



NLIT 2009 LANL Site Update:

A Year of Change and Great Promise



Technology



Security



Information

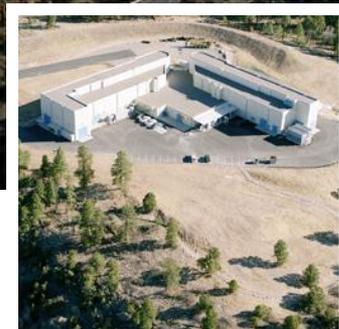
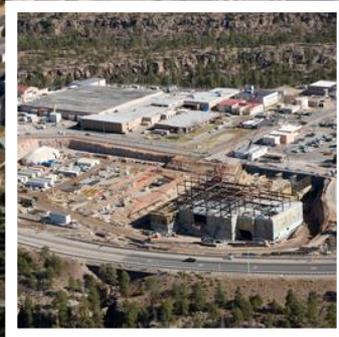
Thomas A. Harper, Chief Information Officer
June 1, 2009



Los Alamos National Laboratory

- Multidisciplinary teams find science solutions to nation's issues
- Stockpile Stewardship is dominant mission
- Lab's tools also address other national priorities

**Science, technology and innovation
addressing National challenges**



Unique facilities

- Extensive Nuclear facilities
- Supercomputing facilities
- DARHT allows researchers to study weapons performance
- Nanotechnology center drives critical research programs
- LANSCE draws international scientists studying materials

Physical / IT Footprint

■ 10,518 Workforce

including theoreticians, experimentalists, support staff, program managers, collaborators and contractors

■ 40 square miles, 26,245 acres

- 7,500 ft elevation

■ 1,280 buildings, 9.0M sq. ft.

- 11 nuclear facilities

■ Computing & Network

- ~2TB Internet traffic/day
- 3 10GB external network connections
- 40,813 - unclassified network systems
- Diverse platforms – LINUX, Macs, PCs, Solaris, UNIX (many)



Since NLIT 2008

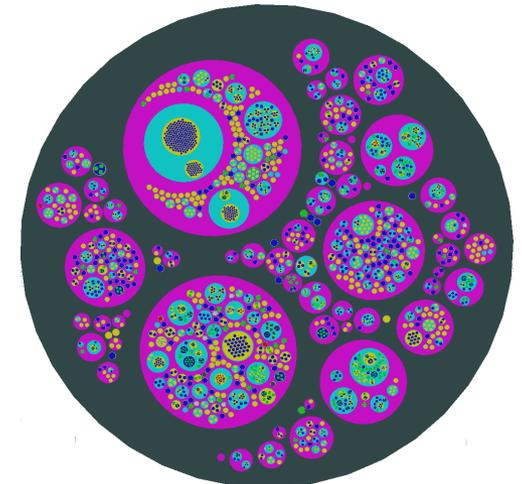
- **LANL Completed the Security Compliance Order** including the actions to accredit all unclassified systems and create NAPs-compliant policy.
- Audits and Assessments ...
- In tandem, LANL stood up a new program office, established IT portfolio management, and reorganized IT operations.
- While continuing to move IT forward

Transformation Planning

IT Roadmap

- The IT organizations, and their leaders, demonstrated excellence and dedication.

Representation of
domain name
hierarchies



LANL at NLIT 2009

- **Virtual Desktop / Zero client**
 - Michael Johnson
- **Scientific Computing / Sun Ray**
 - Ronald Crotzer
- **Virtualization**
 - Anil Karmel
- **Privileged Access**
 - Randy Cardon
- **LANL-STOR**
 - David Kennel
- **Desktop Metrics**
 - John McDermon
- **Multiple KVM**
 - Brian Martinez
- **LANL IT Future**
 - Dale Land
- **Network Threat**
 - Giri Raichur
- **RBAC**
 - Jim Clifford
- **Exchange / Blackberry**
 - Anil Karmel
- **C&A**
 - Mike Zolinger
- **Windows Service**
 - Mark Wingard

Security Compliance Order – July 12, 2007

- Secretary Bodman presented LANS with a Security Compliance Order to ***“implement specific corrective actions to remediate longstanding deficiencies in the classified and unclassified security programs at the Laboratory.”***
- Violating the Compliance Order would have subjected LANS to civil penalties of \$100,000 per day per action.
- Fourteen compliance order actions with different due dates.
- Information Security actions were to (1) fully implement cyber policy and (2) achieve accreditation of all LANL systems.

Security Compliance Order

Intense Effort Leading to

- Baselined unclassified assets / systems
- Assessed risk and residual risk consistently (RAPTOR)
- Used NIST controls systematically
- Formalized configuration management

= Accreditation for all Unclassified and Classified
(sixty-seven systems accredited)

COMPLETE: December 12, 2008

Audits and Assessments – 2009

More Challenges with Visits and Findings

- GAO (October and February)
- HSS (January and August)
- IG
- Self Assessments (eight)
- Internal Independent Assessment
- Findings
 - 75 external findings (40 open)
 - 67 internal findings (65 open)
- Corrective Action Plans (CAPs)
 - ~82 CAPs pending
- Fail/ Corrects from Certification and Accreditation
 - 1234 identified and consolidated into 11 program CAPs and TBD # of system CAPs

“Establish Institutional IT Oversight”

Fully implement, and illuminate the information technology program through

- *involved governance,*
- *integrated budget, and*
- *management of IT portfolio*

FY **08**

Process Development

- IT Governance
- Identify IT Projects
- Define Scope/Milestones
- Prioritize Funding
- Develop Work Packages

FY **09**

Illumination

- Integrate IT Projects
- Define Scope/Milestones
- Prioritize Funding
- Develop Work Packages
- Lessons Learned

FY **10**

Refine Process

- Continue Integration
- Define Scope/Milestones
- Prioritize Funding
- Develop Work Packages
- Lessons Learned

A New Way to Purchase IT

Purchases – of IT computer hardware, software, and services managed for business and security (some exceptions)

purchase IT
An Acquisition Strategy for Security



■ Improving our Information Security

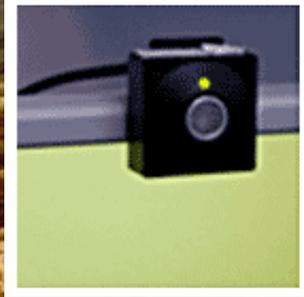
All purchases of scientific and non-scientific IT hardware, software, and services will be managed to improve our security posture

- ‘Blind buy’ – ensuring programs and individuals aren’t easy to target.
- Cyber approval and hardening (before distribution) of IT purchases
- Waiver areas – include SCI, HPC, and instruments

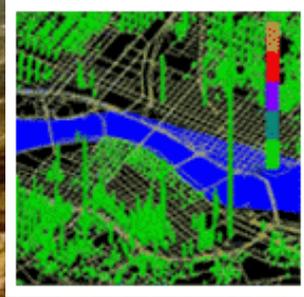
■ Business Excellence and Efficiency

Path Forward

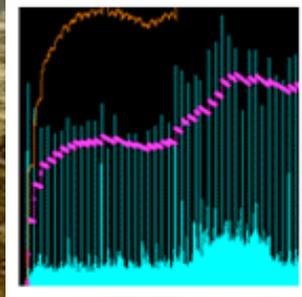
Technology
Supporting Behavior



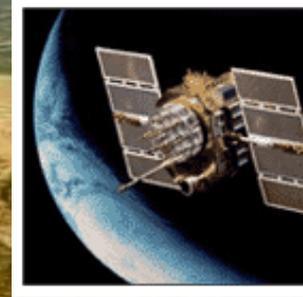
Integrated Modeling
Simulation



Self-learning
Detection
Response



Technology
Adaptation



Knowledge-driven
Situational
Awareness



Move beyond the Security Compliance Order

Focus on revitalizing and transforming IT

Enable and drive the mission!

Thank you!