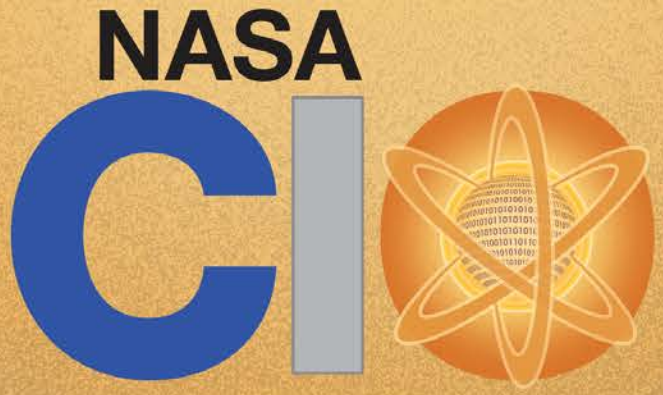
National Aeronautics and Space Administration

Managing NASA Cybersecurity



Mike Witt, NASA
Senior Agency Information Security Officer
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Agenda

- NASA's Mission & IT Strategy
- NASA's Cybersecurity & Privacy Program
- Challenges to NASA Cybersecurity
- Accomplishments

NASA's Mission and IT Strategy

NASA Mission	Drive advances in science, technology, aeronautics, and space exploration to enhance knowledge, education, innovation, economic vitality and stewardship of Earth.
IT Vision	Manage IT as a strategic resource to securely unleash the power of data.
IT Mission	Enable the use of data to drive advances in science, technology, aeronautics, and space exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of Earth.
IT Values	Customer Driven (Responsive, Make IT Easy!) ❖ Continuously Learning (Insight Driven) ❖ Accountable (Transparent) ❖ Trusted Partner

IT Goals

Goal 1: Excellence

Partner with customers to consistently deliver excellence and enable mission success.

Goal 2: Data

Capitalize on data management, access, and innovation.

Goal 3: Cybersecurity

Safeguard NASA's data and IT assets.

Goal 4: Value

Maximize business value by optimizing IT.

Goal 5: People

Care for our people today and prepare them for tomorrow.

NASA's Cybersecurity & Privacy Program

IT Goals and Cybersecurity Value to NASA Mission

Goal 1: Excellence

Goal 2: Data

Goal 3: Cybersecurity

Goal 4: Value

Goal 5: People

- Be a trusted partner
- Manage cybersecurity risks across the Agency
- Be proactive
- Consistent Agency-wide approach

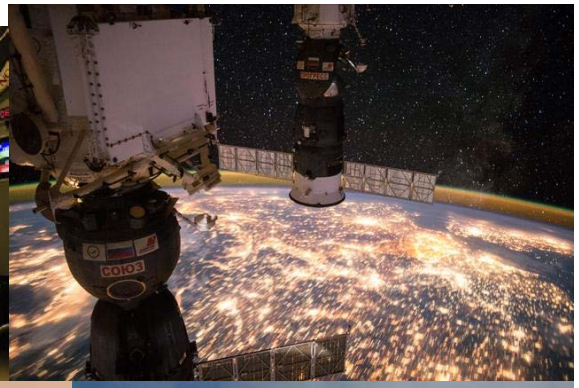
- Under the *Federal Information Security Modernization Act* ("FISMA"), federal CIOs are legally responsible for Agency compliance with information security requirements.
- The Agency CIO designates a Senior Agency Information Security Officer (SAISO) to carry out CIO's cybersecurity responsibilities.
- NASA created the Cybersecurity & Privacy Program to implement Agency cybersecurity across all of its IT domains.

Challenges to NASA Cybersecurity

- **Technology**
  - IT must be secured across all environments in which NASA operates—including space
    - *How do we protect cutting edge technology?*

- **Customer Service**
  - NASA has customers in private and public sectors, and internationally
    - *How do we ensure transparency?*
    - *How do we get right data to right customer, with correct protections in place?*

- **Governance**
  - Eleven distinct NASA Centers across U.S., plus international facilities
    - *How to implement cybersecurity strategy consistently across broad range of stakeholders?*



Cybersecurity Accomplishments

NASA has made great strides in cybersecurity in recent years, including through:

- Moving our Security Operations Center from a reactive stance to a proactive posture
- Active Red Teaming and Phishing exercises across all NASA Centers
- Increased enforcement of multifactor authentication
- Implementation of intrusion prevention systems
- Implementation of unauthorized hardware alerts
- Improved High Value Asset network segmentation
- Improved access management through an automated, dynamic solution that tracks access and privilege levels
- Mobile device management, including the capability to remotely wipe lost or stolen devices

Moving forward, NASA continues to implement a cybersecurity strategy that will secure NASA data, enable data transfer to help further scientific discovery, and enhance NASA's mission and capabilities.

Questions