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Cloud, Mobile, Social and SOA – Redefining (Enterprise) IT

3-day seminar

Give Your Business the Competitive Edge

Throughout recent years Enterprise IT had to deal with a number of disruptive trends: Cloud Computing started with the replacement of in-house packages by Software as a Service (SaaS) offerings, and is now used more and more as Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) based alternatives to in-house (i.e. on-premise) systems. This puts developers outside of Enterprise IT as well as business users in the power seat – all they need is a limited budget and a browser in order to create their own, on-demand, shadow IT.

At the same time the consumerization of IT has materialized in form of smart phones and tablets that offer an endless pool of applications with a rich user experience. These devices are purchased by the consumer, who is also an employee, bringing these devices into the corporate environment and demanding connectivity to enterprise systems as well as mobile enterprise applications that provide the same convenience as his personal applications. Social networks are the third trend that many IT managers are struggling with: how can employee collaboration be improved through the implementation of social platforms that are managed by Enterprise IT, and how can the public social networks be mined for information that can only be meaningful if it is integrated with core enterprise systems?

The convergence of these trends is creating a complexity that is an order of magnitude greater than our previous generation IT environment. It is therefore more important than ever to develop an architecture blueprint that enables us to manage this complexity. The seminar starts with a description of Service Oriented Architecture (SOA) and how it can provide the fabric that unifies these new initiatives.

This is followed by an overview of cloud computing and we will discuss IaaS clouds, including examples like Amazon Web Services (AWS). Once we understand IaaS cloud in general we can look at the benefits and challenges of private and hybrid clouds. We then move up the cloud stack and discuss Platform as a Service (PaaS) – what are they comprised of, what are multi-tenant systems, what are the major vendors? The seminar then brings SOA and cloud together and details the synergies: how do the SOA principles help us to build applications that can take advantage of the cloud benefits like elasticity? In this context we will also look at a major challenge that is looming in the cloud: the integration of on-premise systems with cloud-based systems.

The seminar will then compare the three approaches to building enterprise mobile applications: device native, web based, and hybrid. Depending on the development approach we choose we need to consider different ways of integrating the mobile apps with our enterprise systems running behind the firewall.

Finally, the seminar will address the third major trend: social networks. We will look at them from two perspectives: first, how can we mine external social networks to gain information about our customers and competitors; second, how can we create a digital workplace for our employees that makes them more productive, for example through collaboration.

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Benefits of Attending

- Understand the relationship between Cloud, Mobile and Social
- Get insights into the challenges and opportunities that Cloud, Mobile and Social provide
- Understand why and how Enterprise Architecture is now more important than ever
- Learn why SOA is the architecture of choice for Cloud applications and for integrating mobile and enterprise applications
- Understand the opportunities that the new Web standards offer for building next generation applications
- Learn how to make the right choices when building mobile applications
- Network with your peers and see how other high profile companies apply the technologies in their businesses
- Grow your personal knowledge about technologies and best practices
- Understand what impact (negative and positive) Social Platforms can have on the Enterprise
- Start redefining the role of your Enterprise IT such that it continues to provide value to the business

Who Should Attend

- IT Executives, IT Managers, Architects and Technology aware Business Managers who wish to understand of what are the challenges and the opportunities that Cloud Computing, Mobile and Social bring to the Enterprise.
- IT Executives, IT Managers and Architects who wish to take a detailed and practical look at Cloud based next generation SOA implementations.
- Consultants who need to define migration strategies for cloud computing, recommend approaches for building and integrating mobile applications, and advise on the corporate implementation of social software.

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Agenda:

1. Introduction

- Challenges to Enterprise IT
- Consumerization of IT
- The threat of new technology silos
- A unified architecture
- Redefining Enterprise IT

2. Service Oriented Architecture (SOA) - A Proven Foundation for Managing the IT Complexity

- Why do we need an architecture blueprint for enterprise systems?
- Why SOA is the application architecture that is here to stay – Long Live SOA
- Services and SOA defined
- The Service Layer model
- Key SOA characteristics: loose coupling, self-containment, composability, statelessness
- How SOA enables Business/IT alignment
- Agility and process composition
- Advanced SOA
 - SOA vs. Event Driven Architecture (EDA)
 - Synchronous vs. Asynchronous services
- Services and standards (e.g. WSDL, SOAP)
- What is REST and why is it important for the cloud and mobile applications?
- The API is the new website

3. Overview of Cloud Computing

- How did we get here?
 - From application hosting to SaaS to public & private cloud
- Cloud definition
 - Chose your flavor: Infrastructure as a Service (IaaS), Software as a Service (SaaS), or Platform as a Service (PaaS)?
- A cloud reference architecture
- Typical cloud usage scenarios
 - SaaS vs. traditional enterprise computing
- Moving into the cloud
 - Better utilization through resource virtualization
 - Cloud management for elasticity: automated, on-demand provisioning of resources
 - Evolving the economy of scale through shared infrastructure and applications
- Cloud benefits and challenges



4. Maximize the Benefits and Minimize the Risks in IaaS Clouds

- IaaS architecture and key features
 - What to look for when selecting an IaaS provider?
- IaaS examples:
- Microsoft Windows Azure
 - Web Roles & Worker Roles
 - Scalability, load balancing, fail over
- Amazon Web Services (AWS)
 - Elastic Compute Cloud (EC2) & Amazon Machine Images (AMI)
 - IaaS+: AWS Application Services and Marketplace
 - Regions & Availability Zones
 - Networking & security
 - Monitoring, Auto Scaling, & Load Balancing
 - Building scalable and fault-tolerant applications
 - The big AWS outage & how to protect yourself
- The private cloud – benefits without the risks?
- It's all about management and automation
- Hybrid clouds - challenges and solutions
- Selecting a cloud model

5. PaaS – Building Applications In/For the Cloud

- PaaS defined
- A complete PaaS stack
 - Where to draw the line: IaaS+ or pure-PaaS or custom-SaaS?
 - What functionality do we need to build applications for the cloud?
- Multi-Tenancy
 - What is a multi-tenant system?
 - Evolving the economy of scale
 - Customizing the application for a tenant
 - Considerations for multi-tenant applications:
 - Stability, SLA, legal & regulatory, security, maintenance, 3rd-party components
- A detailed look at major PaaS providers:
 - Microsoft Windows Azure
 - Google App Engine
 - Force.com
- Outlook: PaaS adoption and vendor roadmap

6. The Service-Cloud

- Synergy of SOA and Cloud – the industry view
- SOA / SaaS synergy
- SOA / PaaS synergy
 - Approaches to meet demand
 - Applying SOA principles to the cloud: loose coupling, encapsulation, asynchronous services
 - Building multi-tenancy applications based on SOA
 - Migrating legacy systems into the cloud
- SOA / IaaS synergy

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- Service-Oriented Infrastructure (SOI)
- Service virtualization vs. server virtualization
- Automated, on-demand resource provisioning
- The need for cloud integration and its challenges
- How SOA can help: focus on integration
- From application integration to Service Oriented Integration (SOI)
- The need for an Enterprise Service Bus (ESB)
- Enterprise Service Bus (ESB) reference architectures
 - What are the particular requirements for cloud integration?
 - Moving from ESB to “Internet Service Bus”
 - Choices for cloud integration architectures

7. Building Enterprise Mobile Applications

- Market overview
- Use cases, existing skills, target audience
- Device native applications
- Mobile Web applications
 - HTML5 and webSocket
- Hybrid (wrapped) mobile applications
- Comparison of the native and Web approach
- Mobile Enterprise Application Platform (MEAP)
- Product examples:
 - Antenna Software AMP
 - IBM Worklight

8. Integrating and Managing Enterprise Mobile Applications

- Connecting mobile applications to backend enterprise systems
 - Connection
 - Data retrieval
 - Parsing the responses
 - Populating a database
 - Secure storage
 - App and data de-provisioning
 - Data synchronization
- **A comprehensive enterprise mobile architecture**
- Mobile device management

9. Social Networks Inside and Outside the Enterprise

- Enterprise social platform functionality
 - Networking and collaboration
 - Examples of functional elements
- Enterprise social & cloud, mobile, and integration
- Can an enterprise social initiative really work?
- Social Media Monitoring (SMM)
 - What is SMM?
 - How to implement SMM
 - Typical functionality of a SMM platform
 - Integration with CRM systems

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10. *Conclusions*

- Cloud Return on Investment (ROI)
- Total Cost of Ownership (TCO)
- Outlook and future usage for cloud computing
- Redefining Enterprise IT

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