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Nota di contenuto	About the Authors; Preface; Contents; Introduction; Infrastructures for Distributed Applications; Thematic Organization; Target Group; Chapter Overviews; Ancillary Materials; Basic Concepts; Distributed Systems; Characterization; Transparency; Communication Mechanisms; Client/Server Model; Failure Semantics; Object Model; Characterization; Terminology; Middleware; Middleware Tasks; The Structure of a Middleware Platform; Standardization of a Middleware; Portability and Interoperability; Sample Application; The Account Example; C++ Implementation; Distribution of the Sample Application SummaryIntroduction to CORBA; Object Management Architecture; Overview of CORBA; CORBA Object Model; Interface Definition Language; IDL-Language Mappings; Object Request Broker; Invocation and Object Adapters; Interoperability; The Creation Process of a CORBA Application; Application Development in C++; IDL Specification; IDL Language Mapping for C++; C++ Server Implementation; C++ Client Implementation; Compiling and Executing the Application; Compiling the Application; Executing the Application; Application Development in

Java; Java Server Implementation; Java Client Implementation
Compiling and Executing the Java ImplementationThe Bootstrapping Problem; File-Based Bootstrapping; Object URLs; Command Line Arguments; Naming Service; Overview; Name Server Daemon; Example; Summary; ORB; ORB Architecture; Transport Layer; Presentation Layer; Value Ranges of Types; Representation of Type Instances; Modeling of the Presentation Layer; Interoperability Layer; Protocol for Remote Operation Invocation; Structure of Protocol Data Units; Modeling of Protocol Data Units; Proxies; Object Services; Life Cycle of an Object; Object References; Services on the Server Side; Summary ORB DesignORB Functionality; ORB Architectures; Design of Mico's ORB; Invocation Adapter Interface; Object Adapter Interface; Invocation Table; Scheduler; Object Generation; Bootstrapping; Dynamic Extensibility; Summary, Evaluation, and Alternatives; Interoperability; Model; Inter-ORB Protocols; Interoperable Object References; General Inter-ORB Protocol; Environment-Specific Inter-ORB Protocols; Design of Mico's Interoperability; Framework; GIOP; Summary, Evaluation, and Alternatives; Object Adapters; Terminology; Functionality; Object Management; Servant Management
Generation of Object ReferencesMapping Objects to Servants; Execution of Method Invocations; The Portable Object Adapter; Overview; Policies; POA Manager; Request Processing; Persistence; Design of Mico's POA; Object Key Generation; Persistence; POA Mediator; Collocation; Invocation Adapters; Functionality; Representation of IDL Data Types; Type Checking; Dynamic Invocation Interface; Static Invocation Interface; Design of Mico's DII; Design of Mico's SII; Summary; IDL Compiler; Invocation Adapters; Dynamic versus Static Invocation Adapters; Support of Static Invocation Adapters
Mico's Static Invocation Adapter

Sommario/riassunto

Middleware is the bridge that connects distributed applications across different physical locations, with different hardware platforms, network technologies, operating systems, and programming languages. This book describes middleware from two different perspectives: from the viewpoint of the systems programmer and from the viewpoint of the applications programmer. It focuses on the use of open source solutions for creating middleware and the tools for developing distributed applications. The design principles presented are universal and apply to all middleware platforms, including CORBA and W