



The New Integration Manifesto – Applications, Data, Cloud, Mobile, and the Internet of Things

2-days seminar

Integrating applications and data in a timely and cost efficient way has been among the top priorities of most CIOs. However, today we face new challenges: how do we connect our core systems to the extended ecosystem of cloud, mobile devices, external app developers, business partners and the Internet of Things (IoT)? Not surprisingly, in a recent forecast Gartner Group predicted a 33% increase in integration cost over the next few years.

The three classic integration architecture patterns still apply: Data Consistency - making data across applications consistent; Multi-step Processes - orchestrating the execution of activities across people, programs, and devices; and Composite Applications – new user facing applications created out of existing applications and services. However, today these patterns are applied to a broader array of integration projects.

Examples include synchronizing data in SaaS applications with on-premises applications, incorporating cloud based services into new Composite Applications, integrating mobile apps with on-premises back-end systems to support bring-your-own-device initiatives, deployment of multi-enterprise processes that bring new efficiencies and cost savings, and turning vast amounts of data from IoT devices into actionable intelligence.

Many companies are prone to fall into the trap of repeating the “integration spaghetti” of the 1990s. The integration technology landscape today is becoming increasingly more complex - companies face a wide variety of approaches and middleware platforms that could be utilized. We will look at major use cases, best practices, and the functionality you should be looking for when selecting a platform. The chance of finding a “one stop shopping” solution are slim – in a typical scenario best of breed solutions are fragmented across the different domains of integration.

We will discuss data integration, a long standing staple for any company, but vastly more challenging now that proliferation into clouds threatens to invalidate our systems of record. We will look at application integration: how can we move legacy applications forward into a world of services and how to integrate with the cloud and across clouds. When should you employ on-premise integration, integration Platform as a Service (iPaaS), or Hybrid Integration?

Enterprise mobile apps today are more than mere UIs to back-end systems – they have to work online and offline, synchronize local and enterprise data stores, interact with enterprise services intelligently, and be centrally managed. Last but not least the IoT is quickly becoming a first class citizen in the enterprise ecosystem. No longer can it be restricted to specialized applications and access protocols – it has to be connected to cloud, mobile apps, and enterprise systems like CRM and ERP, in order to create the \$14 Trillion business value that analysts forecast.

Best practices and lessons learned will be discussed throughout the seminar, case studies will emphasize application of the integration approaches, and we will put everything that was discussed together so that the attendees can start formulating a comprehensive integration strategy for their company.



Benefits of attending:

- Understand how to solve the integration challenges when enterprise applications are extended to mobile.
- Learn how to architect scalable integration solutions that can be reused and how to integrate and reduce the complexity of your application portfolio.
- Understand the major use cases for data integration and what functionality the leading technology platforms provide.
- Learn how to integrate applications on-premise, in a cloud, and across clouds.
- Distinguish between hype vs. reality so that you can use the right technology to solve the right problem in your organization.
- Learn how different Middleware technologies can be used to integrate mobile, on-premise and cloud applications.
- See why a services-based architecture is an efficient approach to facilitate application integration on a large scale.
- Understand how to integrate the Internet of Things into your enterprise ecosystem and capitalize on its potential.

Who should attend:

- IT Managers that need to understand the challenges and opportunities for integrating on-premise applications, cloud-based systems and mobile apps.
- IT Architects who want to define architecture to facilitate successful integration projects.
- IT professionals who need to see when and how different integration solutions can be applied.
- Developers and IT Managers who want to obtain an overview of the different approaches to integration that are available today.
- IT Managers and IT Strategists selecting new technologies.
- IT Architects and Managers who need to develop an integration strategy for their company.
- IT professionals looking for best practices to be applied in integration projects.
- Consultants who need to recommend different strategies for implementing integration solutions.



Agenda:

1. Integrating the Extended Enterprise

- The IT mega-trends that drive integration today
 - a) Cloud, mobile, big data, social
- The next frontier: The Internet of Things
- The perpetual challenge: increasing business velocity
 - a) How can IT respond?
- From Enterprise Class IT to Global Class IT – what does it take to get there?
- How not to reproduce the “integration spaghetti” of the 1990s
 - a) Seven things you must know about integration
- Exercises for integrating the extended enterprise

2. The Integration Technology Landscape

- What are the integration technology choices today?
 - a) Portals – integration on the glass
 - b) Data level integration
 - c) Interface level integration
 - d) Service Based Integration
 - e) Process level integration
 - f) Cloud integration
 - g) Mobile integration
 - h) Integrating the IoT
- Exercises for the integration technology landscape

3. Data Integration

- When to use data integration
 - a) Business Intelligence (BI)
 - b) Master Data Management (MDM)
 - c) Data conversion
 - d) Data synchronization
- Functionality to look for in a data integration platform
 - a) Adapters
 - b) Movement of data
 - c) Data transformation
 - d) Data virtualization
 - e) Meta data & modeling
- Major data integration platforms
- Exercises for data integration

4. Interface and Service-based Integration

- What problems do we need to solve?
 - a) Data transformation, routing, protocol switching, etc.
- Architecture choices
- Services, service layers, and Service Oriented Architecture (SOA)
- When to use service-based integration
- Architecture patterns: Multi step process vs. Composite Application
- Which standards can make interface and service integration more scalable?



- Exercises for service-based integration

5. Platforms for Interface and Service-based Integration

- What functionality to look for?
- Enterprise Service Bus – a popular platform for service-based integration
- How do enterprises use integration platforms today?
- Product examples and Open Source
- Exercises for integration platforms

6. Integration Platform as a Service (iPaaS) and Hybrid Integration

- Cloud definition
 - a) Choose your flavor: IaaS, PaaS, or SaaS?
 - b) A Cloud Reference Architecture
- What drives the need for Cloud integration
- Why do we need a new technology for cloud integration?
- Integration Platform as a Service (iPaaS) defined
- iPaaS product examples
- Cloud Integration architectures: the rise of the Hybrid Integration platform
- Exercises for cloud integration

7. Integrating Mobile Apps with Backend Applications

- Use cases for mobile apps
- How to choose device native applications vs. mobile Web applications
- Connecting mobile apps to enterprise systems – a step by step walk-through
- Cross-platform solutions: Mobile Enterprise Application Platform (MEAP)
- A comprehensive enterprise mobile integration architecture
- Exercises for mobile integration

8. The Next Frontier: The Internet of Things (IoT)

- What is the Internet of Things (IoT)?
 - a) \$14 Trillion “Value at Stake” – can you afford to miss it?
- Typical use cases in Finance, Government and Insurance
- The two worlds of the Internet: Physical vs. Cyber
- Typical solution architectures
- How to communicate with “things”
- Why do we need a new technology for IoT integration?
- Integrating things, cloud, mobile apps, and back-end systems
- Exercises for integrating the IoT

9. Putting It All Together

- Real world case studies
- Developing an integration strategy for your company
- Approaches to leverage legacy systems
- Organizational impact of integration projects
- Exercises for developing an integration strategy