Web Services

David Homan

Principal Analyst, Doculabs

"Nothing is particularly hard if you divide it into small parts." – Ray Kroc

Agenda

- What are Web Services?
- Technology Overview
- Market Overview
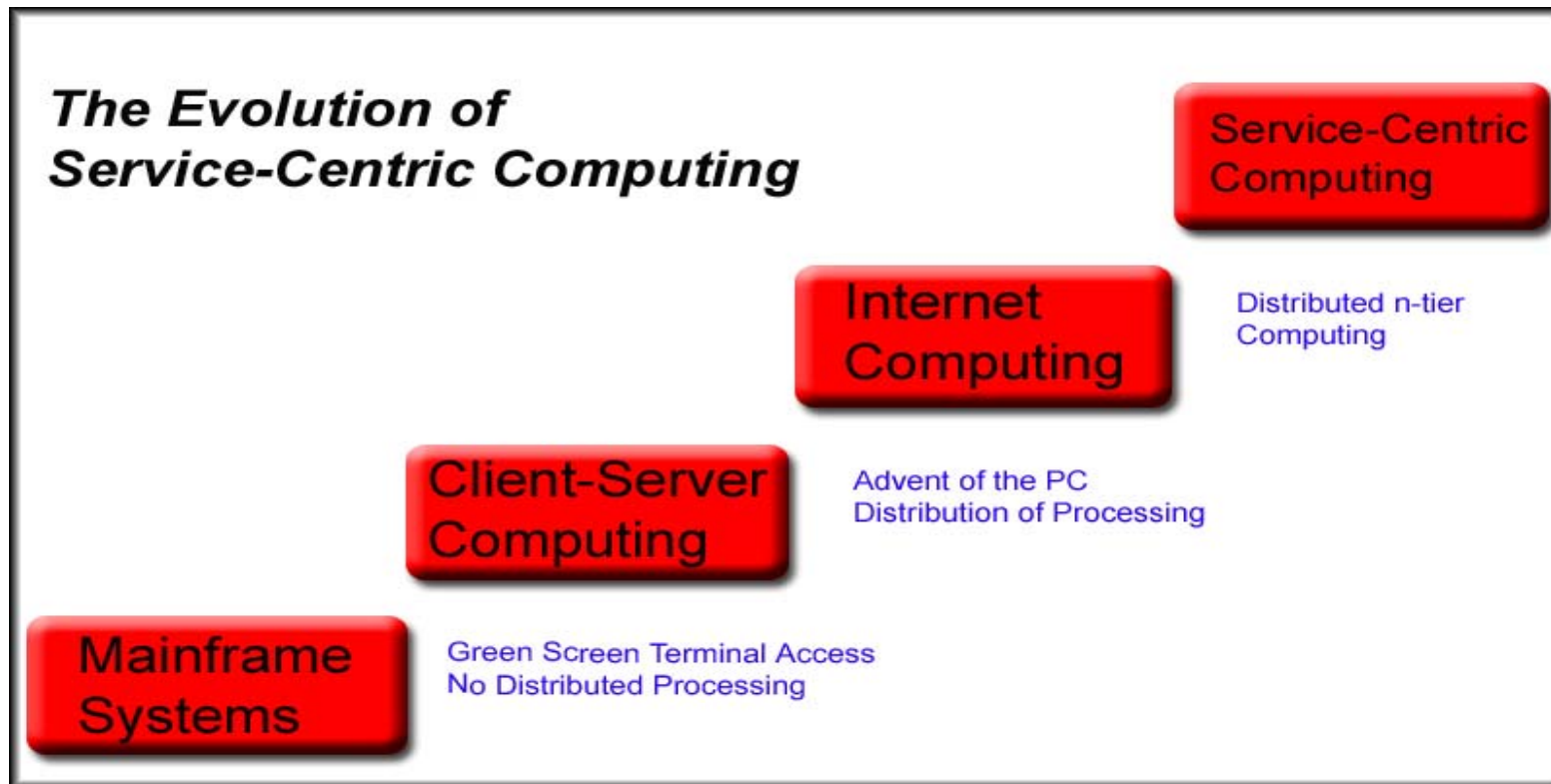- Vendor Landscape
- Futures
- Questions

Who is Doculabs

- Research and Consulting Firm
  - Provide the connection between current business pains and future business success
  - Applied across a variety of emerging technologies
  - Knowledge of technology applications to vertical markets

What Are Web Services?

- Web services provide a standards-based interface and discovery system that can be used with almost any programming language, platform or operating system
  - Products can be divided into orchestration runtimes, and development tools
  - Web services make use of three main technologies: SOAP, WSDL and UDDI
- Web Services represent an evolutionary, not a revolutionary advance

The Evolution of Service-Centric Computing

The Evolution of Service-Centric Computing

Service-Centric Computing — Distributed n-tier Computing

Internet Computing — Advent of the PC, Distribution of Processing

Client-Server Computing

Mainframe Systems — Green Screen Terminal Access, No Distributed Processing

Web Services and Service-Centric Computing

- Web services are an implementation of a service-centric computing model

- Service-centric computing has an economic impact as well as technology consequences

- Service-centric computing represents a discontinuous innovation that will have profound implications for software delivery models

Technology Overview

- Web services require a programmatic client instead of a human client
- Web services technology is basically nothing new, but rather extensions of existing standards and protocols

Alphabet Soup – Tools of the Trade

- SOAP – Simple Object Access Protocol
- WSDL – Web Services Definition Language
- UDDI – Universal Description, Discovery and Integration
- XML – eXtensible Markup Language

Orchestration

- Orchestration allows for the creation of full-featured applications from component web services
- Builds on standard BPM feature sets
- Used properly it can greatly reduce the amount of custom coding required
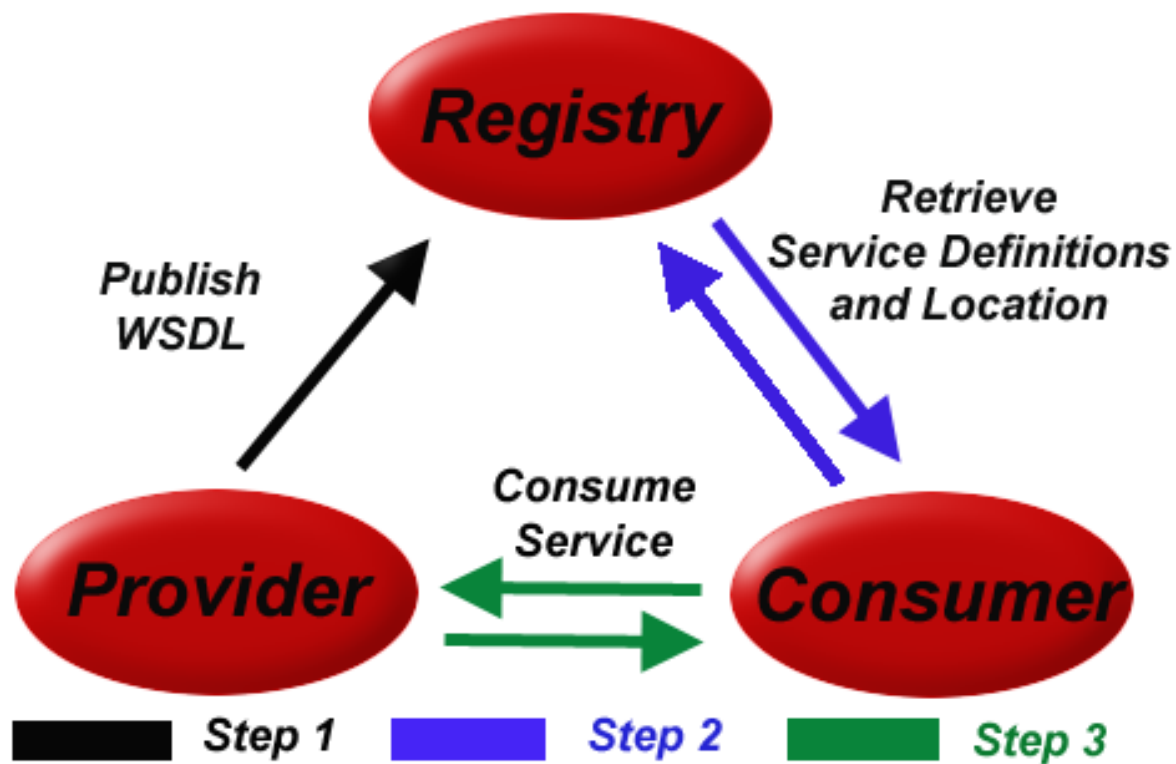
JAXM and Message Queues

- Provide a mechanism to create asynchronous services

- Useful for systems that are not always network connected

- Can be used in combination with ebXML for commerce related transactions

Microsoft .NET – Where does it fit?

- Microsoft's Web services implementation framework

- Builds on a common set of protocols for broad interoperability that bridges the Microsoft-Java divide

- Sets the stage for a shift to software as a service

Market Overview

- Web services have broad applicability across a variety of verticals
- Vendors are leading the charge
- Holds out the promise of standards-based interoperability between enterprise applications
- Has the potential to significantly change the way software licensing is managed

Applications of Web Services

Manufacturing/Retail

- Exposing real-time inventory information to partners, customers, and staff (sales force)

- Supply chain management control

- Remote/mobile access

Applications of Web Services

Financial/Insurance

- Expose financial products over the web (e.g. escrow, credit check, loan applications, calculators, etc.)
- Provide unified view of customer to customer service reps
- Internal integration following merger and acquisition activity
- Integration with remote field workers

Applications of Web Services

Healthcare

- Secure exchange of patient information (including HIPAA compliance) between HMO/insurance carrier and doctors, hospitals, and care centers
- Real-time medical records retrieval
- Prescription processing

Vendor Landscape

- Application Servers
- Enterprise Application Integration
- Portal Servers
- Tooling and Pure-Play Vendors

Application Servers

- Web services and JCA form the core foundation for integration on Java application servers

- Application servers are starting to provide both server and consumer functionality

- Integration strategies including Web services tend to more development intensive than competing approaches such as those offered by EAI vendors

Enterprise Application Integration

- Vendors are moving away from proprietary adapters as the EAI space evolves
- Broad vendor support for Web services technology
- EAI vendors have a leg up on the competition in that they already have robust BPM/orchestration capabilities

Portal Servers

- Portal servers are evolving into run-time Web services clients
- Most vendors are adopting Web services standards for integration points
- Business Process Integration is going to be key in this space

Tooling and Pure-Play Vendors

- Most IDEs currently have capabilities to auto-create Web services and WSDL
- A new generation of vendors is springing up around the Web services area providing everything from tooling to runtime containers to hosted services

Future of Web Services

- Better discovery services adoption will lead to improved usage and automation
- Business Process Management will become a key driver to the success of Web Services
- Security architecture will continue to be a leading concern in Web Services deployments
- Non-web clients will become increasingly important
- Performance will be addressed by using higher performing network protocols

Questions and Conclusion

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Principal Analyst

Doculabs, Inc.

312 433-7793

info@doculabs.com