Enterprise Architecture Patterns

A Pattern-Based Approach to Enterprise Application Design

There is no shortage of technology in the Java 2 Enterprise Edition (J2EE) and the .NET platforms. To design applications successfully for them demands a good understanding of the technology, but it is not enough just to know the mechanics. As developers have deployed such applications, many good practices have been identified (as well as quite a few bad ones). These good practices have typically been embodied as patterns and most of these patterns are applicable to systems based on .NET, J2EE and other architectures in the same space. As the technology advances, the styles of application also change. Without sound design principles and proven solutions, it will be difficult to create such applications, not to mention the services on which they are built.

The *Enterprise Architecture Patterns* course examines the primary patterns from the various catalogues on J2EE, .NET and related application design. The course is based around lectures, demos, exercises and discussion.

Objectives

- Describe typical J2EE and .NET application anatomy, including component and service roles
- Explore many of the principal patterns common to both J2EE and .NET applications.
- Highlight a number of the patterns that are specific to either J2EE or .NET applications
- Assess the suitability of particular patterns in a given design context
- Describe these patterns, from motivation to implementation

Audience

Architects and developers familiar with the development of J2EE or .NET systems applications and already comfortable with basic pattern concepts.

Content

Context of Enterprise Applications Standalone, distributed and enterprise applications · Application architectures · Improving operational qualities · Layers and tiers · Application lifecycle · Deployment and management · J2EE · .NET

Patterns, Blueprints and Practices Beyond common design patterns · Refactoring · J2EE Patterns and Blueprints · Microsoft Patterns and Practices · Other related pattern work

Distribution and Structural Patterns Differences between distributed and non-distributed systems · Tiered distribution · Proxies, facades, decoupling and caching · Logical versus structural server-side coupling · Efficient transfer of data · Structuring a service interface

Web Presentation Layer Patterns Factoring out code from presentation · Controllers for command processing and navigation · Building the output through different kinds of views · Session state issues and management · Improving performance · Adding functionality

Business Layer Patterns Business components and types of business logic · Boundaries and interactions · Making interaction more granular · Splitting domain and business logic · Partitioning strategies · Sharing business functionality · Implementation choices

Data and Integration Layer Patterns Types of data, data access and service access · Structuring data access and transfer · Object to relational mapping patterns · State, updates and transactions · Distributed locking · Data access · Different approaches to locking · Working with services · Enterprise application integration

Additional Details

Duration	3 days
Setup	Projection facilities for a laptop · Whiteboards and flip charts
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