Lecture 3-2

OM-AM and PEI

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THE OM-AM WAY

What?

- Objectives
- Model
- Architecture
- Mechanism

How?

Assurance
LAYERS AND LAYERS

- Multics rings
- Layered abstractions
- Waterfall model
- Network protocol stacks
- Napoleonic layers
- RoFi layers
- OM-AM
- etcetera
OM-AM AND MANDATORY ACCESS CONTROL (MAC)

**What?**
- No information leakage
- Lattices (Bell-LaPadula)
- Security kernel
- Security labels

**How?**
OM-AM AND DISCRETIONARY ACCESS CONTROL (DAC)

What?

Owner-based discretion

numerous

numerous

ACLs, Capabilities, etc

How?
OM-AM AND ROLE-BASED ACCESS CONTROL (RBAC)

What?

Objective neutral

RBAC96, ARBAC97, etc.

user-pull, server-pull, etc.

certificates, tickets, PACs, etc.

How?
SERVER MIRROR

Client  User-role Authorization Server  Server

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SERVER-PULL

Client

User-role Authorization Server

Server
USER-PULL

Client  

User-role Authorization Server

Server
PROXY-BASED

Client -> Proxy Server -> Server

User-role Authorization Server
THE OM-AM WAY

What?

Objectives
Model
Architecture
Mechanism

How?

Assurance

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PEI Models: 3 Layers/5 Layers