Leveraging Technology to Enhance PeopleSoft Web Services (SOA)

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System Efficiency

Introduction: Organizations IT Systems are generally made up of disparate systems which communicate with each other through some means. How can an organization leverage their existing Technology investment in PeopleSoft to improve, enhance and bring together all of these systems? This presentation will outline delivered technology out of the box that allows these disparate systems to integrate and collaborate with each other.

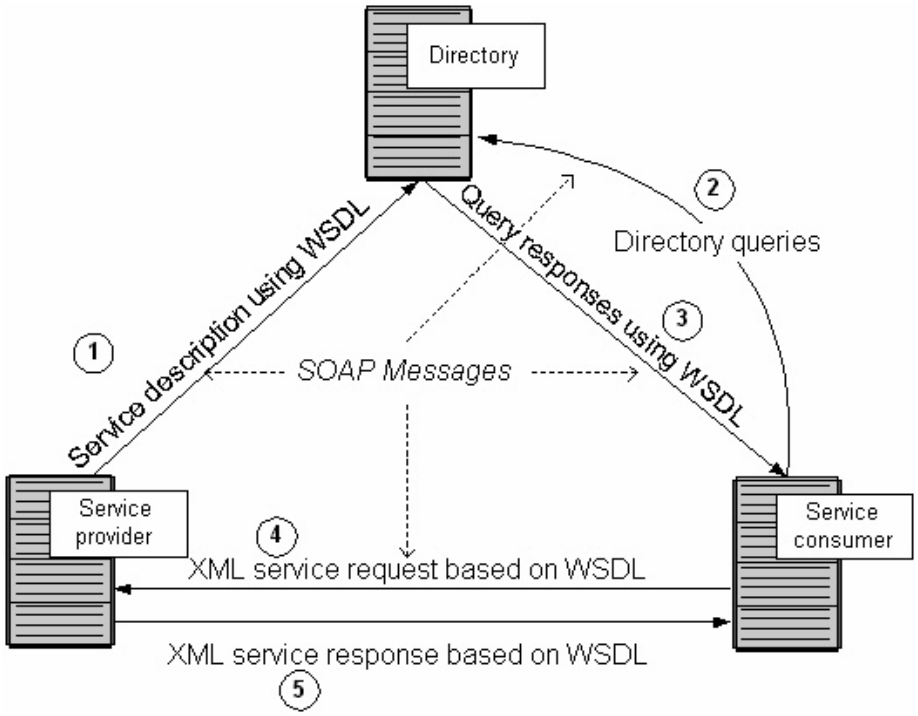
- Web Services
- What the technology is
- How to leverage this technologies to enhance your ERP
- Integrating your in-house and third-party system with your ERP System
- Leveraging Web Services in an SOA world to integrate custom applications into your PeopleSoft System (Home Grown Customer Portal integrated into your PeopleSoft System by leveraging the business logic)
- Leveraging Web Services to complete functions that would otherwise have to be developed or done manually in the upstream process of AR/Billing (Customer Credit Check), (Address Validation), (Sales and Use Tax Calculation)

Web Services and Service-Oriented Architecture are all the rage in today's IT/PeopleSoft shops. With more and more talk of Fusion (the Application) and the release of Fusion Middleware, the topic only gets hotter. So what is this rage all about? Is it hype or is it real? Can Web Services running on a SOA platform truly be a silver-bullet for PeopleSoft and IT shops?

First we need to define both Service Oriented Architecture and Web Services. A Service-Oriented Architecture is essentially a collection of services that communicate with each other. The communication can involve either simple data passing or it can involve two or more services coordinating some activity. Some means of connecting services to each other is needed (ie: XML). A Web Service is a technology used to connect two or more services. A service is a function that is well-defined, self-contained, and does not depend on the context or state of other services.

Example:

1. A service provider describes its service using WSDL. This definition is published to a directory of services. The directory could use Universal Description, Discovery, and Integration (UDDI). Other forms of directories can also be used.
2. A service consumer issues one or more queries to the directory to locate a service and determine how to communicate with that service.
3. Part of the WSDL provided by the service provider is passed to the service consumer. This tells the service consumer what the requests and responses are for the service provider.
4. The service consumer uses the WSDL to send a request to the service provider.
5. The service provider provides the expected response to the service consumer.



If your organization considers IT strategic (as opposed to a necessary evil), Web Services is something to consider. It is important, as with any deployment, not to use a technology just because it exists. Many organizations get into trouble with this by over engineering what could be a simple solution. In other words, don't try to kill a mosquito with a shot gun. The same holds true when considering the deployment of an SOA with Web Services. It is important to thoroughly understand what business problem/challenge the organization is trying to overcome before deploying a particular technology. Along with the understanding of the current business challenge, it is critical to look ahead to see what other future opportunities this deployment might benefit.

Web Services has some solid value propositions; it is loosely coupled, reusable, and it is built on a standardized technology: Extensible Mark-up Language (XML). However, it is critical that organizations have both a short-term and a long-term plan for this type of technology deployment. A sound approach includes some type of scorecard to determine whether or not new development efforts are a good fit for a Web Services. Additionally, a blueprint of which legacy deployments will be replaced over time with this new technology should be included. As with any new technology, it is important to not over commit and try to deliver all new development with it.

A demonstrable example of Web Services is the use of Google Maps. Most folks who surf the web have used Google Maps to find a location. In addition, many websites leverage the Google Maps technology to deliver content from their web sites. How is this accomplished? Google Maps is a free service to which anyone can subscribe to for content. Google Maps provides their free service as a JavaScript API.. This allows any organization to provide Google Maps as a service to their customers and/or employees without having to write the code (this makes it "reusable").

How does this translate to a PeopleSoft deployment? How can an organization take this new technology and leverage it with an ERP? PeopleSoft/Oracle has extended the toolset with its applications starting in PeopleTools version 8.48. The toolset is built on the Fusion Middleware framework, which allows any component/page with the PeopleSoft application to be converted to a Web Service. In terms of benefit to an

organization, this technology can be leveraged by taking a function within the ERP application and share that information with other applications. In this example of the hire process, many organizations have a workflow of tasks which occur when an employee joins the workforce:

- Assign a ***userid*** in the LDAP solution
- Assign the appropriate security with certain applications
- Provide the employee with a security badge
- Assign the employee a laptop or computer

These functions can be all interconnected with each of the respective applications with the use of Web Services. Information that is published or subscribed from each of these applications is then consumed by the receiving application, resulting in a unified process. Not having to write an interface to move data between each application is a significant benefit that can be easily realized. This example also demonstrated the reusability factor; these particular Web Services can be leveraged each time a new employee is hired. In addition, these Web Services can also provide a de-provisioning function in the event of a termination.

There are many benefits of leveraging Web Services within a PeopleSoft environment the organizational enterprise. Some of these benefits are only realized after an organization has established a working SOA. Leveraging functions as a service allows organizations to respond more quickly to change. Additionally, the standardized technology allows for a common skill set for development efforts. Web Services is not a new technology but one that has come to the forefront of IT over the past two years. It is recommended that an organization proceed slowly into this new space and leverage small wins along the way. This approach will allow for careful evaluation of the advantages that can be realized while keeping a pulse on the future of this technology.