IDL and the ACF

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Lecture 17

IDL and the ACF

- Interface Definition Language
  - Defines the interface
- Attribute Configuration File
  - Defines the options

Simple IDL types

- float
- double
- char
- boolean
- byte
- void
- handle_t
- int
  - small
  - short
  - long
  - hyper
- ptr
- string
- arrays
- ref
- pipe
- error_status_t

Pointers

- ref, reference pointers, limited usage across the rpc, can not change value
- ptr, full pointer

Arrays

- Fixed
  - fixed size
  - all sent
- Conformant
  - variable size
  - all sent
- Variable
  - variable size
  - only portion sent

Structured IDL types

- const
- typedef
- struct
- enum
- union

Context handles

- context_hdl_t
- allows for a server and client to save context between calls

Source of Arguments

- In
- Out
- In, Out

Type of call

- idempotent
- broadcast
- maybe

Port Selection

- TCP, UDP
- static port number

Four types of Bindings

- string - by pass the cds and go directly to this location
- auto - binding handle done in stub code, no programmer visibility
- implicit - binding handle managed by the user, one global variable
- explicit - binding handle managed by the user, one for each rpc call

In the AFC

- code/nocode: generation of stub code
- in_line/out_of_line: is the marshalling code in line or not?
- heap: parameters are allocated in the heap in the server. By default use the stack.
- represent as/transmit as: type casting

Exceptions across the rpc

- comm_status
- fault_status