
— HP ORB Plus 2.5

★ Subset of CORBA Security APIs

- ◆ framework supporting multiple simultaneous mechanisms
- ◆ “null” security mechanism for testing frameworks, writing applications
- ◆ no real secure transport or security mechanism yet

★ Implementation issues

- ◆ avoiding pseudo-objects
- ◆ supporting multiple mechanisms
- ◆ relevance of replaceability interfaces

— Avoiding Pseudo-Objects

★ CORBA Security specification mostly legal IDL

- ◆ implemented as real objects
- ◆ will locality-constrain them when supported by OA

★ Current issues

- ◆ added CORBA::ServiceType parameter to CORBA::ORB::get_current
 - allows each service's Current to be independently implemented
- ◆ Current must provide location transparency
 - method must not manipulate caller's Current

— Avoiding Pseudo-Objects

★ Credentials issues

- ◆ lifecycle and copy semantics not specified
- ◆ added destroy operation
- ◆ operations to which Credentials are passed copy them if necessary
- ◆ internal representation reference-counted copy-on-write for efficiency

★ SecurityLevel2::Object issues

- ◆ not specified well enough to implement
- ◆ revision moving operations to Current

Multiple Simultaneous Mechanisms

★ Goals

- ◆ use multiple mechanisms simultaneously
- ◆ support both mechanism-aware and mechanism-unaware applications

★ Credentials

- ◆ single Credentials instance used for multiple mechanisms
- ◆ include attributes for each mechanism
- ◆ distinguish attributes via defining_authority
- ◆ internal framework connects mechanism-specific credentials to API Credentials

— Replaceability Interfaces

★ Vault and SecurityContext issues

- ◆ only apply to GSS-API style mechanisms, not SSL or DCE-CIOP
- ◆ efficiency

★ Interceptor issues

- ◆ overly constrain ORB implementations
- ◆ only handle synchronous invocations
- ◆ ignore IOR-generation and binding

★ No standard framework between mechanisms and API objects