosing
Process

RightPath Program Overlay

Phase 1 - Concept
- Develop proposal
- Complete business case
- Identify national policy and requirement drivers
- Develop conceptual requirements
- Develop ROM cost range
- RightPath accepts project and works into budget forecast

Phase 2 - Design
- Detailed requirements established
- Engineering design for solution completed
- Point estimate established
- Architecture finalized and aligned to EA prescriptive architecture
- Point estimate established for budget and submitted with PMP for approval by the appropriate governance body

Phase 3 - Project Execution
- Funding provided to project
- Federal Project Manager assigned
- Fully loaded WBS loaded into Project Server and tracked for transparency
- WBS progressively elaborated using an agile approach
- Monthly status reports provided to RightPath PMO
- Quarterly project reviews held with executive teams

Phase 4 - Transition
- Operations Team accepts deliverables from project and validates requirements are met
- Cyber security controls are tested and system is authorized
- Governance body approves project closeout
- Validated savings, lessons learned, and success stories submitted to RightPath PMO

<DISCRETE PROJECTS>
<table>
<thead>
<tr>
<th><strong>Best Practices</strong></th>
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<tbody>
<tr>
<td><strong>Program Management</strong></td>
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</table>
| • Transparency across selected enterprise federal projects  
• Consistent IT project execution  
• Eliminate redundancy and capture cost savings  
• Improved IT governance |
| **Enterprise Architecture** |
| • Ensures technology investments leverage enterprise services  
• Improves interoperability  
• Improves speed of execution and lowers project costs |
| **Policy** |
| • Ensures appropriate policy is in place to support IT investments  
• Reduces non-value-added paperwork and compliance activities  
• Front loads policy activities so that policy leads IT investments |
Immersive Collaboration and Social Networking tools

powered by

Virtual Servers and Desktops hosted in your Secure Hybrid Cloud
NNSA Pilot: End User View
NNSA Pilot: Back End View

2NV FY12 Notional Architecture

Connection Info
- On-site users authenticate locally then consume Enterprise Services through the ShrubFAB network
- Remote users authenticate at the local site using 2 factor authentication then consume services through the One NNSA Network

Operations and Management Services
- DNS
- Firewall Management
- Configuration Management
- Auditing/Logging
- Hypervisor
- Cyber Tools
- Incident Response
- Out of Band Camera
- Backup/Recovery

User Interactions
- "Device Agnostic"

Site Federation
- Identity Management (no central storing of keys), building of the Metaverse to have a central directory
- Overlay infrastructure on Demand (iOD) access internal data centers (optional)
- Integration with on-premise ONEvoice components (i.e. Lync)

Cloud Service Providers
- vCenter / vSphere

OneNNSA Network
- SNL, LANL, LNL, Pantex, NNSA, OPC, Y-12, SNS, Albuquerque Complex, HQ - F Airborne, HQ - Germantown

vShield - Logical Software Firewall to Segregate and Secure Infrastructure and Network Traffic

vFile - Logical Software Storage File to Segregate and Secure Storage and Storage Traffic

Federal Enclaves
- Metallo
- DOE
- NRC
- DOE Y-12
- DOE NNSA
- DOE BES
- DOE ER
- DOE N3B
- DOE N2A

Shared Services
- NNSA
- DOE
- DOE N2A
- DOE N3B
- DOE

NPO Enclave
- DOE
- DOE N2A
- DOE N3B

Lab Enclaves
- DOE
- DOE N2A
- DOE N3B

Additional site-specific enclaves will also be developed as needed. A representative set of enclaves is shown in a material design.
- **Unified Communications:**
  - Instant Messaging/Email
  - Voice/Video
  - Web Conferencing
  - Presence

- **Social Networking:**
  - Crowd sourcing/polling
  - Town halls
  - Organic Collaboration and Groups
  - Integration w/ LOB Apps
  - Business/Social Intelligence
- Infrastructure as a Service offering based on the Los Alamos National Laboratory Infrastructure on Demand solution
- Providing an East and West geographically distributed solution for COOP, DR, and Load Balancing
- Takes the process of provisioning a server from months to minutes automatically
- Maintains existing management and security boundaries (enclaves) within a shared hardware/facility infrastructure investment
- NNSA federal infrastructure is the pilot deployment with an opt-in model for M&O contractors
- Enterprise FIPS 140-2 encrypted, mesh network connects all sites and enables a common set of communications services
- Foundation for future enterprise services; similar to the Enterprise Secure Network on the classified side
- Gives access to YOURcloud for federal employees and enterprise services
- Provides a federated authentication model for securing enterprise applications
Federal Operations

Leveraging RightPath to Accelerate Transformation
Federal Operations

- Shift from IT Manager/Provider to IT Broker Concept
  - Cloud First Strategy
  - Buy vs. Build philosophy
  - Dynamic/Elastic Service Provisioning

- Planned Transition of Commodity IT
  - Hybrid Cloud Concept
    - Leveraging Managed Service Solutions as a Priority
  - NNSA’s 2NV as the Pilot offering
    - Potential candidate for Department-wide deployment
  - DOE COE Enhancement/Replacement

RightPath seeks to ensure that technology investments are sustainable, that they obtain high adoption rates, and that they generate the business outcomes envisioned by the stakeholders. To this end, the RightPath team is deploying state of the art systems to enable transparency into new projects, improving communications both horizontally and vertically within the department, and deploying the latest collaboration tools to connect HQ to the field, researcher to researcher, feds to contractors, and joining us all together in a virtual community.
Shift from IT Management to IT Broker
Migration to “As A Service” Model
Shift from IT Management to IT Broker

EITS To-Be Infrastructure

- GTN
  - EITS
    - Voice/VoIP
  - Managed Metal & OS
- HOUSED
  - Un-Managed Metal & OS
- TIC
  - OC-12’s
  - ISP
  - OC-12’s
  - Guest
  - WAN Wire & WiFi
  - OC-12
  - OC-12
  - OC-12
- Commercial
  - IaaS
    - Leased Metal Managed OS
    - Commodity
    - Remote Access
  - Co-Lo
    - Owned or Leased Metal Managed OS
    - Hosted Mission Apps
    - iManage
    - FDS
  - SaaS
    - Leased Metal, OS & Services
- Storage/aaS
  - Backup and Recovery

ABC
Field Site B
Field Site C
Transforming the Federal Infrastructure Provider

FY12 “Pilot” Service Offerings

- Virtual Desktop Infrastructure
- IT Service Management
- Mobility / Hoteling Pilot
- Instant Messaging Federation
- Electronic Records
- Multi-factor Authentication
- Videoconferencing Enhancements
## Success

- **Measures of Performance Goals:**

- **Delivering Sustainable Solutions**

- **Lowering Departmental Expenditures**

- **Increasing Energy Savings**

<table>
<thead>
<tr>
<th>Action Plan</th>
<th>Scheduled Start</th>
<th>Anticipated Completion</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>Virtual Desktop Infrastructure (VDI) Pilot – Finalize new desktop image; evaluate zero-client devices.</td>
<td>FY 2012 Q2</td>
<td>FY 2012 Q3</td>
<td>On Target (80%)</td>
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<td>Deploy Remote Access and 2-Factor authentication solution; Deploy additional virtualized applications.</td>
<td>FY 2012 Q2</td>
<td>FY 2012 Q3</td>
<td>On Target (60%)</td>
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<tr>
<td>Secure decision on Infrastructure-as-a-Service (IaaS) cloud offering to support build-out of Hybrid -cloud supporting IT Transformation.</td>
<td>FY 2012 Q2</td>
<td>FY 2012 Q3</td>
<td>On Target (30%)</td>
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<td>Deploy VOIP capabilities for ARPA-e.</td>
<td>FY 2012 Q2</td>
<td>FY 2012 Q3</td>
<td>On Target (50%)</td>
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<td>Complete Lync Federation with Golden Field Office &amp; NNSA Y-12 site.</td>
<td>FY 2012 Q2</td>
<td>FY 2012 Q3</td>
<td>On Target (65%)</td>
</tr>
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<td>Deploy 1100 desktop VTC cameras for NNSA enabling desktop VTC capabilities.</td>
<td>FY 2012 Q2</td>
<td>FY 2012 Q4</td>
<td>On Target (32%)</td>
</tr>
<tr>
<td>Deploy Enterprise ITSM tool in the cloud – Service Now.</td>
<td>FY2012 Q2</td>
<td>FY 2012 Q4</td>
<td>On Target (25%)</td>
</tr>
<tr>
<td>Work with CFO to transform iManage iPortal into DOE-wide enterprise portal capability.</td>
<td>FY 2012 Q2</td>
<td>FY 2012 Q4</td>
<td>On Target (20%)</td>
</tr>
<tr>
<td>Enable DOE Wide Area Network capability to ensure Enterprise communications capability including Federal and M&amp;O labs.</td>
<td>FY 2012 Q2</td>
<td>FY 2012 Q4</td>
<td>On Target (15%)</td>
</tr>
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Contracting Strategies

- Innovative Contracting Solutions to Deliver IT Solutions
- Energy Savings Performance Contract
- First in Government
- Investment Grade Audit Approach
- Focus on Energy and Operational Savings
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