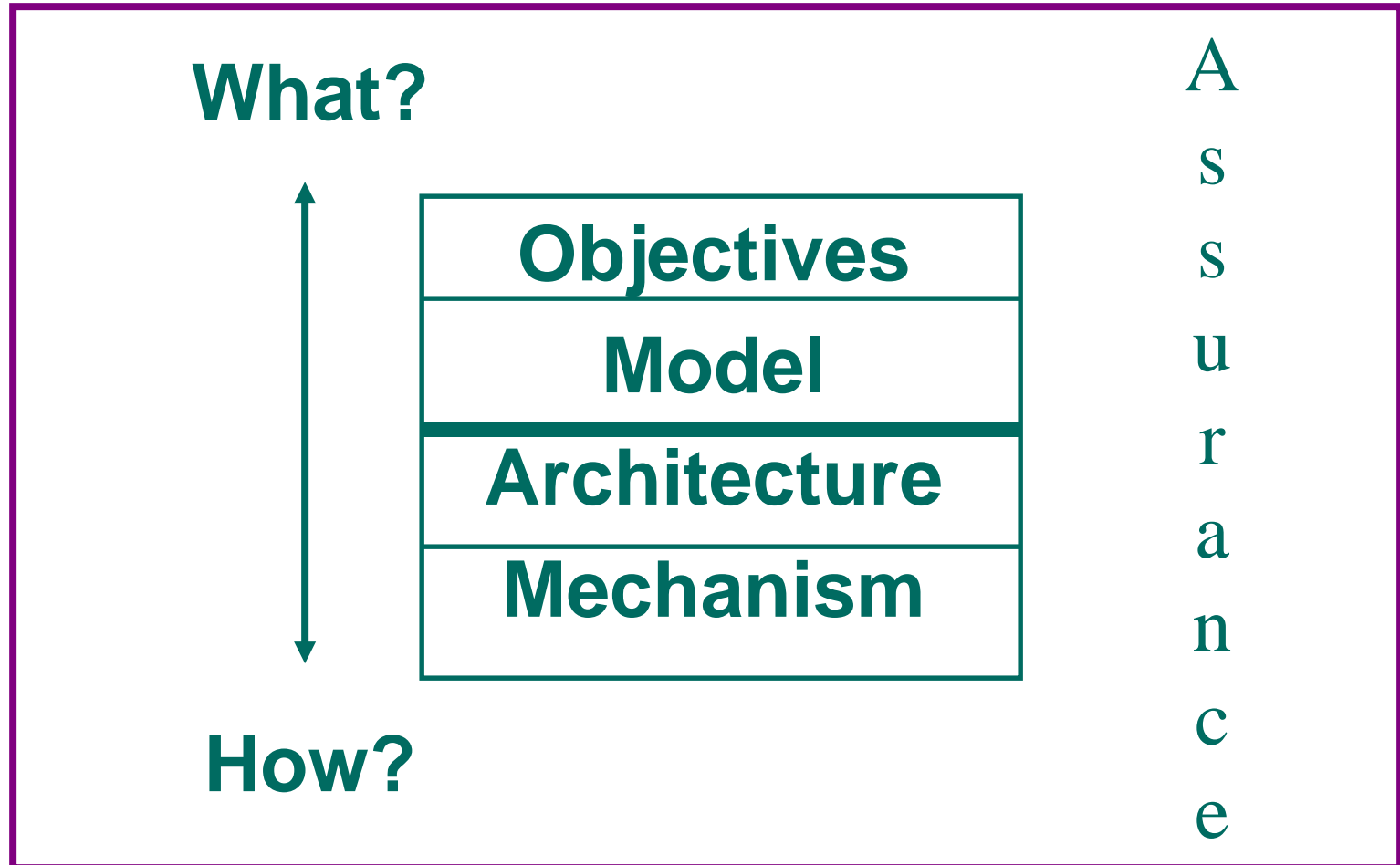


Lecture 3-2

OM-AM and PEI

Prof. Ravi Sandhu

THE OM-AM WAY



LAYERS AND LAYERS

- **Multics rings**
- **Layered abstractions**
- **Waterfall model**
- **Network protocol stacks**
- **Napolean layers**
- **RoFi layers**
- **OM-AM**
- **etcetera**

OM-AM AND MANDATORY ACCESS CONTROL (MAC)

What?



How?

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

A
S
S
U
R
A
N
C
E

OM-AM AND DISCRETIONARY ACCESS CONTROL (DAC)

What?



How?

Owner-based discretion
numerous
numerous
ACLs, Capabilities, etc

A
S
S
U
R
A
N
C
E

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

What?

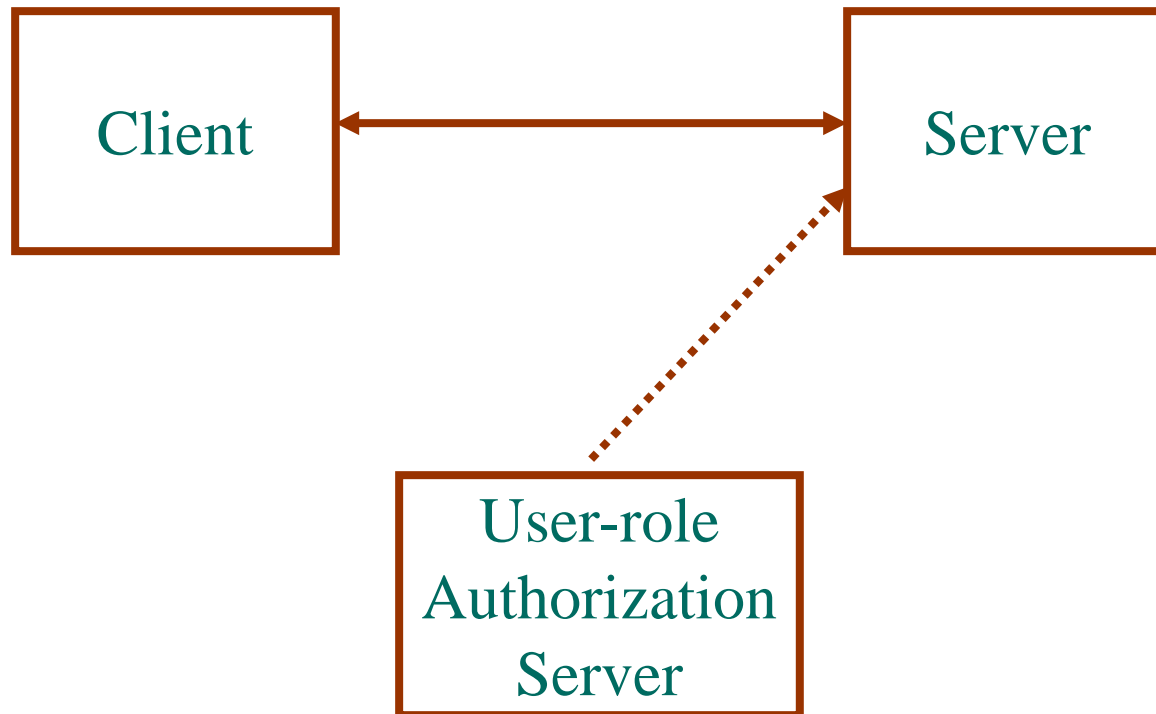


Objective neutral
RBAC96, ARBAC97, etc.
user-pull, server-pull, etc.
certificates, tickets, PACs, etc.

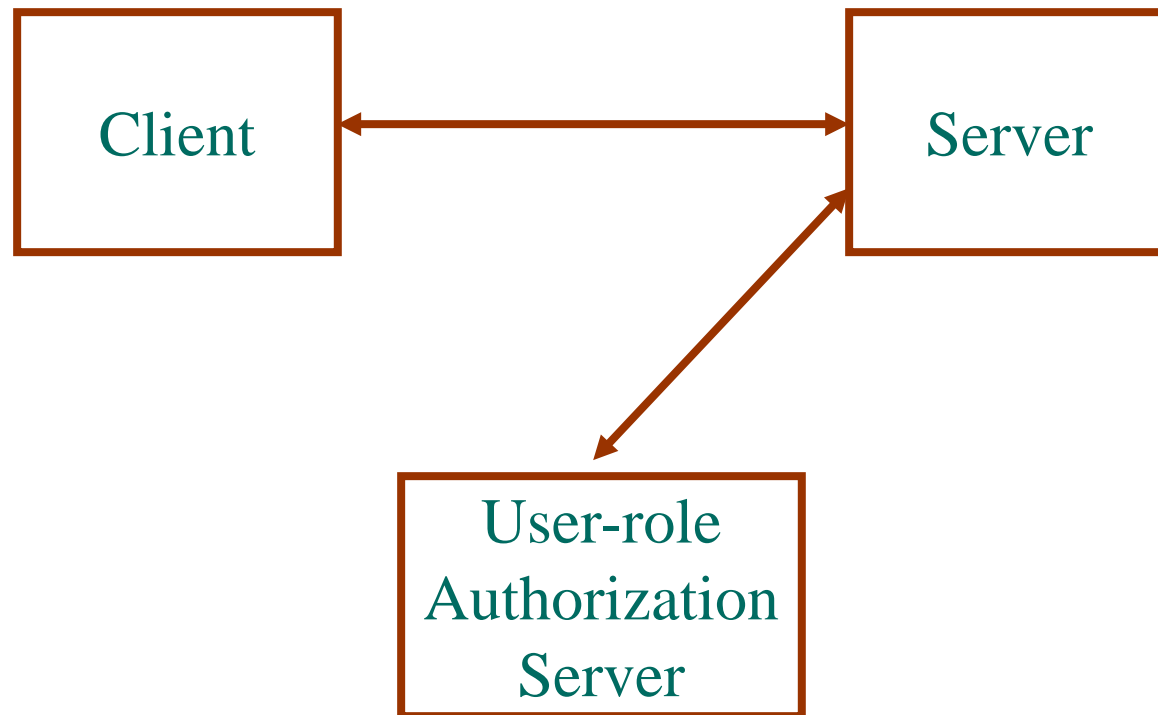
How?

A
S
S
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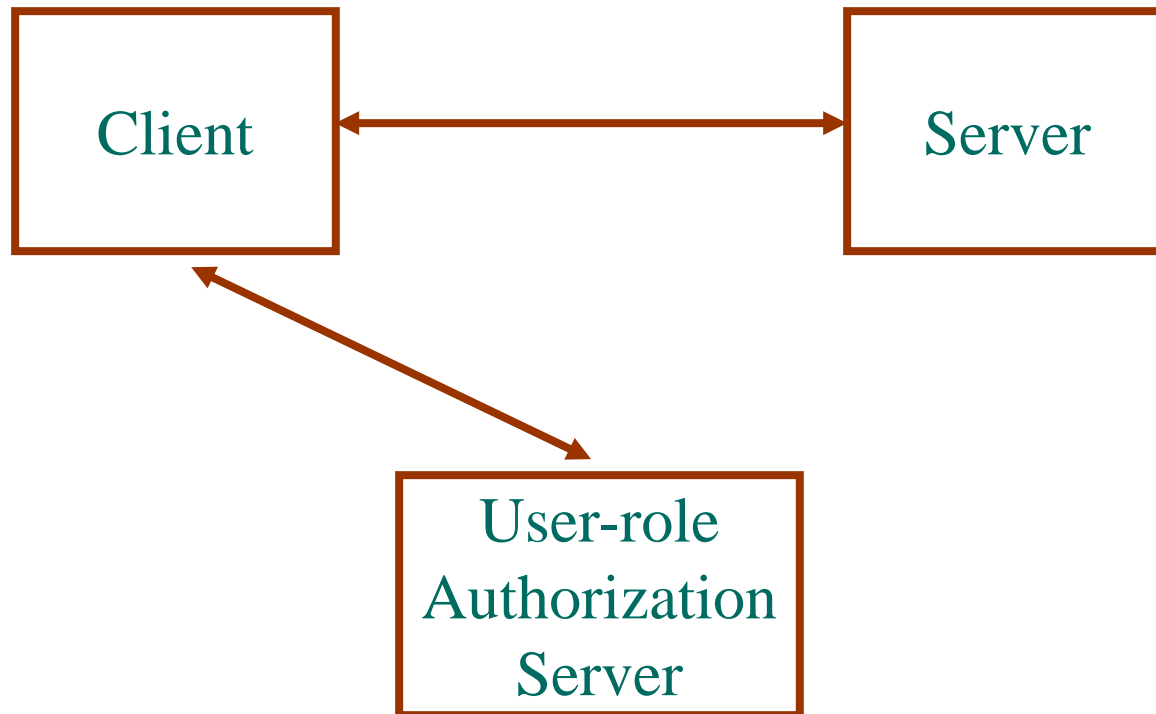
SERVER MIRROR



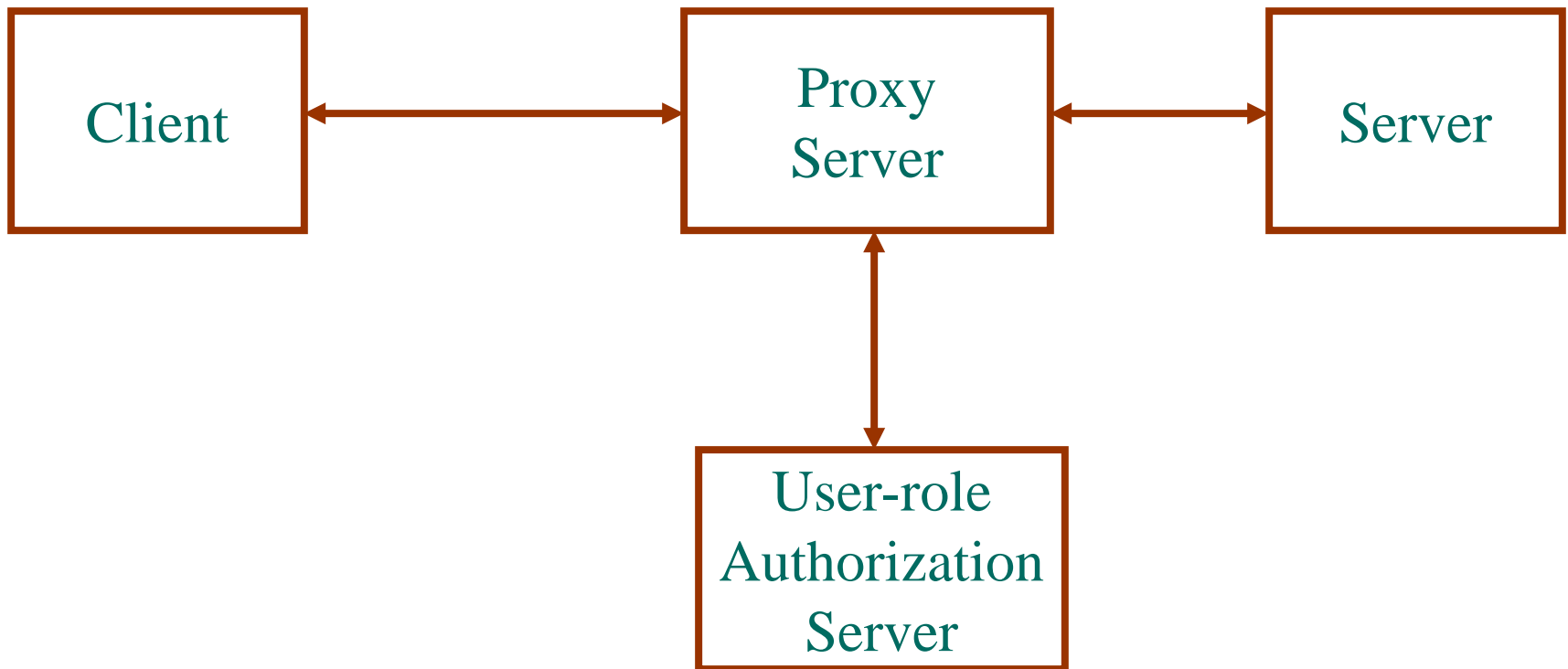
SERVER-PULL



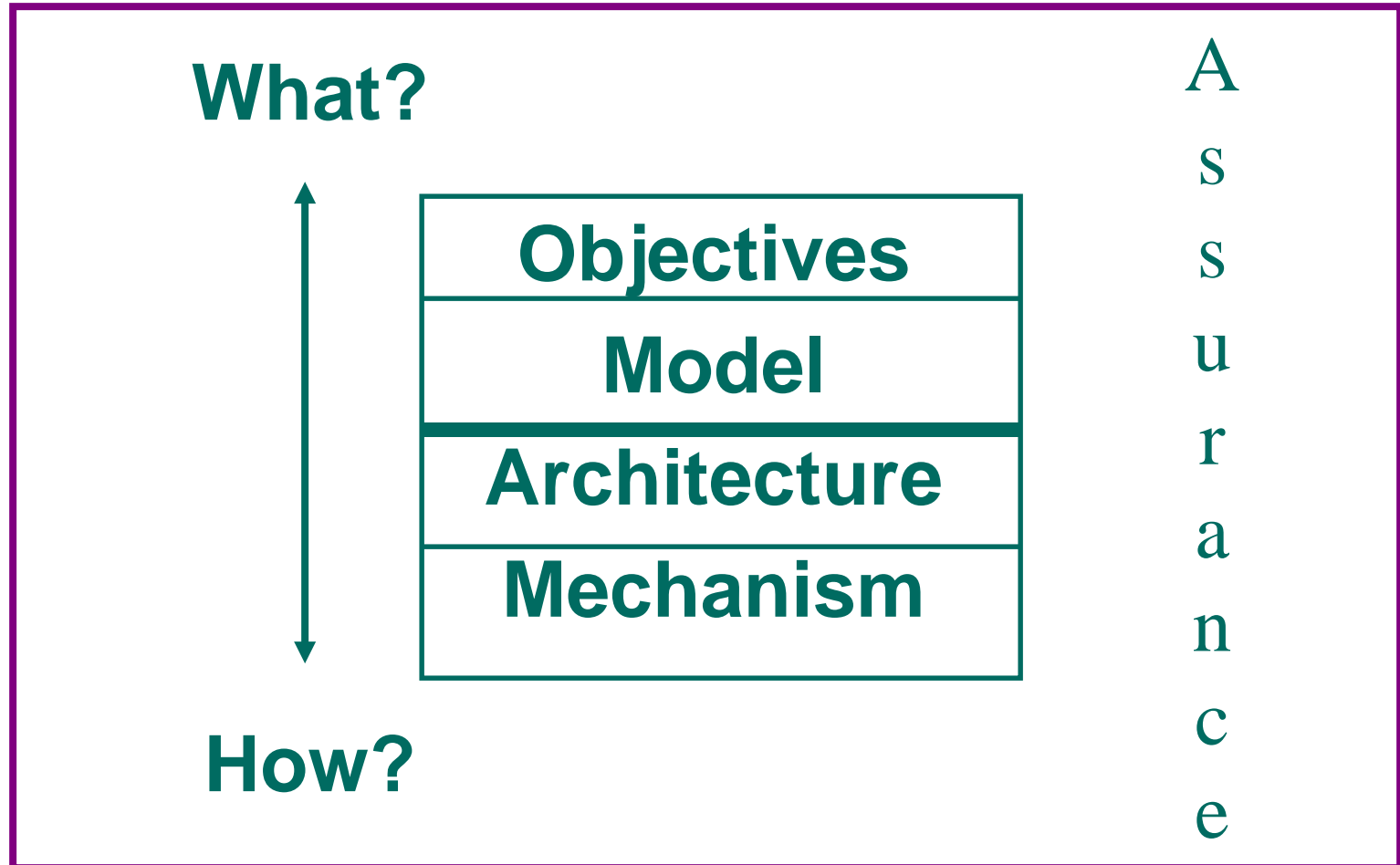
USER-PULL



PROXY-BASED



THE OM-AM WAY



PEI Models: 3 Layers/5 Layers

