<<分布式系统>>

图书基本信息

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内容概要

从移动电话到互联网,我们的生活越来越依赖于以无缝和透明的方式将计算机和其他设备链接在一起的分布式系统。

本书全面介绍分布式系统的设计原理和实践及其最新进展,并使用大量最新的实例研究来阐明分布式系统的设计与开发方法。

《分布式系统概念与设计(英文版.第5版)》前几版已被爱丁堡大学、伊利诺伊大学、卡内基—梅隆大学、南加州大学、得克萨斯a&m大学、多伦多大学、罗切斯特理工学院、北京大学等众多名校选用为教材。

第5版在上一版的基础上,新增了三章内容,分别介绍间接通信、分布式对象和组件、分布式系统设计(以google为例)。

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插图: CORBA's common data representation, which is concerned with an external representation for the structured and primitive types that can be passed as the arguments and results of remote method invocations in CORBA. It can be used by a variety of programming languages (see Chapter 8). Java's object serialization, which is concerned with the flattening and external data representation of any single object or tree of objects that may need to be transmitted in a message or stored on a disk. It is for use only by Java. XML (Extensible Markup Language), which defines a textual format for representing structured data. It was originally intended for documents containing textual self-describing structured data - for example documents accessible on the Web - but it is now also used to represent the data sent in messages exchanged by clients and servers in web services (see Chapter 9). In the first two cases, the marshalling and unmarshalling activities are intended to be carried out by a middleware layer without any involvement on the part of the application programmer. Even in the case of XML, which is textual and therefore more accessible to hand-encoding, software for marshalling and unmarshalling is available for all commonly used platforms and programming environments. Because marshalling requires the consideration of all the finest details of the representation of the primitive components of composite objects, the process is likely to be error-prone if carried out by hand. Compactness is another issue that can be addressed in the design of automatically generated marshalling procedures. In the first two approaches, the primitive data types are marshalled into a binary form. In the third approach (XML), the primitive data types are represented textually.

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