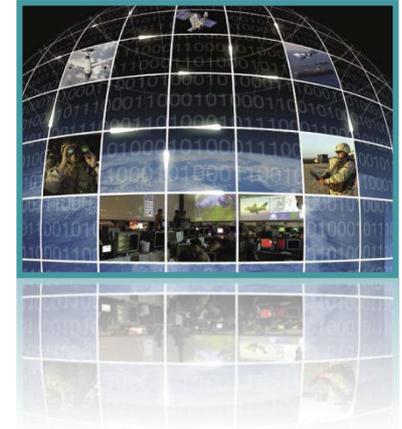




DoD Information Enterprise Architecture (IEA) v2.0



Overview Briefing

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Purpose of DoD IEA

- Provide stakeholders with a strategic level architecture with more detailed reference architectures that sets the direction for transforming the current IE to a more effective, secure, and efficient IE.
- Provide a common, enterprise foundation to guide and inform IT planning, investment, acquisition and operational decisions in achieving the future, objective IE.

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Scope of the DoD IEA

- **Customers:** IT Architects, Investment Decision Makers, and Program Managers
- **Content:**
 - Requirements for the IE; describes the capabilities the IE must provide or perform
 - Activities, rules, services, and standards needed to provide and perform the IE capabilities
 - Reference Architectures (RAs)
 - IEA compliance criteria and EA compliance requirements
 - DoD IEA Use Cases



New Features in the DoD IEA v2.0

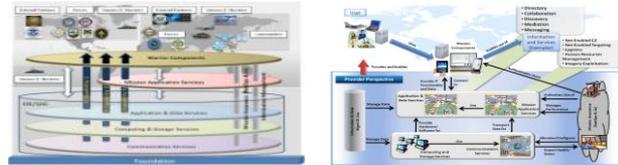
- **Operational Context:** Incorporates GIG 2.0 ORA content in operational views
- **Capability-based Architecture:** Identifies the capabilities the IE must provide or perform to support mission operations
- **Service Views:** Describe the services needed to deliver the IE capabilities
- **Comprehensive IE Capability Description:** Aligns activities, rules, and services to each capability
- **Reference Architectures:** Extend the DoD IEA and provide more technical information to guide and inform solutions and implementations
- **Use Cases:** Describe how the DoD IEA is used to support key events



Line-of-Sight: From Abstract to Concrete

DoD IEA v2.0

IE Vision & CONOPS



IE Capabilities

Category	Item	Item	Item
Network	Network	Network	Network
	Network	Network	Network
	Network	Network	Network
	Network	Network	Network
Information & Collaboration	Information & Collaboration	Information & Collaboration	Information & Collaboration
	Information & Collaboration	Information & Collaboration	Information & Collaboration
	Information & Collaboration	Information & Collaboration	Information & Collaboration
	Information & Collaboration	Information & Collaboration	Information & Collaboration
Mission Operations	Mission Operations	Mission Operations	Mission Operations
	Mission Operations	Mission Operations	Mission Operations
	Mission Operations	Mission Operations	Mission Operations
	Mission Operations	Mission Operations	Mission Operations

Requirements for the IE to enable Mission Operations

Activities
Services
Rules

The activities, services and rules needed to deliver IE capabilities

Reference Architecture

- EANCS RA
- ADORA
- CDC RA
- NORA
- UC RA

Additional detailed information on IE Capabilities for use by decision makers and IE solution developers

Legend:

- RA – Reference Architecture
- EANCS – Enterprise-wide Access to Network and Collaboration Services
- ADO – Active Directory Optimization
- CDC – Core Data Center
- NO – Network Optimization
- UC – Unified Capabilities

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DoD IEA v2.0: Structure and Content

- **Volume I:** A management overview of the DoD IEA that focuses on general content, the value of the content, and intended uses for the content
- **Volume II:** A description of the DOD IEA providing more detailed information about the architecture views, results of architecture analysis, and a set of appendices
- **Reference Architectures (RA):** Enterprise-wide RAs are a key component of the DoD IEA that provide more detailed content on capabilities, as well as rules, patterns, and technical positions for specific IE focus areas



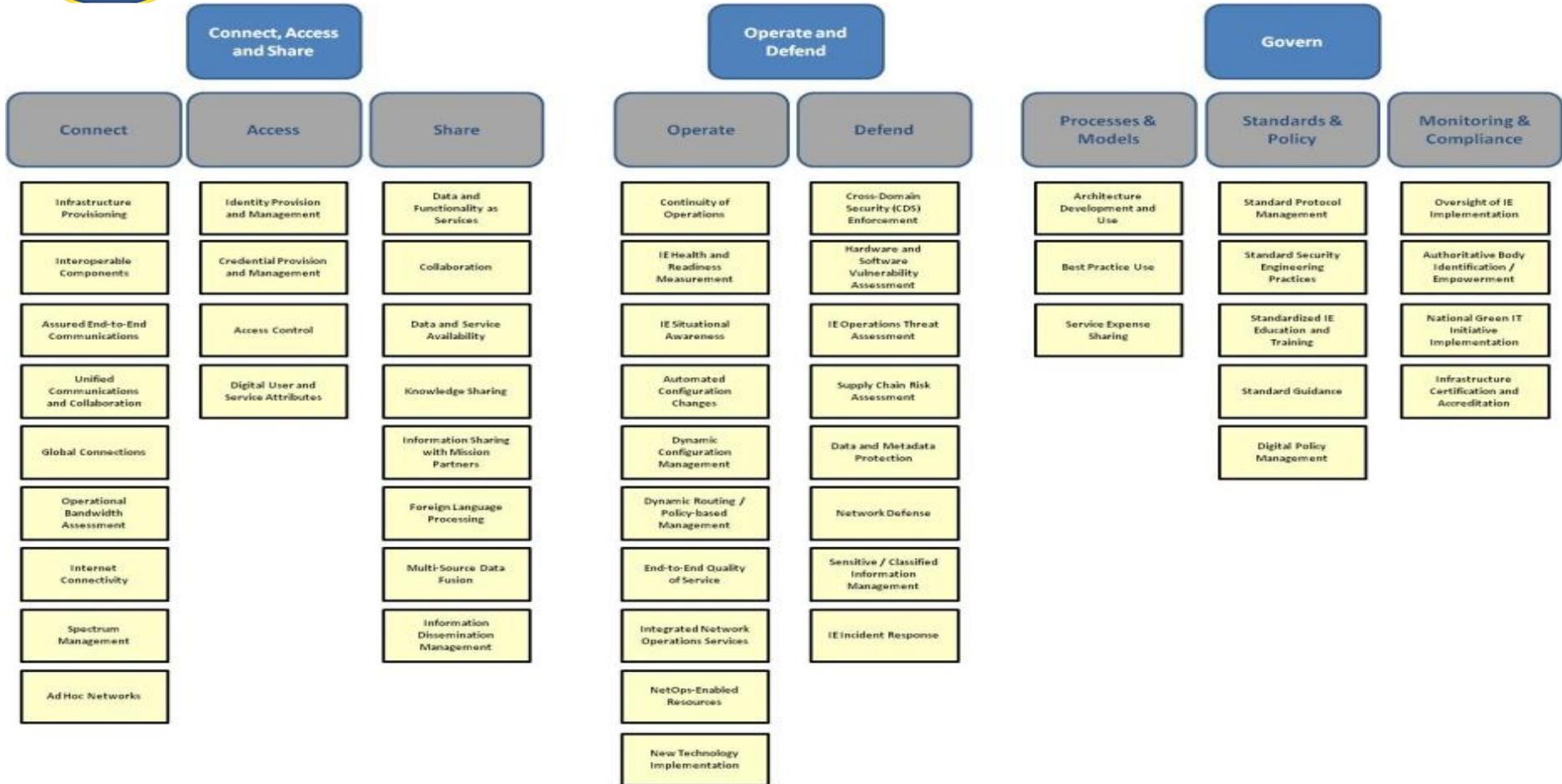
DoD IEA v2.0 Architecture Views

DoD IEA v2.0 Architecture Views	Description
AV-1: Overview and Summary Information	Provides executive-level summary information. It frames the context for the DoD IEA v2.0 and includes purpose, scope, goals, assumptions, and constraints for the architecture.
AV-2: Integrated Dictionary	Defines all terms used in the architecture descriptions.
OV-1: Operational Concept Graphic	Provides a high-level graphical/textual description of the IE operational concept.
OV-5a: Activity Decomposition Tree	The activities organized in a hierarchical structure.
OV-6a: Operational Rules Model	Describes the business rules that constrain operations.
CV-1: Vision	Describes the IE vision and strategic context for IE capabilities.
CV-2: Capability Taxonomy	Presents the hierarchy of IE capabilities.
C-6: Capability to Operational Activities Mapping	Provides a mapping between the IE capabilities and the activities performed to achieve the capabilities.
CV-7: Capability to Services Mapping	Provides a mapping between the IE capabilities and the services used to achieve the capabilities.
SvcV-1: Services Context Description	Provides context for and identifies enterprise services.
SvcV-4: Services Functionality Description	Describes enterprise services and sub-services for the IE.
StdV-1: Standards Profile	Provides a listing of current standards applicable to the IE.
StdV-2: Standards Forecast	Describes emerging standards applicable to the IE.

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CV-2: Capability Taxonomy



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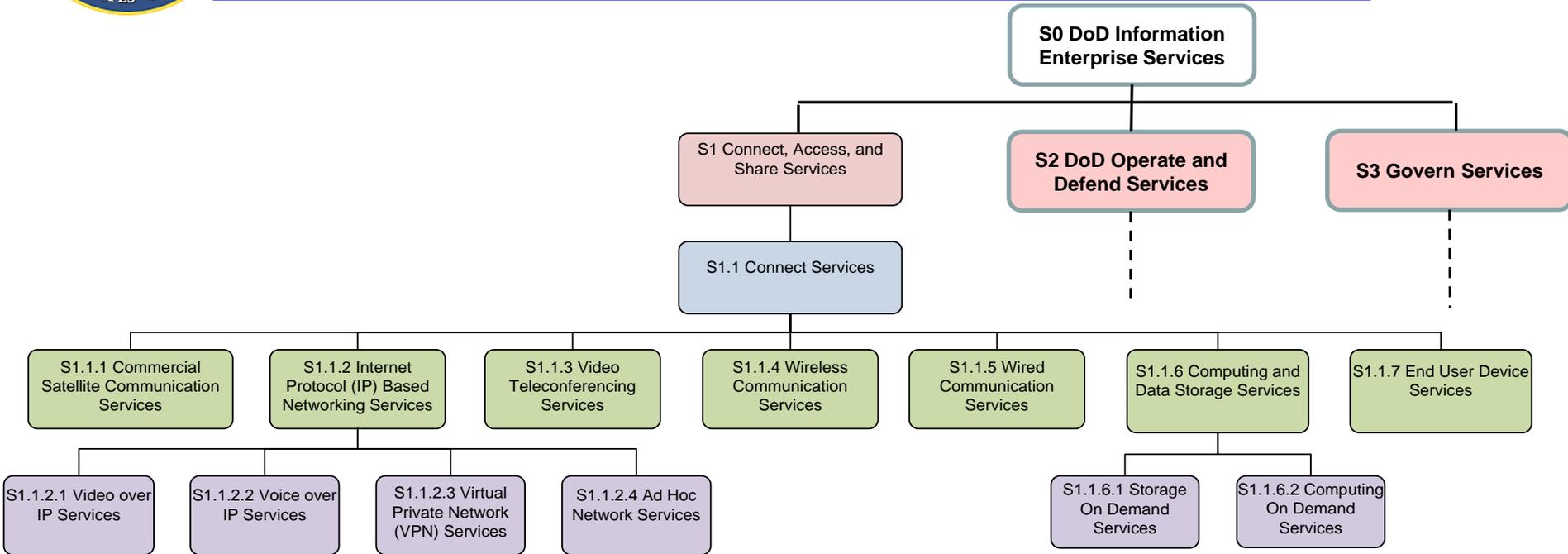


CV-6/7: Capability to Operational Activities/Services Mapping

Capability	Definition	Activities	Rules	Services
Connect	The set of computing and communications infrastructure capabilities enabling any user or service to reach any other user or identify and use any other service.			
Infrastructure Provisioning	The ability to provision and allocate shared computing and data storage resources in a computing platform agnostic, location independent, transparent, and real-time manner.	A3.1.1.1 Provide Services Infrastructure A3.2.1.2.1.3 Enable Dynamic, Virtual Processing in Computing Infrastructure A4.2.3.1 Allocate IE Resources	CIR 01 CIR 05 CIR 06	S1.1.6.1 Storage On Demand Services S1.1.6.2 Computing On Demand Services S1.3.6.1 Software as a Service S1.3.6.2 Infrastructure as a Service S.1.3.6.3 Platform as a Service
Unified Communications and Collaboration	The ability to seamlessly integrate voice, video, and data applications services so they are delivered ubiquitously across a secure and highly available single protocol network infrastructure.		CRP 01 CRR 01	S1.1.2.1 Video over IP Services S1.1.2.2 Voice over IP Services S1.1.2.3 VPN Services



SvcV-1: Services Context Description





DoD IEA Reference Architectures*

**As defined in the June 2010 Reference Architecture Description document*

Reference Architecture	Brief Description	Remarks
Enterprise-wide Access to Network & Collaboration Services RA (EANCS RA)	Guides, standardizes, and enables the implementation of authentication and authorization capabilities to access collaboration services in support of secure information sharing across the Department.	Approved Aug 2010
Active Directory Optimization RA (ADORA)	Guides the transformation of legacy Windows networks that use AD to improve security, facilitate secure info sharing across networks, and achieve efficiencies through network consolidation.	Approved Feb 2011
Core Data Center RA (CDC RA)	Drives the vision of a consolidated, standardized, services-based IT infrastructure that meets all mission needs. Establishes the core attributes and characteristics for the small set (fewer than 20) of DoD Core Data Centers that will form the backbone of the future DoD computing environment.	Currently in formal review; expect approval in September 2012
Network Optimization RA (NORA)	Guides the implementation of joint networks using network virtualization or federation techniques and leveraging regional boundary protection (TLA) concepts.	Strategic pause; expect approval in CY12
Unified Capabilities RA (UC RA)	Guides implementation and acquisition plans for phasing in voice and video over IP services, and other UC operating on converged networks.	Currently in formal review; expect approval in September 2012

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Core Data Center RA (CDC RA)

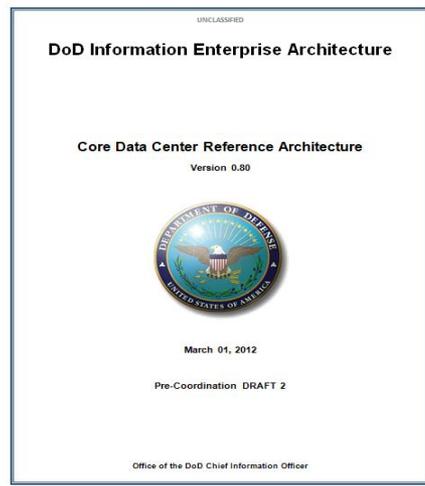
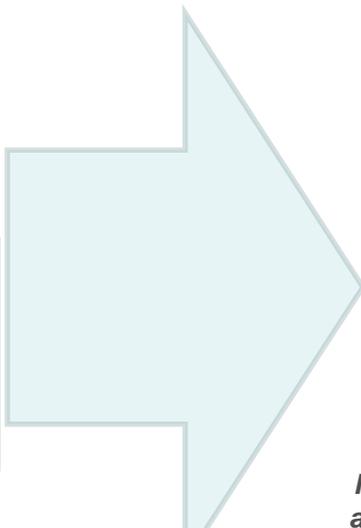
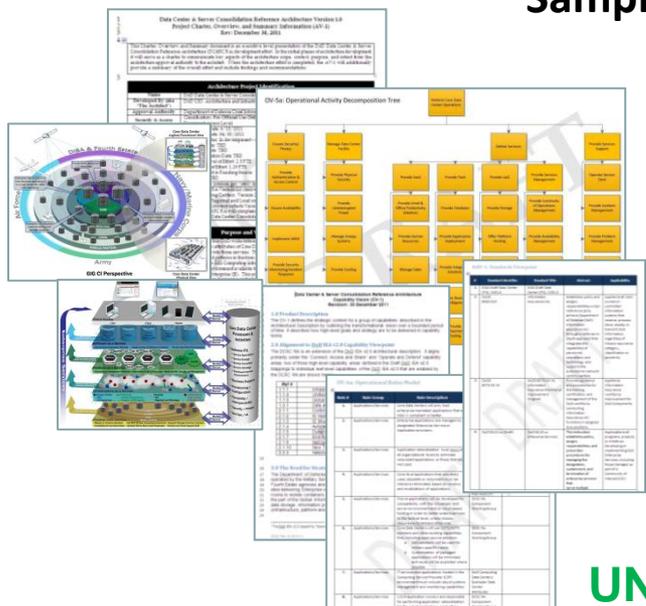
Purpose/Scope

- Guide data center and server consolidation efforts across the Department to meet GIG Computing Infrastructure (CI) goals of a standardized, agile, ubiquitous computing environment available to all authorized users as part of a services-based Information Enterprise (IE)
- Describes characteristics/attributes of Core Data Centers

Intended Use

- To aid in the identification and implementation of Core Data Centers that will operate according to the principles, rules and standards contained in this RA
- Serve as the Enterprise-level technical direction for the development of Component-level:
 - Solution architectures
 - Programs
 - Initiatives related to data centers, consolidation, server virtualization and enterprise services delivery

Sample Content



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Integrated report drawing from each architecture view to create a product consumable by a broad DoD audience



Network Optimization RA (NORA)

Purpose/Scope

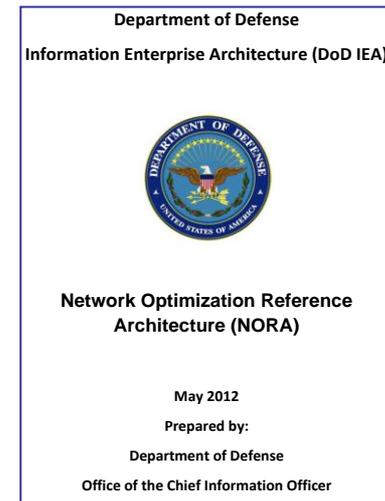
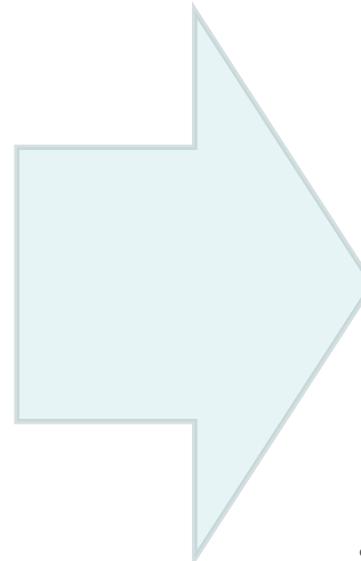
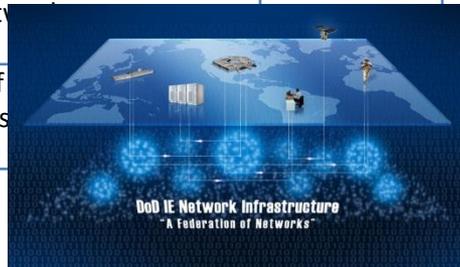
- Provides enterprise-level technical direction to guide the evolution of component networks toward an optimal future target state that:
 - Improves network security posture
 - Increases operational effectiveness
 - Enables efficiencies
- Focuses on “well-connected”, fixed network environments; Target State for 2020

Intended Use

- Guide and constrain network solution architectures, engineering plans, and similar documents developed by DoD components

Sample Content

	PRINCIPLES & RULES	FOCUS AREA
1	Network boundary protection for all CC/S/A networks is provided by virtual security stack provided by the enterprise	Network Security
2	Enterprise virtual security stacks are collocated with enterprise PE routers and provide boundary protection for all connected CC/S/A networks	Network Security
3	All ICAN, regardless of size, must receive long haul transport via a single enterprise network	



Integrated report drawing from each architecture view to create a product consumable by a broad DoD audience

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Unified Capabilities RA (UC RA)

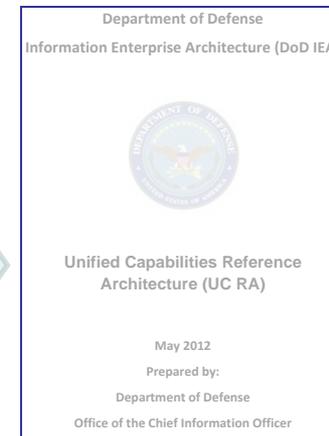
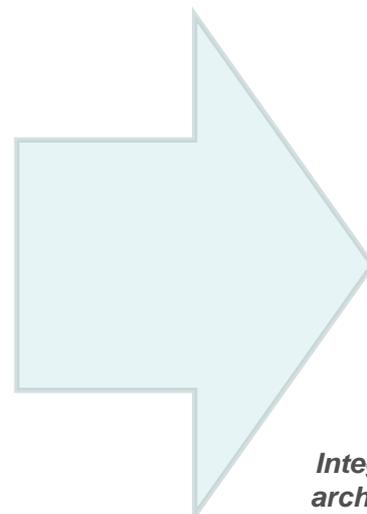
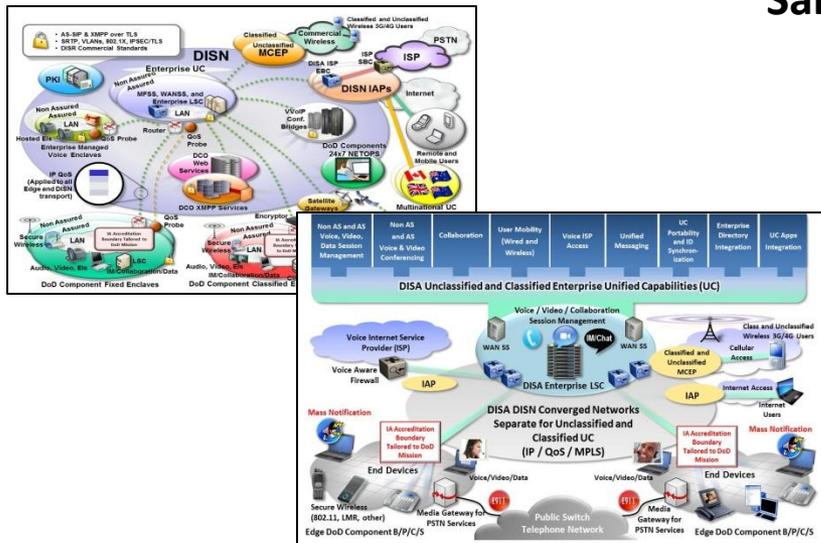
Purpose/Scope

- Defines the DoD's strategy for implementing converged, net-centric, IP-based enterprise UC (integration of voice, video, and/or data services), as defined in the DoD Unified Capabilities Master Plan (UC MP)
- Provides a common language and reference for DoD Components' implementation of UC technology, supports implementation of DoD Component solutions, and encourages adherence to common standards and specifications

Intended Use

- Provides a reusable DODAF 2.0-compliant architecture to facilitate oversight and analysis of DoD UC implementations
- Used as a guide to the DoD Components in the preparation of implementation and acquisition plans for phasing in UC, pursuant to the UC MP
- The UC RA shall be created in a DoDAF-approved format, consistent with the larger DoD Enterprise Architecture

Sample Content



Integrated report drawing from each architecture view to create a product consumable by a broad DoD audience

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DoD IEA v2.0 Use Cases

- The Use Cases illustrate the use of the DoD IEA in key processes
- The six Use Cases are:
 - IEA support to Identify and Develop DoD-wide Reference Architecture (RA): Uses IEA Capability descriptions to determine focus and scope for more detailed descriptions
 - Mission Area Architect Use of the IEA: Uses IEA Capability and RA descriptions to guide and align Missions Area architectures
 - Component Architect Use of the DOD IEA: Uses IEA Capability and RA descriptions to guide and align Component architectures
 - IEA Support to Transition Planning: IEA descriptions are used to guide detailed development and execution of the Initiatives/ Programs specified in the Plan
 - IEA Support to Investment Planning: IEA descriptions are used in analysis to support IT investment planning and decisions
 - Evaluate IEA Compliance: IEA compliance criteria is used to meet compliance requirements and to evaluate compliance

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DoD IEA and the Joint Information Environment (JIE)

- The DoD IEA is the authoritative capstone architecture that describes priority areas, principles and rules, and activities that guide the evolution of the DoD IE to realize the JIE vision.
- The DoD IEA provides a clear, concise description of what the DoD IE must be and how its elements should work together to accomplish the transformation to a JIE and deliver effective and efficient information and service sharing.
- The capability descriptions allow the development of a transition plan to evolve from the current DoD IE to the future vision of JIE.
- The DoD IEA enables proper planning for shaping the DoD IT landscape, managing the acquisition of required resources, and effectively operating the resulting IT environment.



Navigating DoD IEA Content

- URL for the DoD IEA

<http://dodcio.defense.gov/Home/Initiatives/DIEA.aspx>