

Providing Local Event Services to CORBA Collocated Components

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ABSTRACT

Current implementations of CORBA Component Model (CCM) often suffer from unreasonable communication overheads when components are collocated. When a component requests an event service from a collocated component, communication between the two collocated components is routed through ORB irrespective of their locality, leading to lots of unnecessary communication overheads such as marshaling and de-marshaling of request and reply messages in the same address space. Eliminating these overheads is very crucial and quite beneficial to some applications like real-time ones.

A new approach has currently been introduced for optimizing collocated components' communication, with little concern for event service support. This paper augments this new approach by providing collocated components with *local event service*. Local requests for event service are transformed by a special unit, called proxy, to direct calls to local event service, without any ORB involvement. Our implementation results show considerable reduction of time during publication and consumption events.

Keywords

Component, Collocation, CCM, Event Service, Communication Overhead, CORBA.