



Enterprise Integration Architecture Course: ESB, iPaaS and Event-Driven Integration



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Introduction:

Enterprise integration architecture covering ESB, iPaaS and event-driven integration is a 5-day course for integration, solution architecture and middleware platform teams that ends with an Integration Architecture and Rationalisation Plan for a case organisation. Organisations that connect ERP, CRM, SaaS and legacy applications through hundreds of point-to-point interfaces face brittle change, duplicated mappings, silent message loss and no owner for integration standards. Nominees already design or approve interfaces between business applications at work and spend each day on case studies built from interface inventories, message flows and incident records. CoreConcept Training Center delivers this enterprise integration architecture course.

Course Objectives:

- Assess an interface estate across ERP, CRM, SaaS and legacy applications for coupling, change frequency and failure exposure
- Apply enterprise integration patterns for channels, routing, transformation and endpoints to redesign point-to-point flows
- Select between ESB, iPaaS and event broker styles for each integration using a weighted platform selection matrix
- Define a canonical data model and mapping rules that remove duplicated transformations between business applications
- Specify dead letter, retry, idempotency, compensation and monitoring rules for production integration flows
- Establish an integration competency centre with an interface catalogue, reuse register and versioning standards

Target Audience:

- Integration architecture teams responsible for interface design standards across business applications
 - Solution architecture teams responsible for connecting new ERP, CRM and SaaS deployments to the existing estate
 - Middleware and platform teams responsible for running ESB, iPaaS or message broker environments
 - Application portfolio teams responsible for retiring legacy systems and the interfaces that depend on them
 - Integration delivery teams responsible for interface projects, testing and handover to production support
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Course Outline:

Day 1: Integration Landscape, Point-to-Point Debt and Current-State Assessment

- Point-to-Point Interface Sprawl and the N-Squared Connection Problem
- Integration Styles from File Transfer to Shared Database and Messaging
- Interface Inventory Template for ERP, CRM and Legacy Systems
- Coupling Assessment Across Time, Format and Location Dimensions
- Integration Heat Map of Change Frequency and Failure Rates

Day 2: Enterprise Integration Patterns and Platform Architecture Styles

- Enterprise Integration Patterns Channel and Message Construction Families
- Content-Based Router, Splitter, Aggregator and Process Manager Patterns
- ESB Mediation, Protocol Conversion and Adapter Architecture
- iPaaS Prebuilt Connectors, Multi-Tenant Runtime and Hybrid Agents
- Event Broker and Mediator Topologies for Event-Driven Integration

Day 3: Canonical Data Models, Message Mapping and Flow Design

- Canonical Data Model Scope for Customer, Product and Order Entities
- Message Translator, Normalizer and Content Enricher Mapping Rules
- Claim Check Pattern for Large Payloads and Document Attachments
- Synchronous Request-Reply Versus Asynchronous Event Message Selection
- Platform Selection Matrix Weighing ESB, iPaaS and Event Mesh

Day 4: Error Handling, Observability and Integration Governance Risks

- Dead Letter Channel and Invalid Message Channel Handling Procedures
- Retry Policies, Idempotent Receiver and Duplicate Message Detection
- Compensating Transactions for Long-Running Multi-System Business Flows
- Wire Tap, Correlation Identifier and Backlog Latency Monitoring
- Integration Competency Centre Models, Reuse Rules and Version Governance

Day 5: Case Study on the Integration Architecture and Rationalisation Plan

- Case Organisation Competency Centre Model Selection and Staffing
 - Case Interface Catalogue, Reuse Register and Versioning Standards
 - Case Interface Rationalisation and Legacy Retirement Sequencing
 - Target Integration Architecture Review Against Pattern and Platform Choices
 - Integration Architecture and Rationalisation Plan Completion and Panel Defence
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Skills You Will Gain:

- Interface Estate Assessment
- Messaging Pattern Selection
- Integration Platform Evaluation
- Canonical Data Modelling
- Message Mapping Design
- Integration Fault Handling
- Integration Flow Observability
- Integration Competency Centre Governance

Why Attend This Course:

- Deliver an Integration Architecture and Rationalisation Plan for a case organisation to the head of enterprise applications and the architecture review board
- Decide whether a new interface belongs on the ESB, the iPaaS or an event broker, and which integration pattern it follows
- Avoid silent message loss, duplicate postings in ERP and costly rework caused by undocumented point-to-point interfaces
- Coach integration developers and analysts using the pattern selection sheet, mapping rules and interface catalogue templates

Conclusion:

Back at work, the participant presents the Integration Architecture and Rationalisation Plan to the head of enterprise applications and the architecture review board. The board uses it to decide which point-to-point interfaces are retired first, which platform carries each new integration, and which canonical entities, error handling rules and versioning standards the integration competency centre enforces. After the first rationalisation wave, the unit should review interface counts, failed message volumes, time to resolve integration incidents and reuse rates, then adjust the sequencing and standards.

Frequently Asked Questions FAQ:

What should participants know before the enterprise integration architecture course on ESB, iPaaS and event-driven integration?

Participants should already design, approve or support interfaces between business applications and understand XML or JSON messages and how ERP or CRM systems exchange data. No coding is required. An anonymised interface list from their own organisation helps during the case study work.

How does enterprise integration architecture differ from an API management course?

Enterprise integration architecture decides how all applications exchange data: patterns, platforms, canonical models, error handling and integration governance. API management courses concentrate on publishing and securing individual APIs through gateways, developer portals and token policies, which this course treats only as one integration channel.

When should an organisation choose iPaaS over an ESB in its enterprise integration architecture?

iPaaS suits estates with many SaaS applications, limited middleware staff and a preference for subscription pricing and prebuilt connectors. An on-premises ESB still fits heavy legacy protocol mediation, and many organisations run both in a hybrid integration architecture.

What do participants take back from the enterprise integration architecture course?

Participants take back an Integration Architecture and Rationalisation Plan for a case organisation, with an interface inventory, platform selection matrix, canonical data model outline, error handling rules, interface catalogue and integration competency centre model to adapt to their own estate.
