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Part 7: Flow allocator

Télécommunications et échange d'information entre systèmes — Architecture récursive inter-réseaux —

Partie 7: Allocateur de débit

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Introduction

This document defines the sequencing of the interactions of the flow allocator (FA). It is not, strictly speaking, a protocol specification. The protocol used in this document is the common distributed application protocol (CDAP). This document uses the objects required to create a flow between two processes and bind their endpoints to the applications that requested the flow.

The flow allocator is responsible for creating and managing an instance of interprocess communication (IPC), i.e. a flow. The IPC-API communicates requests from the application to the distributed IPC facility (DIF). An Allocate-Request causes an instance of the flow allocator to be created. The flow allocator-instance (FAI) determines what policies will be utilized to provide the characteristics requested in the Allocate. It is important that how these characteristics are communicated by the application is decoupled from the selection of policies. This gives the DIF important flexibility in using different policies, but also allows new policies to be incorporated. The FAI creates the error and flow control protocol (EFCP) instance for the requested flow before sending the CDAP Create Flow Request to find the destination application and determine whether the requestor has access to it.

A create request is sent with the source and destination application names, quality of service information, and policy choices, as well as the necessary access control information. Using the name space management (NSM) function, the FAI searches the IPC process (IPCP) in the DIF that resides on the processing system that has access to the requested application. This exchange accomplishes three functions:

— —follows the search rules using the NSM function to find the address of an IPC-Process with access to the destination application;

— —determines whether the requesting application process has access to the requested application process and whether or not the destination IPC-Process can support the requested communication;

— —instantiates the requested application process, if necessary, and allocate a FAI and port-id in the destination IPCP.

The create response will return an indication of success or failure. If successful, destination address and connection-id information will also be returned along with suggested policy choices. This gives the IPC-Processes sufficient information to then bind the port-ids to an EFCP-instance, i.e. a connection, so that data transfer may proceed.

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~~10,135,689 Position parameterized recursive network architecture with topological addressing~~

~~9,762,531 Position parameterized recursive network architecture with topological addressing~~

~~9,584,633 Method and system for managing network communications~~

~~9,288,176 Position parameterized recursive network architecture with topological addressing~~

~~8,769,077 Parameterized recursive network architecture with topological addressing~~

~~8,352,587 Parameterized recursive network architecture with topological addressing~~

~~8,103,797 Parameterized recursive network architecture with topological addressing~~