

Web Services Gateway

The Issue

Web services are being praised as the next generation solution to enterprise integration. There is significant potential for using Web services to integrate applications and provide easier and faster B2B environments and EAI integrations. However, a comprehensive management facility to administer and monitor a service-based architecture is required. Most EAI vendors are able to adopt their integration products to support Web services but, they lack the management components necessary to build an infrastructure that is strong enough to support a production-ready Web services environment.

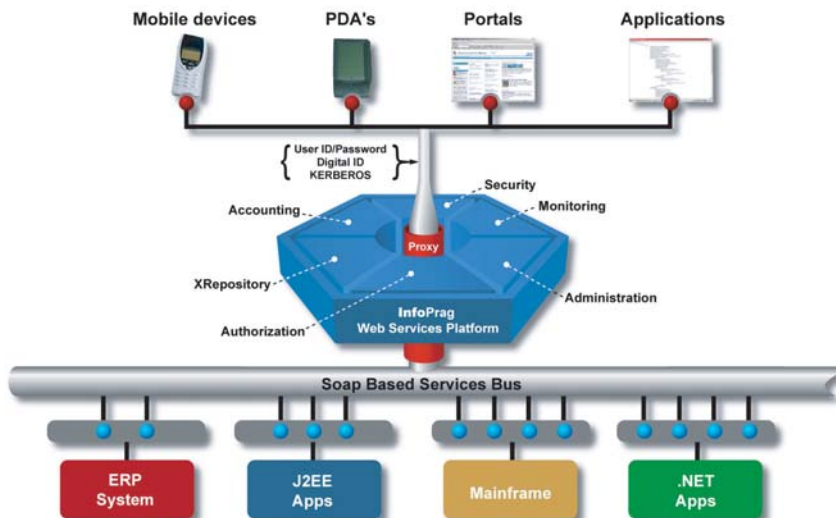
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The Solution - Web Services Gateway

InfoPrag Inc. has introduced the Web Services Gateway to allow companies to deploy Web services quickly and to integrate the services into an overall administration and management framework.

With the use of a registration wizard, the Web Services Gateway registers services for authorization, monitoring and accounting purposes.

A Web services Console provides a central location for monitoring and administering each of the Web services registered in the Web Services Gateway. The Gateway collects performance data, ensures encryption of data and validates authorization and access to the individual services. Each of the registered Web services can be accessed through a portal or a mobile device (cell phones / PDA's), or they can be invoked by partner applications. Central registration of the services allows the publisher of the service to track the performance of the service and charge for it, if required. In addition each of the Web services are integrated into the security and authorization component to provide access control to back end systems.



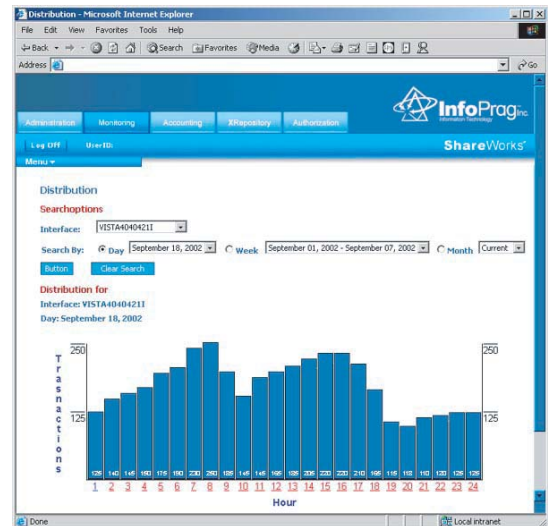
Web Services Gateway Components

Administration

The primary feature of the administration component is the registration wizard. Based on the WSDL file, the wizard will generate the proper Web services registration with the Web Services Gateway. It will parse the WSDL document and then through several prompts, request information on authorization and charges to be incurred. The Web service is then registered in the XRepository --a central site that stores and manages all XML related documents. The output of the parser is a new WSDL.

Monitoring

The monitoring facility provides performance data on each of the Web services registered with the Gateway. The performance data is structured around, reliability, failure incidents and execution times. Using the data provided, detailed analysis can be conducted to help answer concerns such as which of the services are in highest demand, which service could be improved, what capacity is required based on expected loads. In addition, various graphs provide statistical information on load, distribution, and consumption of resources. This information can be used to proactively improve services and determine hardware requirements.



XRepository

The XRepository component allows for centralized storage and management all XML related documents. Its functionality is grouped into four main features:

1. Classification of Documents.

This section allows users to create classification categories for XML documents in order to better search and retrieve these documents. The classification setup is generic so that each organization can design its own classification hierarchy.

2. Authorization of Access

The access and upload of XML documents is managed through the authorization component of the Web Services Gateway.

3. Collaboration

By providing a central location to retrieve XML documents, the Web services console provides a central site for version control of documents. Collaboration can occur internally as well as externally to trading partners as all documents can be published via the Internet.

4. Dynamic Runtime Access.

XML Schema's, XSLT stylesheets and WSDL files can be accessed dynamically at run time. This will ensure that the right version of the document is accessed at any given point in time.

Name	Type	Version	Publisher	Details	Summary
test	XML	test	test	Details	test
WebFlow	XML	1.1	InfoPrag Inc.	Details	test

Accounting

The accounting component of the Gateway allows the configuration of Web services so that, based on various pricing conditions, charges will be incurred for the consumption of a service or a group of services. For example, an organization can make information available via a Web service. Depending on the access device, whether a cell phone, PDA, or browser a minimum of \$1.00 could be charged. If the Web service is accessed through a browser more information is provided and therefore the charge for the information could be higher. The Web services console monitors these conditions and provides the necessary billing information which can be imported into a billing system(s). Also, standard Web services are provided to allow users access to their account information over mobile devices or a browser.

These features, allow organization to become content-providers and it gives them the capability of generating additional revenue from the services offered to Web services consumers.

The accounting component also allows organizations to manage the interdepartmental cost allocations when internal departments consume the services.

Authorization & Security

The Web Services Console provides authorization and security for registered Web services. It ensures that only the Web pages and Web services that have been authorized for access by a particular client are available to that client. The authorization is performed by comparing the identity of the authenticated client with the Access Control List for the Web service.

Web Services authorization is either handled through Active Directory or the Web Services Gateway authentication database. When handled through Active Directory, organizational units can be created by the Web Services Gateway to provide a "container" to store users, groups and other network resources relating to the Web service. By tying authentication into Active Directory, the Web Services Gateway is able to take advantage of a very advanced authentication mechanism, Kerberos, for authentication.

In the second case, handling authorization through the Web Services Gateway, the user has the flexibility of tying the Web services into the Gateway's authentication database.

By providing centralized authentication and authorization, the Web Services Gateway eliminates the need for the application consuming the various Web services from having to authenticate to each individual Web service.

Successful and unsuccessful access to Web services registered with the Web services gateway are logged and can be analyzed to determine the number of successful/unsuccessful accesses. This powerful feature enables the administrator to proactively react to suspicious log entries.

Conclusion

Whether used for in-house aggregation of information, bridging boundaries beyond corporate walls, or providing user-pay information, Web services promise a future of cost-effective application integration. However, to realize the full potential of Web services some fundamental business requirements must be fulfilled. Issues such as security, contractual agreements over service use, reliability, and monitoring must be addressed. The InfoPrag Web Services Gateway was developed to address these issues.

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