DISA CDES Overview

DISA ID32
Oct 2017
DISA’s Cross Domain Enterprise Service (CDES) deploys, operates, and maintains cross domain technologies to facilitate the transfer of data between differing security domains for a variety of file types and transfer protocols.

CDES provides Enterprise, Enterprise-Hosted, and Mission Specific Cross Domain (CD) services for DoD and Other Government Agency (OGA) customers in a secure, consolidated, enterprise environment.

CDES facilitates consolidation of point to point (P2P) cross domain solutions (CDSs) and provides automated alternatives to removable media and manual cross domain transfers, reducing overall risk to the DoD Information Network (DoDIN).

CDES supports customers throughout the entirety of the CD project lifecycle to include requirements definition, development and integration, deployment and testing, certification and accreditation (C&A), and operations and maintenance (O&M).

CDES supports Computer Network Defense (CND) and Cybersecurity compliance for the cross domain devices within the Enterprise infrastructure.

What is CDES?
Cross Domain Enterprise Services

Project Management & Planning
- Provides Project Management to Customers
- Guides customers through the appropriate onboarding/C&A process
- Ensures that customers are provided with necessary onboarding, integration, and user training documentation
- Over sites customer implement schedule

Engineering
- Provides Engineering Support for Customers
- Develops Filters
- Performs Technical Assessments
- Develops Gateways
- Fields Systems
- Provides Pre-deployment System Integration and Testing Support
- Supports Customers through Deployment

Accreditation and Authorization
- Supports Customers through the SABI Process
- Provide CDES Mission Partner Support in completing connection documentation
- Provides Cybersecurity and Risk Assessment subject matter expertise
- Support CDES interests in CDRM working group
- Support the conversion from DIACAP to RMF

Testing
- Supports GAT Systems Testing
- Provides support Filter IV&V and ST&E
- Performs System ST&E
- Performs CDS Pre-CT&E
- Validates Patches

Operations
- Supports Guard Integration
- Supports Performance Monitoring
- Provides CDES Help Desk
- Supports Customers Post-deployment
- Maintain IAVM, STIGs, ORD compliance
- Compile and distribute Enterprise Metrics
- Maintain CDES Integrated Test Facility

Budget & Finance
- Provides Financial Notification
- Provides Annual Sustainment Notification
CDES System Overview (OV-1)

Cross Domain Enterprise Services
Secure Transfer of Information & Enablement of Key Services Across Security Domains

NIPRNet
Unclassified Partner, Coalition Networks

SIPRNet
Coalition/Secret Releasable Networks

NetOps  DCO/CND  Cyber SA
Overview of DISA’s Enterprise Cross Domain Initiatives

- Enterprise-enable existing cross domain capabilities via technology refresh, scaling, hardware consolidation, deployment of enterprise-grade CDSs and ancillary devices, etc.
- Stand up new cross domain capabilities to enhance the CDES capabilities portfolio.
- Cross domain-enable enterprise services on the DoDIN via front-end integration with existing cross domain capabilities or as a part of standing up a new service.
- Develop and implement enterprise-grade technologies to expand and enhance the cross domain services offered and to facilitate the realization of enterprise efficiencies (HW consolidation, physical footprint reduction, increased service capacity and utilization, reduced hosting and O&M costs, etc.).
- Implement an Enterprise Onboarding Process for enterprise cross domain Services to streamline the C&A and onboarding processes and achieve a faster time to IOC.
- Engage in community efforts furthering Computer Network Defense (CND) and Insider Threat Mitigation for Cross Domain.
- Support the Joint Information Environment effort and the Mission Partner Environment 2021 Vision.
CDES Reference Architecture

DoDIN Users / Apps

Enterprise Services / Front End Low

Low Network

Global Load Balancing

DoDIN Users / Apps

Enterprise Services / Front End High

High Network

Global Load Balancing

Enterprise Services / Front End Low

Enterprise Services / Front End High

Global Load Balancing

CDES Cybersecurity Metrics Collection, Consolidation, Analysis System

Historical Query

Real-time Event Correlation

Acropolis

National Cyber Defense Systems

Computer Network Defense (CND)/Defensive Cyber Operations (DCO) Integration

Standard Protocols

Metrics, Alerts, Log, Traffic Collection

Specialized CDES Cyber Defense integrated into DISN / DoDIN Situational Awareness & Defense

Situational Awareness of CDES in support of Cyberspace Operations and Insider Threat Mitigation
FY17 CDES Services Portfolio

**Enterprise Services**
- Shared infrastructure supporting multiple customers' reqts.
- Little/no customization/development per reqt.
- Expedited onboarding and C&A process.
- DWCF DISN Subscription Service Cost Model.

**Enterprise Hosted Services**
- Shared infrastructure supporting multiple customers' reqts.
- Some level of customization/development per reqt.
- Full C&A process with portions streamlined/compressed.
- DWCF Reimbursable (Fee for Service).

**Email with Attachments**
- Plain Text Email
- Plain Text Email with Attachments (See file types under File Sharing)

**File Sharing/Unstructured File Transfer**
- MS Office (.doc/.docx, .xls/xlsx, .ppt/.pptx)
- Image (.jpg, .bmp, .png, etc.)
- PDF
- ASCII (free text)
- Archive (.zip)

**Security Content/Patching**
- Security Content Updates (e.g., patches, antivirus, OS, ACAS, HBSS, CMRS, WSUS)

**Structured File Transfer**
- ASCII (fixed format)
- XML
- Binary
- Other (e.g., proprietary data)

**Web Services**
- HTTPS
- XML

**Data Streaming**
- TCP/IP
- All fixed format data
FY17-FY19 CDES Services Portfolio: Future Plans

- **Voice/VT C Over IP**
  - Point to Point and Multi-point Voice and VTC
  - Interoperable with Different Voice/VTC Infrastructures
  - Minimizes # phones

- **Chat**
  - Person to Person Chat
  - Interoperable with Different Chat Clients

- **Full Motion Video**
  - Streaming Full Motion Video

- **Mail Feature Sync**
  - Synchronization of Mail Features across Domains such as Contacts, GAL, Calendars, Meeting Invites, etc.

- **Content Discovery & Retrieval**
  - Query/response and Federated Search from one Domain across Multiple Domains.

- **Messaging**
  - Integration of Web Services Capability with Pub/Sub Messaging Services/Enterprise Service Bus

FY17-FY18 Pilots/Implementations

FY18-FY19 Pilots/Implementations
## Comparison: CDES Enterprise Hosted Services vs P2P

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<tr>
<th>Comparison of -ilities</th>
<th>CDES</th>
<th>P2P</th>
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<tbody>
<tr>
<td>High availability? (i.e., intra-data center load balancing and failover across system components for minimal downtime)</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>COOP capability satisfied? (i.e., inter-data center load balancing and failover across sites for minimal downtime)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Tech Refresh Costs Incorporated?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>SA Support/Helpdesk/ Troubleshooting?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Other Contract Costs Factored In? (i.e., PM, Travel, Financial, etc.)</td>
<td>Yes</td>
<td>No</td>
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- **Implementation Cost Savings (CDES over P2P):** 44%
- **Sustainment Cost Savings (CDES over P2P):** 84%
- **Reduction in time to IOC (CDES over P2P):** 50%
Customers submit cross domain requirements for enterprise compatibility assessment through CDES’s TRB process:

*Customers onboarding to the Cross Domain Enterprise Email capability are typically exempted from filling out the questionnaire and proceed straight to the TRB for approval. The CDES Compatibility Assessment Memo is typically not required for Cross Domain Enterprise Email customers.

**CDES will not accept questionnaires directly from customers; all questionnaires must be submitted to CDES by the customer’s representative CDSE.
## CDES Cost Models

<table>
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<th>Service Category</th>
<th>Cost Model</th>
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| Enterprise CD Services    | **Capabilities:** Email, File Sharing, Security Content  
**Cost Model:** DISN Subscription Services (DSS) Cost Model under Defense Working Capital Fund (DWCF)  
- All DSS customers will be able to leverage enterprise cross domain capabilities without having to sign up for any additional services or costs.  
- Cost is not determined on a per user (or per email sent/file transferred) basis.  
- Non-DSS customers are subject to a reimbursable cost. |
| Enterprise-Hosted CD Services | **Capabilities:** Structured File Transfer, Web Services, Data Streaming  
**Cost Model:** Reimbursable Cross Domain Services (“RCDS”) under DWCF  
- Cost is comprised of an implementation fee to cover onboarding, development, C&A, and operational cutover per requirement, as well as an annual service fee to cover operations and maintenance per requirement.  
- Costs are shared/normalized across all enterprise-hosted customers.  
- Cost is not determined on a throughput (e.g., MB/time) basis. |
| Mission-Specific CD Services | **Capabilities:** Dedicated implementations for unique customer requirements.  
**Cost Model:** Direct-Reimbursable  
- All costs are charged to the customer to recoup the full cost of each mission specific cross domain implementation.  
- Cost is comprised of HW/SW, equipment maintenance, CDES labor, DECC hosting and support, etc. |
CDES Project Lifecycle

**Administrative A&A Approval**

**Enterprise Onboarding**

**TRB Evaluation**

**Filter Development/Configuration**

**Streamlined IV&V/ST&E**

**Streamlined A&A Approval**

**CDES/ Customer System Integration**

**Connection and End to End Testing**

**Operational Cutover**

*1-3 months*

**Enterprise Hosted**

**MISSION SPECIFIC**

**Filter Development**

**Full IV&V/ST&E**

**Full A&A Approval**

*Compared to point to point implementations, which typically take 12-18 months*
• Submit your inquiries via email to the CDES Inquiry Management mailbox at: disa.meade.ma.list.cdeslno@mail.mil.

• For general inquiries, the CDES Inquiry Manager will address your questions or refer them to the appropriate POC.

• For new requirement submissions, the CDES Inquiry Manager will guide you through the appropriate requirement evaluation process and assign a CDES Project Manager to begin the onboarding/C&A process, as applicable.

• Once transitioned, your CDES Project Manager will guide you through the appropriate onboarding/C&A process and ensure that you are provided with necessary onboarding, integration, and user training documentation.
DEFESE INFORMATION SYSTEMS AGENCY
The IT Combat Support Agency

UNITED IN SERVICE TO OUR NATION