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Part 2: Common application connection establishment procedure

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Foreword

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Introduction

The functions of creating an application connection between instances of application processes are to:

— exchange application naming information;

—) optionally, authenticate each;

—) establish the set of objects to which remote operations on the flow have access.·

This document defines the Common Application Connection Establishment Procedure (CACEP), patterned after the Association Control Service Element (ACSE) protocol. ACSE was chosen for three reasons:

— it already exists;

— it provides all of the necessary functions and no more;

— it was designed to be used recursively.

ACSE provides the basic requirements for exchanging application naming and context information and provides for an authentication module to be included.

Although the primary use of CACEP is to combine it with common distributed application protocol (CDAP) for the application information data transfer phase, there are situations when it is desirable to use CACEP with a different protocol in the data transfer phase, e.g. HTTP, in effect, wrapping CACEP establishment around a legacy protocol. CACEP exchanges naming information and provides for an authentication policy. CACEP is a protocol exchange over a flow that serves to authenticate flow participants to their mutual satisfaction and to initialize the application naming information and information related to the application protocol that will be used by applications to exchange information, e.g. abstract and encoding rules, object model versions. In the case of recursive inter-network architecture (RINA), the application protocol is CDAP

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Telecommunications and information exchange between systems — Recursive inter-network architecture —

Part 2:
Common application connection establishment procedure

1 Scope

This document provides the common application connection establishment procedure (CACEP) specification. It includes an overview of CACEP, its specification, the syntax of the protocol data units (PDUs), and the policies available.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4396-1, *Telecommunications and information exchange between systems — Recursive inter-network architecture — Part 1: Reference model*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4396-1 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: avaiable at https://www.electropedia.org/

3.1
Application Naming Information
names used to reference an application that includes the required name Application Process Name and can include distributed application facility (DAF) name or distributed IPC (inter-process communication) facility (DIF) name, application process name, application process instance id, application entity id, and application entity instance id

4 Overview

The Initiating Process first allocates an (N-1)-flow with a destination application. When this is complete, it sends an A_CONNECT Request with the appropriate parameters and initiates the authentication policy. When the Authentication policy completes, a positive or negative A_CONNECT Response is returned by the destination application process and the connection is established.

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