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Distributed Service Oriented Architecture (SOA)- Compatible Cross Domain Service (DSCDS) DSCDS Overview

**Presentation at the UCDMO Conference, 2 September 2009
by the NSA Cross Domain Solution Products Division**



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Purpose / Outline

- Information briefing to provide an overview of the DSCDS Program
 - Typical legacy cross domain solution
 - Today's cross domain (CD) environment
 - DSCDS framework
 - DSCDS Proof of Concept (PoC)
 - DSCDS next steps



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Typical Legacy Cross Domain (CD) Solution

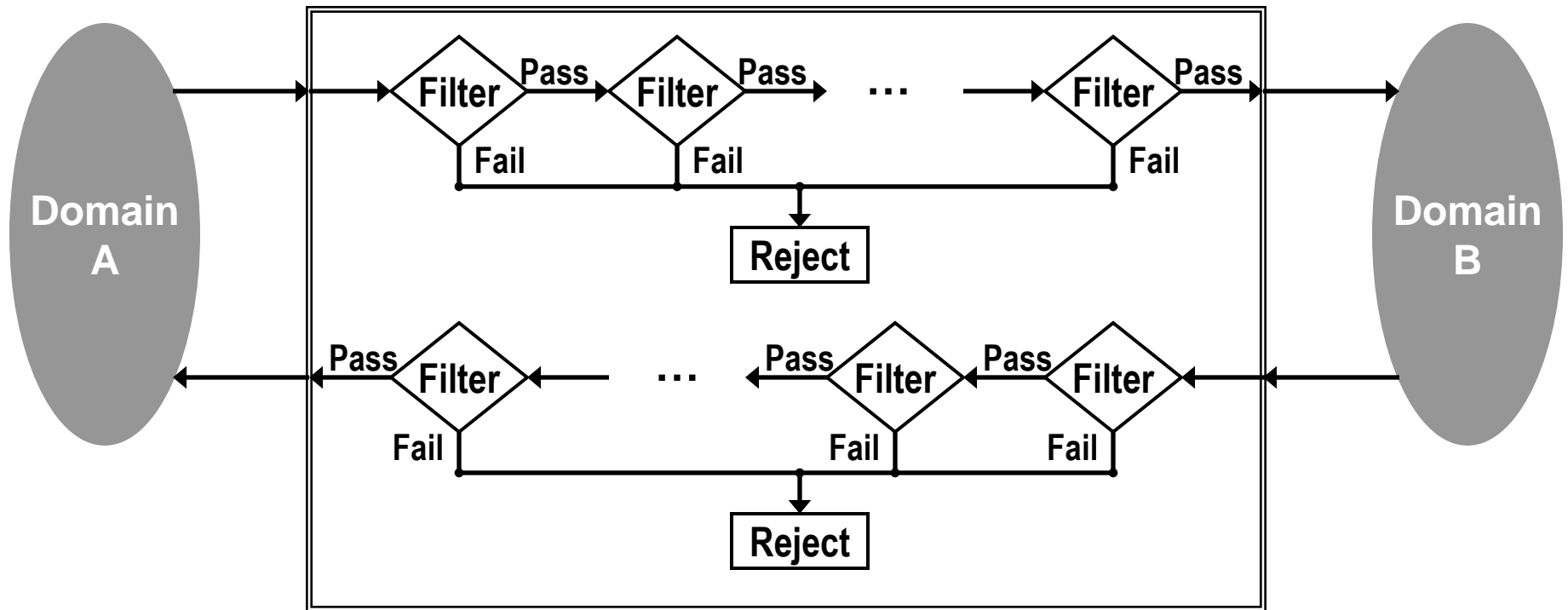




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Typical Legacy Cross Domain (CD) Solution - Continued

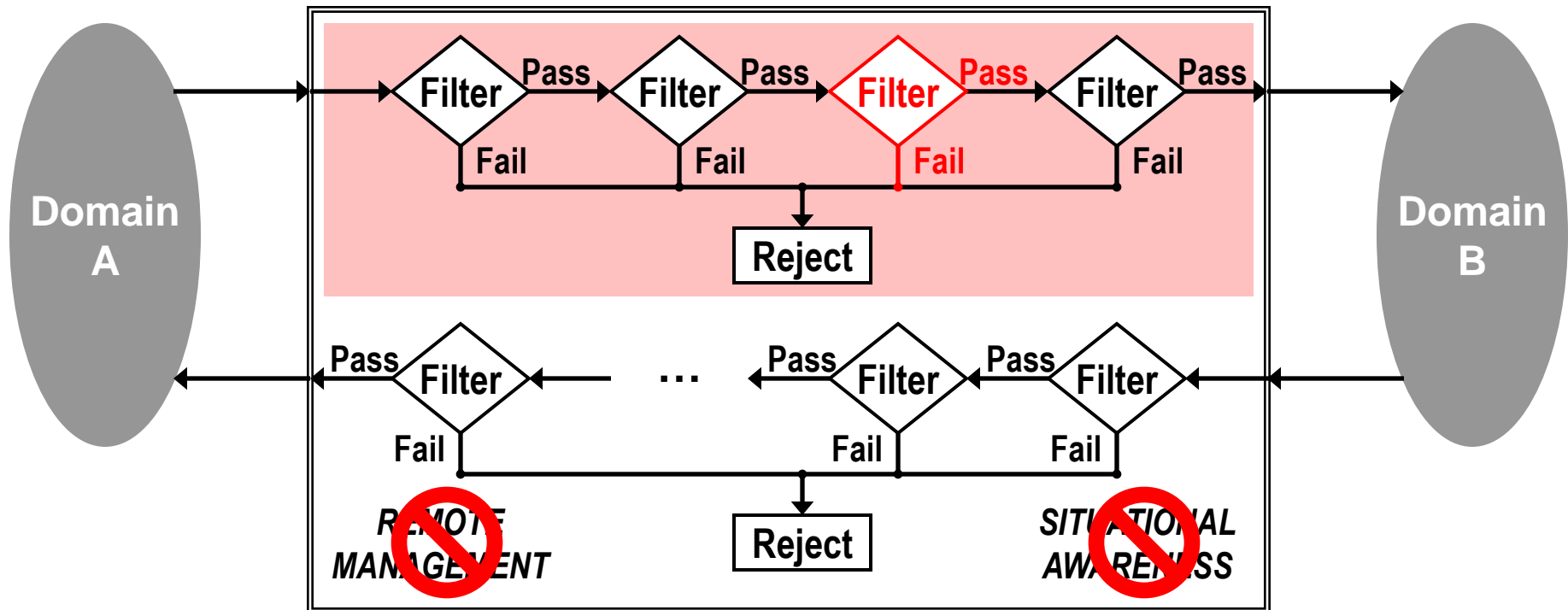




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Typical Legacy Cross Domain (CD) Solution - Continued



Fixed, point-to-point connection
Allows limited number of data types
Enforces “hard-wired” policy

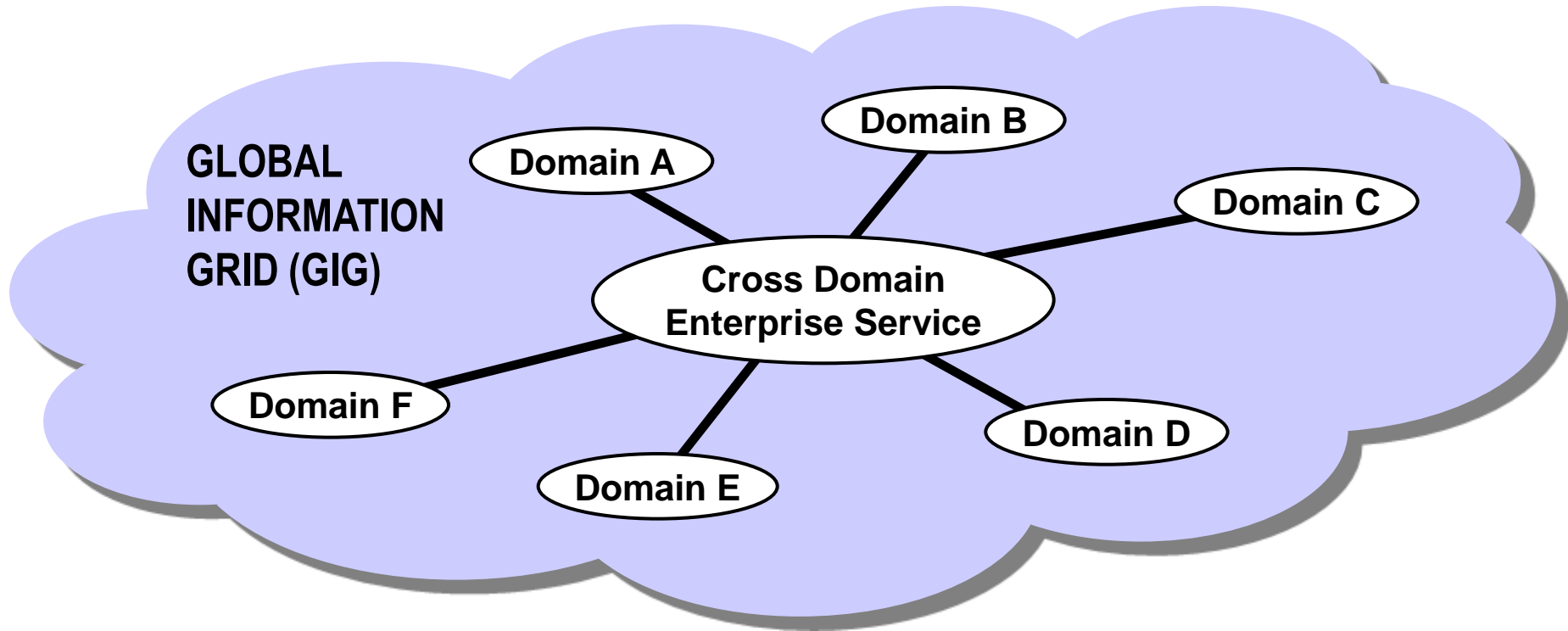
No remote management
No support for situational awareness
Changes require extensive C&A



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Today's Cross Domain Environment



- Global Information Grid (GIG)
- Service-Oriented Architecture (SOA)
- Enterprise-wide cross domain (CD) solutions
- Commercial-off-the-shelf (COTS) technologies



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“New” Requirements

- Characteristics of typical, legacy guards are now limitations
 - Incompatible with current CD environment
 - New capabilities are needed

~~Fixed, point-to-point connection~~

~~Allows limited number of data types~~

~~Enforces “hard-wired” policy~~

~~No remote management~~

~~No support for situational awareness~~

~~Changes require extensive C&A~~

Enterprise-wide CD solutions

Support wide variety of data types

Support multiple, dynamic policies

Support remote management

Support situational awareness

Reduce C&A impact of changes



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DSCDS



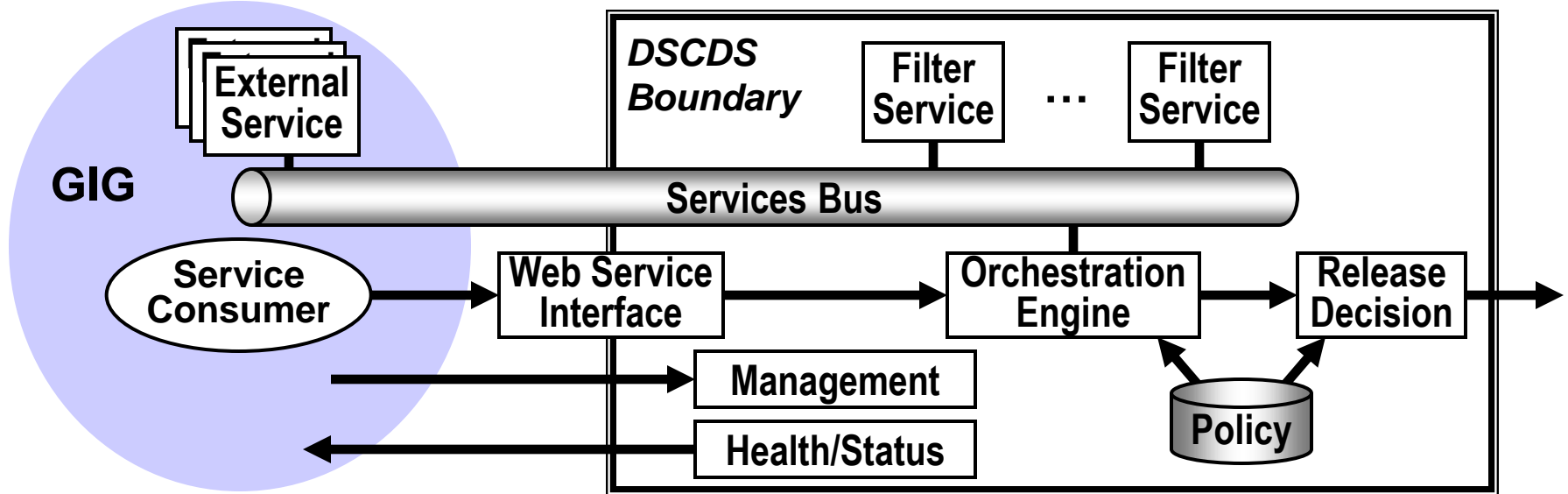
- A distributed, Service Oriented Architecture (SOA)-compatible, cross domain (CD) service that will integrate within the Global Information Grid (GIG) and support enterprise-wide CD requirements.



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DSCDS Framework



- Decompose and reallocate traditional cross domain (CD) functions as web services
- Configurable orchestration of CD web services for specific data flows
- Use of metadata in support of CD release decisions
- Controlled web service interoperable communication
- Support remote management & situational awareness
- Appropriate use of external services
- Standards based
- Maximize use of commercial-off-the-shelf (COTS) components
- Support timely, cost effective certification and accreditation (C&A)



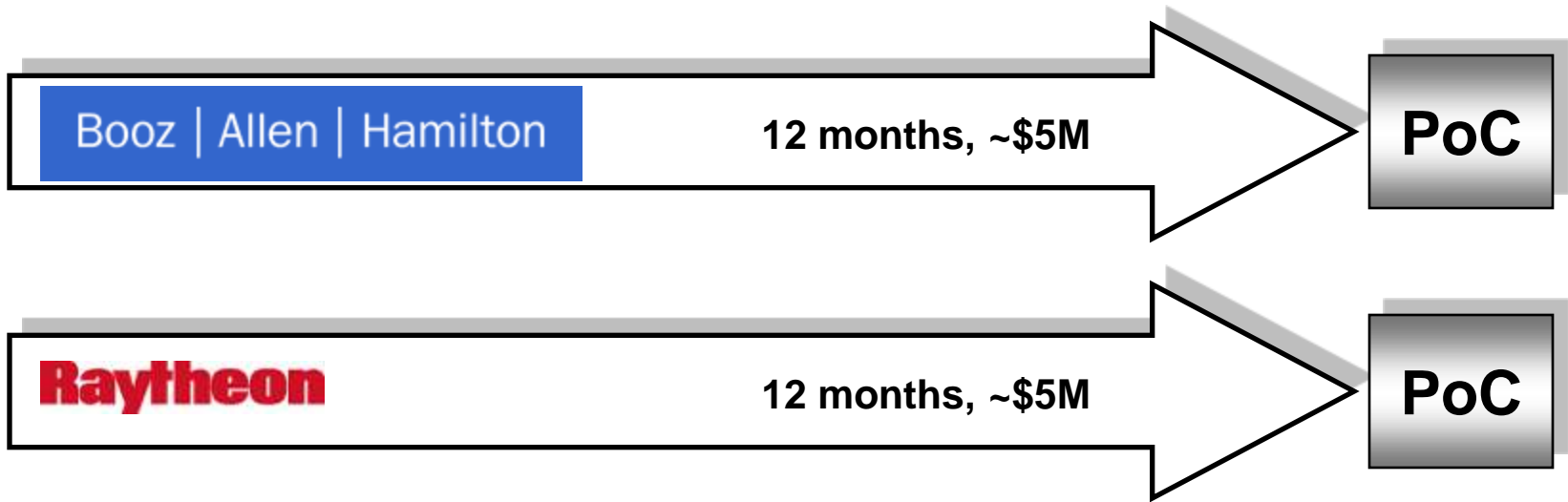
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DSCDS Proof of Concept (PoC)

April 2009

March 2010



- Dual, independent development contracts
- Demonstrate feasibility of an initial set of DSCDS functionality
 - Focus efforts on new, unproven aspects of the DSCDS
 - Laboratory environment



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DSCDS – Next Steps

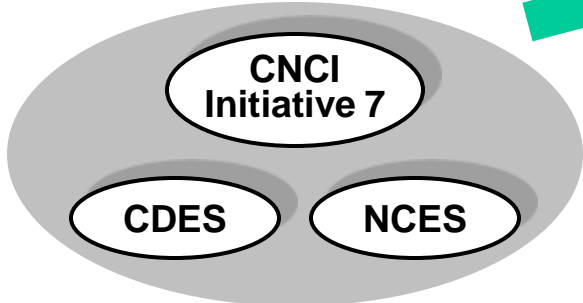
FY10

FY11

FY12

PoC

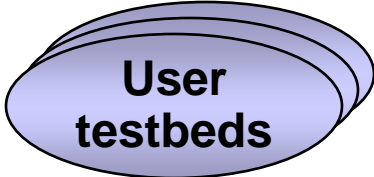
PoC



- Evolutionary step between PoC and operational system
- Expanded set of CD functions / web services
- Interoperate/integrate with external security functions via web service interfaces
- “Designed to” full set of functional, security/assurance, and C&A requirements

Prototype development

Operational system





DSCDS Contractor Overviews