The Manager's Guide to Cloud Computing

1-day seminar

About this Seminar

Cloud computing has gained a lot of attention in recent years. It has mostly been used for non business critical applications like email, or for those business functions that could be outsourced to a vendor that offers large business applications in a Software as a Service (SaaS) model. However, the reach of the Cloud has been expanding, and many companies are planning or implementing more substantial use of Cloud capabilities, such that they won't fall behind their competition. This includes, for example, the development and deployment of custom business applications into private and public clouds. The immediate consequence of this trend is a new integration challenge, since the cloud-based applications often need to communicate with old, non-cloud applications.

This seminar will provide an overview of the key Cloud characteristics and capabilities, differentiating between Infrastructure as a Service (IaaS), Software as a Service (SaaS), and Platform as a Service (PaaS). What are companies using the cloud for today and what is on the horizon? To gain a better understanding of this question we will illustrate some of the most popular cloud use cases.

We will then discuss IaaS concepts and outline what to look for when selecting an IaaS provider, and what the options are today to avoid vendor lock-in. While public IaaS clouds offer substantial benefits, many companies want tighter control and are starting to build private clouds. We will show what the requirements are, how to develop a methodology to approach and manage the private cloud. Once we understand public and private cloud we can look at another model that is gaining some traction: the hybrid cloud, where business critical systems run in a private cloud and peak capacity requirements of less critical applications are handled by public clouds.

The seminar continues with an overview of PaaS, illustrating how the development of business applications for the cloud is different from traditional development and deployment of on-premise systems, including a discussion of multi-tenant systems. The seminar will also address the security challenges when exploiting the cloud, and how to address them.

The seminar closes with a walk-through of a model for calculating Return on Investment (ROI) of cloud-based solutions compared to on-premise systems, and takes a look at the future of Cloud Computing, including the impact that the consumerization of IT has.

What you will learn

- Understand the benefits and challenges of running applications in the Cloud
- Distinguish between the three layers of a Cloud: IaaS, SaaS, and PaaS
- Get an overview of how to select a public IaaS provider
- See how to achieve the best of both worlds with a private cloud
- Learn how developing and deploying applications in the Cloud is different from traditional approaches
- Learn about the new security challenges and approaches to address them
- Understand the challenges when calculating the ROI for cloud-based systems and see an ROI model in action

Who should attend

- Architects who are new to Cloud Computing and are investigating a Cloud Computing strategy
- IT Managers and IT Strategists selecting technologies for Cloud Computing
- IT Managers and IT Strategists evaluating feasible strategies for IaaS, SaaS, and PaaS
- Consultants who need to recommend and use different strategies for moving application workloads into the cloud

Agenda:

1. Cloud Computing Overview and Use Case Examples

- How did we get here?
    a) From application hosting to SaaS to public & private cloud
- The Cloud stack
    a) Infrastructure as a Services (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS)
- Typical cloud use cases
    a) SaaS vs. traditional enterprise computing
    b) Cloud bursting
    c) The Development & Test cloud
    d) The programmable Web: from Websites to APIs
    e) Anti patterns: what you should *not* put into the cloud
- Moving into the cloud
    a) Better utilization through resource virtualization
    b) Cloud management for elasticity: automated, on-demand provisioning of resources
    c) Evolving the economy of scale through shared infrastructure and applications
- Cloud benefits and challenges

2. What Is Your IaaS Strategy: Public, Private, or Hybrid?

- IaaS architecture and key features
- Public cloud
    a) What to look for when selecting an IaaS provider?
    b) Can we avoid vendor lock-in through portability & standards?
        i. Open Virtualization Format (OVF)
        ii. Open Source Software: OpenStack
- Private cloud
    a) Business drivers & IT challenges
    b) Defining the requirements
    c) How to manage the private cloud
- Hybrid clouds
    a) Use cases
- How to select a cloud model
    a) Public, on-site private, hosted private, or hybrid?
    b) The 8 key criteria for cloud model selection

3. How To Develop & Deploy Applications In The Cloud with PaaS

- PaaS defined
- A complete PaaS stack
    a) Where to draw the line: IasS+ or pure-PaaS or custom-SaaS?
    b) What functionality do we need to build applications for the cloud?
- Multi-Tenancy
    a) What is a multi-tenant system?
    b) Evolving the economy of scale
- Outlook: PaaS adoption & vendor roadmap

4. Securing the Cloud

- The evolution to Cloud Security
    a) From traditional Web applications to SOA to Cloud
    b) Public cloud vs. on-premise datacenter
- Delineating responsibilities between Cloud Service Provider and Tenant
- Security across on-premise systems & multiple clouds

5. Calculating Return on Investment (ROI)

- Why is it so difficult to determine the ROI for Cloud Computing?
- A model for ROI calculation

6. The Future of Cloud Computing

- Outlook and usage for Cloud Computing
- Cloud and the consumerization of IT