Defense Information Systems Agency

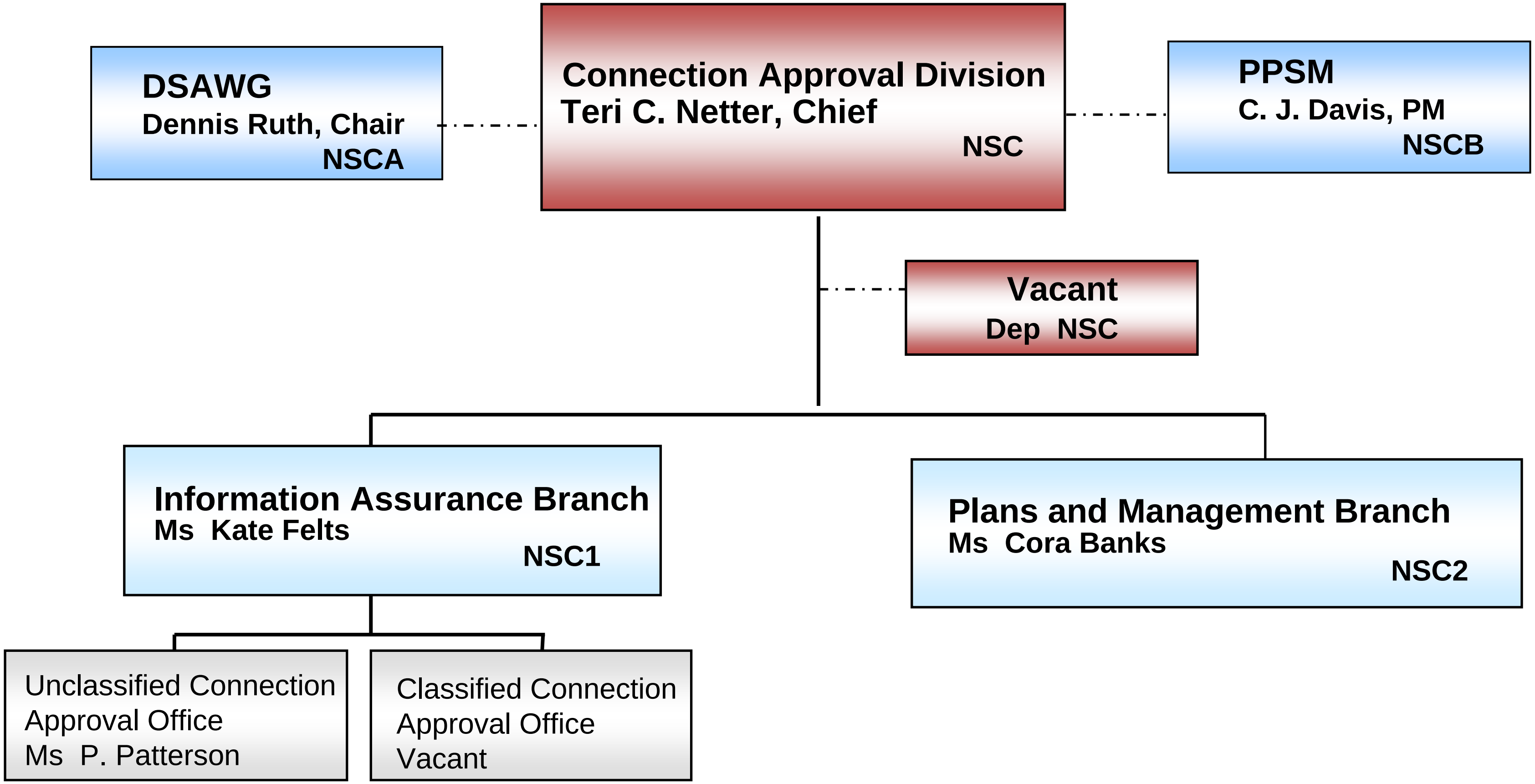
A Combat Support Agency

Ports, Protocols, and Services Management (PPSM)

PPSM, Project Manager
29 July 2010

UNCLASSIFIED

NSC Org Chart



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Connection Approval Division
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Ms Kate Felts
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Unclassified Connection
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Classified Connection
Approval Office
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PPSM Mission

Develop and implement DoD policy and procedures that govern the use and management of applications, protocols, and services (with their associated ports) in DoD Information Systems; in a manner that promotes network security, interoperability, and the evolution of net-centric operations across the Enterprise Networks.

" Committed to Protecting Data End-to-End "

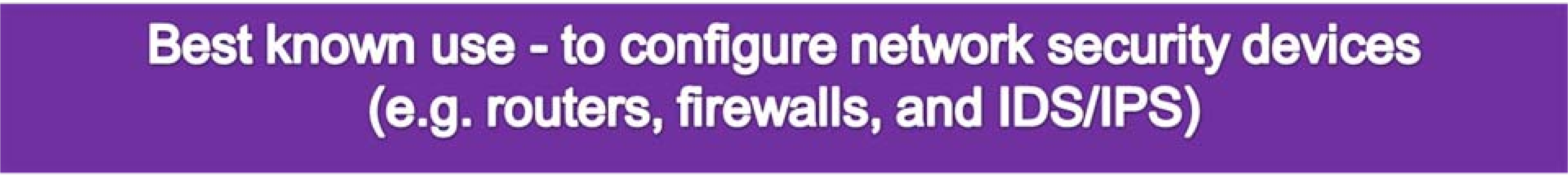
A Combat Support Agency

What is PPSM ?

Created to ensure that applications, protocols, and services (with their associated ports) used in DoD Information Systems are registered, controlled, and regulated.

PPSM provides support to:

- **Acquisition and Development**
- **Certification and Accreditation**
- **Enterprise, Organization, and System DAAs**
- **NetOps**
- **Perimeter and boundary defense**
- **Connection approval processes (UCAO/CCAO/DSAWG/DISN PAA)**
- **Firewall Administrators**



Best known use - to configure network security devices
(e.g. routers, firewalls, and IDS/IPS)

Why is PPSM Important?

To identify the vulnerabilities and risks associated with the use of certain protocols or services:

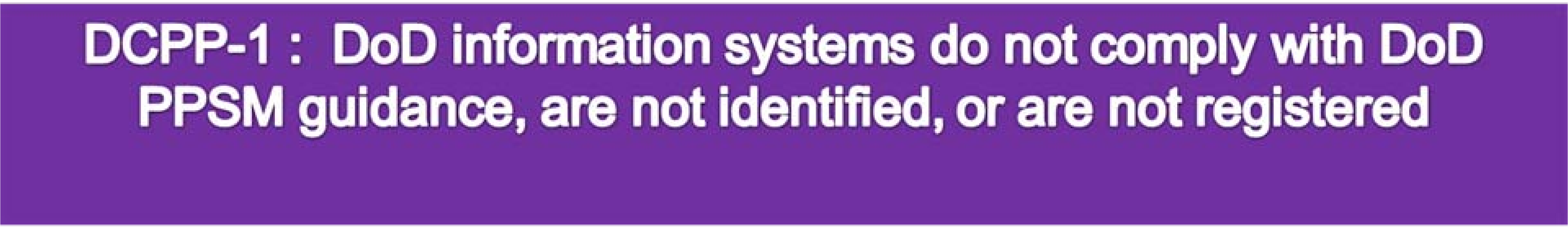
- **Registered in the DoD PPSM Registry**
- **Undergo a vulnerability assessment**
- **Assigned an assurance category**
- **Regulated based on their potential to cause damage to DoD operations.**

Adhering to PPSM guidance minimizes the inherent risk associated with the use of an application's protocols and services

What if I Do Not Comply ?

Failure to comply with DoD Ports, Protocols, and Services Management (PPSM) requirements can result in:

- **Compromise of the enclave boundary protections**
- **Impair functionality of the protocols and services**
- **DoD Information System exposed to unnecessary risk**



DCPP-1 : DoD information systems do not comply with DoD PPSM guidance, are not identified, or are not registered

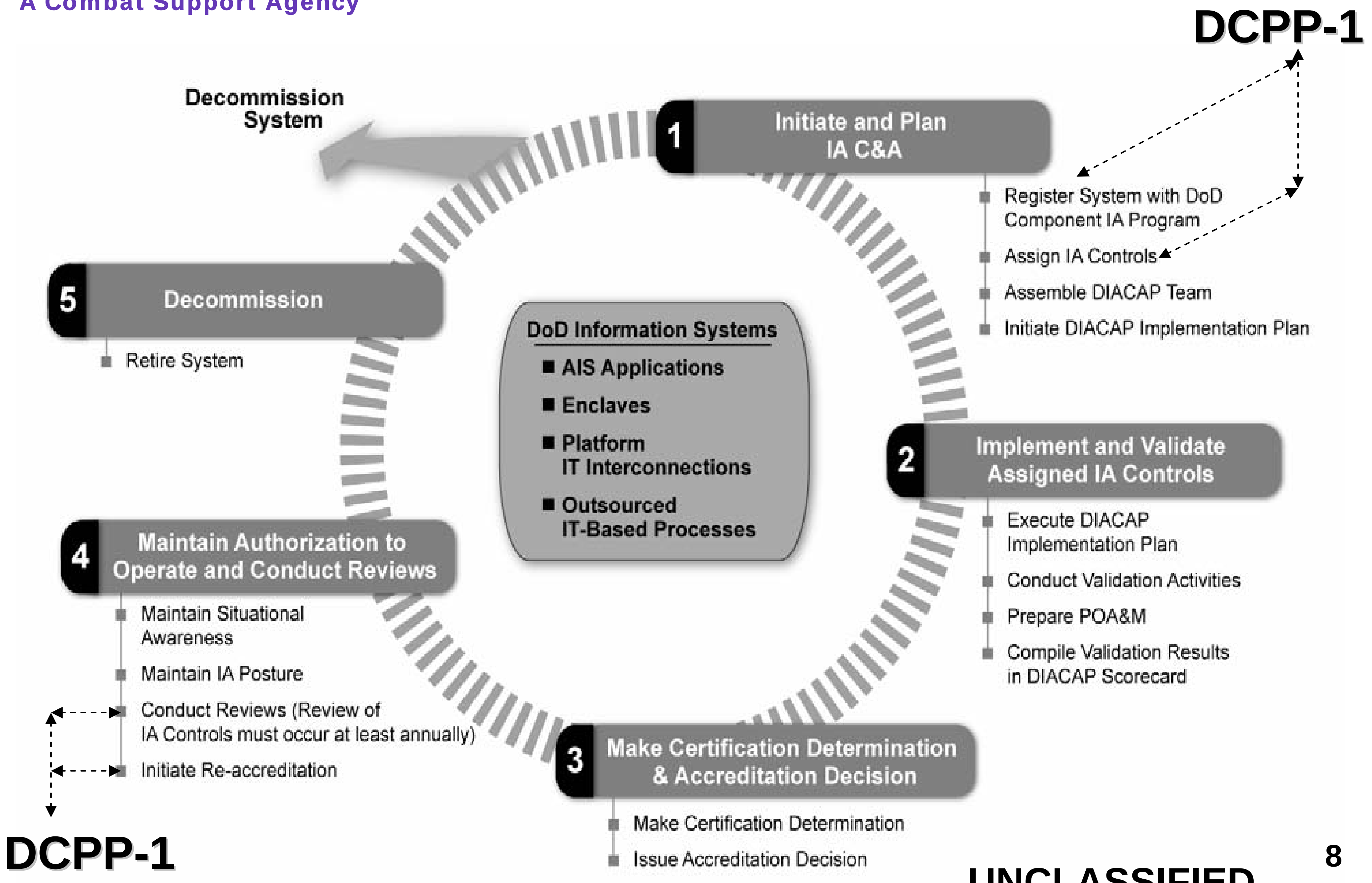
What Else Should I Know ?

***Negative Impacts*:**

- **Certification & Accreditation (C&A)**
- **Hosting/Fielding Systems in the Defense Enterprise Computing Centers (DECCs)**
- **May not be allowed to connect to GIG**
- **Traffic being Blocked by Destination Firewalls**

Open, undocumented, and unnecessary ports, protocols, and services increase the risk of data compromise and system unavailability

When to Comply w/PPSM
DIACAP Activities


DCPP-1
Decommission System
1 Initiate and Plan IA C&A
Register System with DoD Component IA Program
Assign IA Controls
Assemble DIACAP Team
Initiate DIACAP Implementation Plan
5 Decommission
Retire System
DoD Information Systems
AIS Applications
Enclaves
Platform IT Interconnections
Outsourced IT-Based Processes
2 Implement and Validate Assigned IA Controls
Execute DIACAP Implementation Plan
Conduct Validation Activities
Prepare POA&M
Compile Validation Results in DIACAP Scorecard
4 Maintain Authorization to Operate and Conduct Reviews
Maintain Situational Awareness
Maintain IA Posture
Conduct Reviews (Review of IA Controls must occur at least annually)
Initiate Re-accreditation
3 Make Certification Determination & Accreditation Decision
Make Certification Determination
Issue Accreditation Decision
DCPP-1

PPSM Process

- Register DoD IS – PPSM URL: https://pnp.cert.smil.mil
- VA team researches associated protocols and services
- Technical Advisory Group (TAG)
- PPSM CCB Votes on Category Assurance Levels (CAL)
- Products published on IASE and DKO websites (high/low)

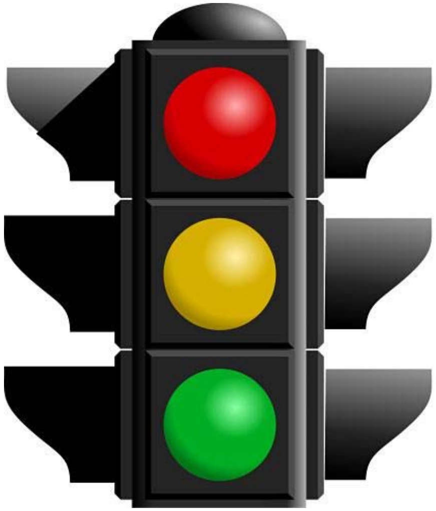
Information Assurance Support Environment – IASE

NIPRNet - http://iase.disa.mil/ports/index.html
SIPRNet - http://iase.disa.smil.mil/ports/index.html

Army Knowledge Online/Defense Knowledge Online - AKO/DKO

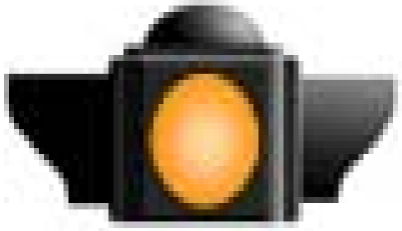
NIPRNet - https://www.us.army.mil/suite/page/396114
SIPRNet - http://www.us.army.smil.mil/suite/page/13648

Assurance Levels



- **Red – Banned**
- **Yellow – Acceptable**
- **Green – Best Practice**

- **Orange – Controlled (DSAWG Approved)**
  - **Operational Need**
  - **System by System basis**



2009 Accomplishments

- Provided greater clarity of PPSM policy and technical guidance
- Redesigned the analysis criteria
- Developed and published the Exception Management Process
- PPSM training module -- DISN Data Services Training Manual.
- Introduced a new Assurance Category & Exception Process
- Awarded DISA Non-Technical Program/Project of the Year

Future Outlook

- Link the PPSM (Registry) database with other repositories
- Incorporating Air Force PPSM database
- Compliance validation and configuration management toolsets
- Differentiating between Classified and Unclassified environments
- Ability to access the PPSM Registry on the low side (NIPRNet)

PPSM

“ Committed to Protecting Data End-to-End ”

Questions?

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Back ups

Stakeholders

Who depends on PPSM?

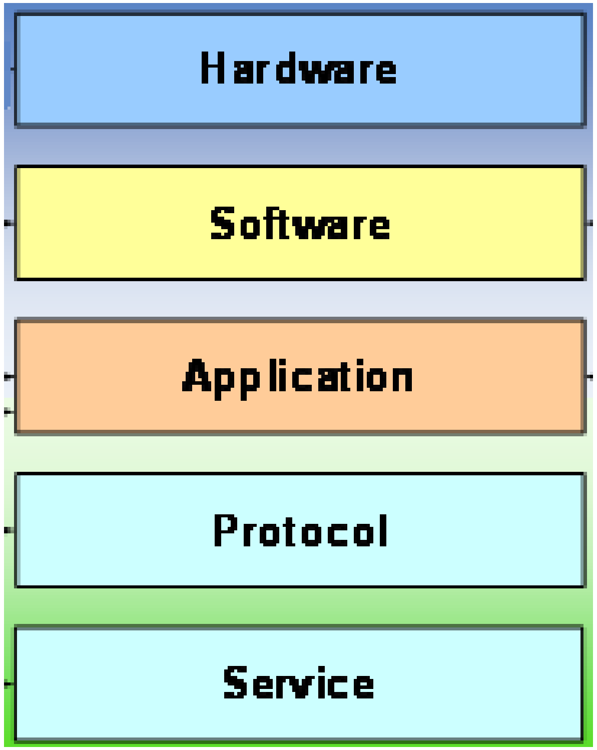
- DoD
- Non-DoD Agencies
- PAAs (Principal Accrediting Authorities)
- DAAs (Designated Accrediting Authorities)
- DSAWG
- JTF-GNO -- Network Operations/Enforcement
- FSO – STIGS and Audits
- DISA CIO -- Certification & Accreditation authority
- Development Program Managers
- Acquisition Program Managers
- Firewall Administrators
- Commercial Vendors

What is a DoD Information System?

DoD Information System

Set of information resources organized for the collection, storage, processing, maintenance, use, sharing, dissemination, disposition, display, or transmission of information. Includes AIS applications, enclaves, outsourced IT-based processes, and platform IT interconnections.

What does a DOD IS Look Like ?



Security Technical Implementation Guide (STIG)

PPSM

Maintains DoD Registry of DoD IS ports, protocols and services usage

Category Assurance Level (CAL)

Vulnerability Assessment (VA)

Assurance Level Changes

Old

- ***Green*** (High assurance)
  - Considered best security practices and recommended for use when implemented with the required mitigation strategy and approved for a specific DoD information system.
- ***Yellow*** (Medium assurance)
  - acceptable for routine use only when implemented with the required mitigation strategy and approved for a specific DoD information system.
- ***Red*** (Low assurance)
  - Unacceptable vulnerability for routine use.
  - Only be allowed when approved by for a specific DoD information system under defined conditions and restrictions and if ***no suitable alternative exists***.

N E W !!!

- ***Green*** (Best Practice)
  - Recommended as best security practices
  - Technical vulnerability acceptable with minimal mitigations
  - Advocated for use in new systems
- ***Yellow*** (Acceptable)
  - Technical vulnerability can be acceptably mitigated
- ***Orange*** (Controlled)
  - Technical vulnerability *cannot* be mitigated to an acceptable level
  - Legacy usage only - based on operational need
  - Not for use in the Acquisition and Development of new systems
- ***Red*** (Banned)
  - Prohibited – No Exceptions!
  - Technical vulnerability *cannot* be mitigated
  - Malware
  - Protocols and Services with no Life Cycle Support
Or, 3rd Party Maintenance Support

Exception Package

- Operational Need
- Ports, Protocols, Services, and IP Addresses
  - Includes hosts, IP address ranges, and subnets
- Executive DIACAP package includes:
  - System Identification Profile (SIP)
  - DIACAP Implementation Plan (DIP)
  - System Accreditation Decision
- POA&M

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