Web Services and Service Management

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White Paper

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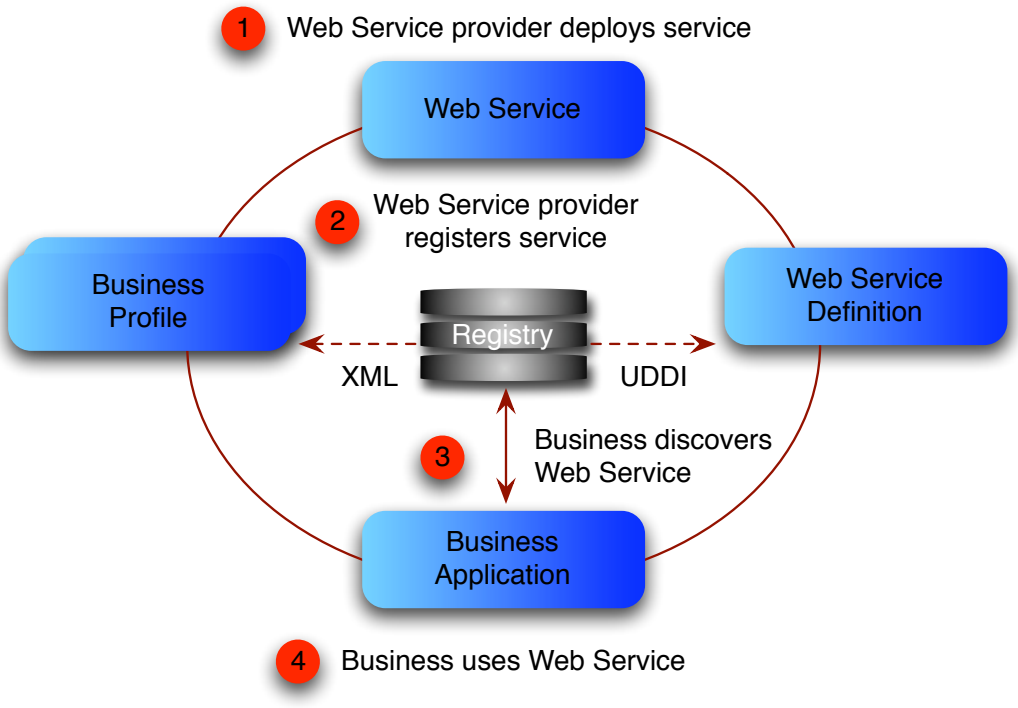
Enterprises currently faced with the challenge of integrating and extending their investments in sophisticated business applications such as ERP, CRM and Service Desk, are increasingly turning to Web services. As a result, many businesses looking to better leverage their IT assets and provide their organizations with the agility needed to stay competitive in today's economy are now Web service enabling their IT infrastructure. The ultimate goal of these efforts is to increase enterprise efficiency, improve customer satisfaction and increase profitability.

This paper provides an overview of Web services technology and its ability to fulfill enterprise-wide Service Desk integration requirements.

The Case for Web services architectures

Web Services offer an approach to software design where applications are assembled from reusable business components, called services. A service is a software building block that performs a distinct business function – such as creating an incident in a service desk application – through a well-defined interface.



These modular components, or services, are organized in a loosely coupled manner, allowing them to be linked together easily and quickly as business requirements demand. This is in contrast to many tightly coupled architectures that are less flexible and require recompilation when components are modified. An important consequence of loose coupling is that services can run anywhere on the network and are not restricted to specific hardware/operating system platforms.

Web services exist as two distinct elements – a well-defined service interface and the service implementation. The service interface describes how to call the service and is described using XML. The service implementation is the actual code that fulfils the business functionality of the service.

The assembly of Web services into higher value added composite services is typically performed by developers using dedicated tools. The resultant composite services are then published and made available to users via a standard URL link which can be rendered using any Web browser.

Delivering Real Business Benefits

Organizations looking to bring structure to their increasingly chaotic IT environment and better equip themselves for change are increasingly turning towards Web services. This is especially true for organizations using the Internet for B2B and B2C e-commerce.

A Web service enable infrastructure provides the basis for this infrastructure. It allows organizations to be more agile and to achieve more with less.

Service-oriented architecture (SOA) Powered by Web services

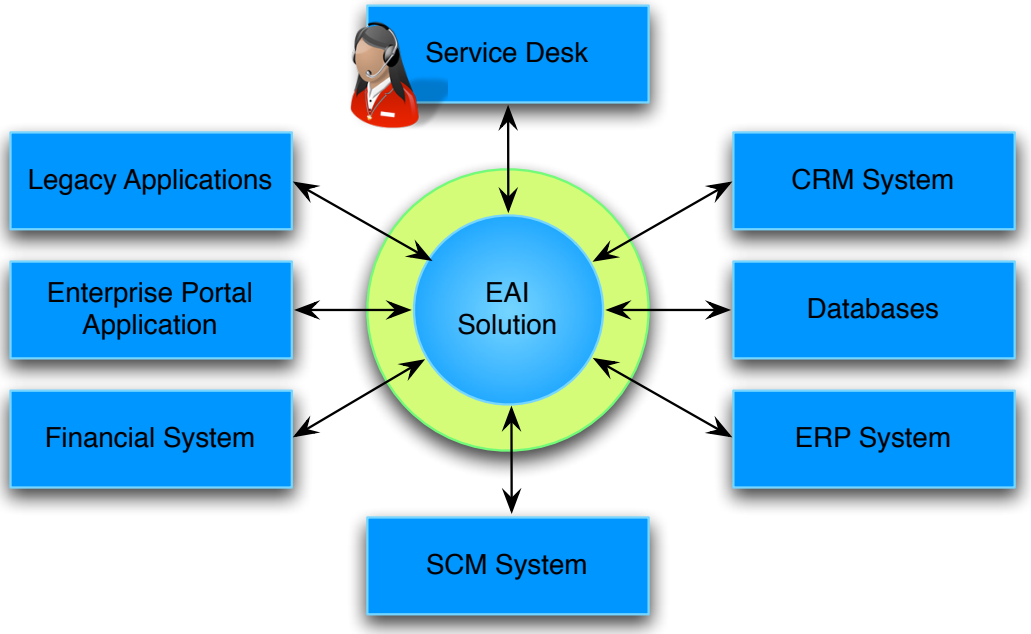
A service-oriented architecture is essentially a collection of services architected in such a way that facilitates for their linking. These services communicate with each other. The communication can involve either simple data passing or it could involve two or more services coordinating some activity. The architecture provides support for connecting services to each other.

Although SOA does not require Web services, in practice, Web Services provide the standards upon which today's SOAs are being built. Key Web services standards include:

- SOAP (Simple Object Access Protocol) - deals with how an application calls a Web service to perform an operation and return an anwer
- WSDL (Web services Description Language) - the XML-based format used to define the interface to a Web Service
- UDDI (Universal Descritpion, Discovery & Integration), - directory of Web services that lets applications find out what services are available to them

Web services as a solution to Enterprise Application Integration (EAI)

Most organizations have complex IT environments consisting of disparate legacy systems, applications, processes, and data sources, which typically interact by a maze of interconnections that are poorly documented and expensive to maintain. These include applications such as enterprise resource planning (ERP), customer relationship management (CRM), supply chain management (SCM), and portals



The need for IT systems to communicate within an organization led to the evolution of enterprise application integration (EAI). EAI is the process of creating an integrated infrastructure for linking disparate systems, applications, and data sources across the corporate enterprise.

While companies have been using EAI solutions with great success independently of Web services and SOA, these solutions take on a much more significant and valuable role when they are plugged into a Web services infrastructure. With the right EAI solution, organizations are able to extend their “legacy” systems (any system that does not support Web services natively) into the new millennium.

LiveTime Service Desk Integration using Web services

LiveTime Software has Web service enabled its Service Management suite to allow organizations to integrate and extend their existing business systems with their IT service desk operations. With LiveTime, service desk organizations are able to get more value out of their existing resources, and capitalize on their Web services infrastructure more quickly than service desk products without this capability.

The following is a sample of the type of functionality currently exposed by LiveTime used to query and create Incidents and Configuration Items (CIs) in the LiveTime CMDB.

- **createCustomer(username, emailAddress, firstname, lastname) -** Use this function to create new customers in LiveTime. Enter into the function, a unique Username, email address, and first and last name for the customer.
- **findCustomer(emailAddress) -** Use this function to search for a Customer. Enter into the function a customer's email address.
- **clientItems (clientId, pagesize, pagenumber, sortNdx) -** This function returns a detailed list of items belonging to a customer. Use this function to search for Items that belong to a specific Customer.
- **createItem(itemTypeId, ownerCustomerId, fieldValues) -** Use this function to enter a new Configuration Item (CI) into the CMDB.
- **createIncident(customerId, itemNumber, classificationId, description) -** Use this to create an Incident for a customer created from the createCustomer function. Simply supply the function with the customer ID, the number of the Item you wish to raise an Incident against, the ID number of the classification the Incident falls under and a text description of the problem.

For more information:

For more information about LiveTime Service Manager or to discuss how LiveTime can assist you in your Service Desk project, please visit our website or contact us at info@livetime.com.

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