This two-day course consists of four parts:
1. Introduction to SOA
2. Pillars of SOA Adoption
3. Considerations for Migration to SOA Environments
4. SMART (Service Migration and Reuse Technique)

Who Will Benefit
- Technical managers, managers, and software engineers who are looking for a solid overview of what the SOA approach really involves
- Technical managers, managers, and software engineers who are considering the migration of legacy systems to SOA environments
- Individuals who make decisions about SOA strategy and implementation
- Individuals tasked with development and deployment of service-oriented systems or with migration of legacy systems to SOA environments

Course Dates
January 28–29, 2009 (SEI Pittsburgh, PA)
April 14–15, 2009 (SEI Pittsburgh, PA)
July 29–30, 2009 (SEI Arlington, VA)
September 10–11, 2009 (SEI Frankfurt, Germany)
October 28–29, 2009 (SEI Pittsburgh, PA)

This course may also be offered by arrangement at customer sites.
E-mail course-info@sei.cmu.edu or call +1 412-268-7622 for details.

Course Explains SOA, Outlines Migration Approach
In the two-day Migrating Legacy Systems to SOA Environments course, you will learn
- SOA basic concepts
- common misconceptions about SOA
- fundamentals for successfully adopting SOA
- potential issues in migrating legacy systems to SOA environments
- a technique for analyzing the potential of reusing legacy systems in SOA environments

Our course begins with a “50,000-foot” view of SOA implications for your organization and introduces the three basic components of SOA-based systems: services, service consumers, and infrastructure.

We then outline the basic operations of service discovery, composition, and invocation and introduce common technologies in a “5,000-foot” view. Web Services is presented in detail as one approach for implementing SOA, with a description of the basic supporting technologies for WS* Web Services—Web Service Definition Language (WSDL) Simple Object Access Protocol (SOAP), and Universal Description, Discovery and Integration (UDDI)—as well as the implementation of Web Services using REST (Representational State Transfer).

In the “1,000-foot” view, we address SOA development issues from three perspectives: the service developer, the application developer, and the infrastructure developer.
Migrating Legacy Systems to SOA Environments

As we reveal SOA concepts, you will see the potentials of cost-efficiency, agility, adaptability, and leverage of legacy investments. You will also learn a set of common misconceptions about SOA, such as the belief that it is easy to integrate any legacy system into an SOA environment.

Four Pillars of SOA Implementation Introduced

In order to implement an SOA approach effectively, it is crucial to pay attention to four pillars that are necessary for SOA success. These pillars do not guarantee successful implementation of service-oriented systems, but most success stories show that if they are not acknowledged and addressed, the chances of success are limited. The pillars are:

1. Strategic approach, focusing on alignment with business goals
2. SOA governance
3. Realistic context-based technology evaluations
4. Change of mindset—a different development and implementation approach

Technique to Analyze Legacy Assets Explained

Having set a foundation for service-oriented systems development, we identify considerations for migrating legacy systems to SOA environments. We then introduce the Service Migration and Reuse Technique (SMART), which can be applied in a variety of SOA migration contexts.

SMART addresses

- Does it make sense to migrate the legacy system to an SOA environment?
- What services make sense to develop?
- What legacy components can be used to implement these services?
- What changes to components are needed to accomplish the migration?
- What migration strategies are most appropriate?
- What are the preliminary estimates of cost and risk?
- What would be an ideal pilot project that would help to understand and mitigate the identified risks?

SMART consists of three elements:

1. a process to gather information about goals and expectations of the migration effort, candidate services, legacy systems and the target SOA environment, and to analyze the gap between legacy and target states
2. a Service Migration Interview Guide (SMIG) to guide the discussions in the initial SMART activities
3. templates for output products, such as service table, component table, and migration strategy

What You Will Learn

After successfully completing this course, participants will be able to

- understand the basic concepts related to service-oriented systems
- appreciate the challenges of implementing service-oriented systems, including the technical and organizational issues that need to be addressed
- recognize the implications of SOA characteristics for the migration of legacy systems to SOA environments
- see the value of a method for determining the feasibility and effort required for the migration of legacy systems to SOA environments

† Read more about SMART in SMART: Analyzing the Reuse Potential of Legacy Components in a Service-Oriented Architecture Environment (CMU/SEI-2008-TN-008). It is available at http://www.sei.cmu.edu/publications/documents/08.reports/08tn008.html

To Register for this Course

You can register for Migrating Legacy Systems to SOA Environments through SEI Education and Training
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