hp
web services
platform

product

hp web services platform…a standards-based, plug-and-play
architecture for developing, deploying, registering,
discovering, and consuming Web Services

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introduction

Web services are an industry-wide response to the need for a more flexible and efficient business collaboration environment. Web services are self-contained, modular business applications that have open, Internet-oriented, standards-based interfaces. They allow businesses to connect together applications either behind or outside of firewalls independent of hardware, operating systems, or programming environments (e.g. Java, .NET). Web services offer businesses the ability to create low-cost, many-to-many connections with their customers, suppliers, trading partners, and even within their own organizations. The result is a lower cost, more flexible, and standards-based alternative to existing EAI and B2B integration technologies.

The HP Web Services Platform delivers a modular, standards-based architecture that allows for plug-and-play assembly of XML components for developing, deploying, registering, discovering, and consuming Web services. Included in the HP Web Services Platform are tools, utilities, and a robust run-time environment for exposing new or existing Java objects as Web services, and for deploying these Web services. Additional tools included in the HP Web Services Platform enable customers to automatically register these Web services in public or private Web services registries, as well as to discover relevant Web services offered by other businesses.

Web services extend the functionality of an application server by enabling applications to connect directly with other applications in a standard fashion. The HP Web Services Platform allows businesses to expose their assets as Web services; examples include:

1. Software applications such as an income tax preparation application or an application that computes the appropriate sales tax based on location
2. Business processes such as a purchase order fulfillment service or a service that enables suppliers to be alerted to inventory shortages at their customer's locations
3. Computing resource such as online storage or server capacity
4. Content services such as stock quotes or a service that allows mobile phone users to locate the nearest hotel or restaurant

highlights and key values

standards-based

The HP Web Services Platform supports the latest Web services industry standards including WSDL (Web Services Description Language) that defines how Web services are to be accessed and invoked; SOAP (Simple Object Access Protocol) a lightweight, XML-based message format for communication between Web services over the Internet; and UDDI (Universal Description, Discovery, and Integration), a repository-based registry service for the automated lookup of Web services.

BizTalk, ebXML, RosettaNet support

In addition to SOAP-RPC support, the HP Web Services Platform will enable businesses to support virtually any XML protocol and therefore to participate in multiple trading environments. Included in the HP Web Services Platform architecture is a listener framework for receiving messages over a variety of transport protocols and a pipeline based on Cocoon2, an Apache open-source framework, for pre-processing and routing of XML documents. This framework enables the HP Web Services Platform to receive, process, and return XML documents based upon requirements detailed in business protocols such as RNIF, ebXML, or BizTalk.

developer tools and utilities
Bundled with the HP Web Services Platform are several useful tools and utilities to simplify the Web services development, registration, and discovery process. Of special importance are the HP Service Composer tool that enables developers to create the WSDL (Web Services Description Language) interface, and HP Service Registry tool for automatically registering and discovering Web services in UDDI registries. Also included are trail map tutorials that assist developers in installing and learning to use the HP Web Services Platform.

modular, plug-and-play architecture
Web services are still progressing along the adoption curve and numerous standards are in varying stages of development – standards dealing with complex Web services requirements. This includes functional areas such as security, Web-based long-duration transactioning, conversations, negotiations, management, and more. The HP Web Services Platform provides unmatched flexibility that will allow our customers to plug-in customer-specific components (such as an authentication manager or transaction server) as well as support current and future business and technology standards.

compatibility with public and private registries
UDDI (Universal Description, Discovery, and Integration) registries provide a central repository for available Web services, thus enabling businesses to promote their services to other businesses or to locate Web services offered by other businesses. HP is one of four vendors to offer a public UDDI Business Registry along with Microsoft, IBM, and SAP. HP also offers a private UDDI registry with the HP Web Services Registry product. Based on the latest UDDI V2 specifications, HP Web Services Registry enables you to create your own private registry, or eco-system of available Web services.

always-on platform
The HP Web Services Platform is tightly integrated with the HP-AS family of J2EE-based application servers. HP-AS is built on a completely standards-based, modular architecture and provides developers with the unprecedented ability to pick-and-choose only the specific services that are required. This plug-and-play architecture removes the current complexities of developing service-based applications and allows developers to easily integrate Java services and APIs into new and existing applications. HP Web Services Platform components run as servlets within HP-AS, enabling it to benefit from the unmatched linear scalability, fault tolerance, and hot deployment and "Hot Versioning" support offered by HP-AS.

feature summary

SOAP server

HP-SOAP provides a standards-based communications platform for sending, receiving, and processing SOAP-based messages. A key component of the hp Web services platform, HP-SOAP provides a listener framework, envelope processing, and routing capabilities supported by the Cocoon2 open source framework.
- SOAP capabilities – exchanges SOAP-based messages with other SOAP servers regardless of platform
- listener framework – transport listeners that support http, https, smtp; runs in own JVM for scalability
- interaction controller – provides XML document pre-processing and routing
- Cocoon2 framework – provides plug-and-play framework that allows for protocol-neutral or protocol-specific (e.g. ebXML, BizTalk) processing of XML documents
- integrated security – supports XML Digital Signatures

developer tools

hp Web services platform addresses the needs of developers, architects, and administrators by providing easy to use tools for developing, deploying, registering, and discovering Web services.

hp service composer tool provides:
- GUI interface for creating WSDL interface for Java objects
- automatic deployment of Web services in HP-AS application server

hp registry composer tool provides:
- GUI interface for registration and discovery of Web services
- programmatic registration and discovery via UDDI4J API
- public and private UDDI registry support (UDDI V1 and V2)

trail maps

hp Web services platform comes with several trail map tutorials to assist you with the following:
- checking your installation – helps to make sure you've completed the installation process correctly
- exploring the HP-SOAP Server – learn how to use the SOAP Server and associated XML document processing framework
- using complex data types – learn how to create and use complex data types in the HP-SOAP Server

platform and standards support

minimum system requirements
- JDK 1.3
- 128 MB RAM
- 50 MB hard disk space
- 400 MHz CPU

supported operating systems
- HP-UX 11.11
- Windows NT4 SP6+
- Windows 2000
- Sun Solaris 8
- Red Hat Linux 7.1

supported web servers
HP-WSP is interoperable with web servers that support Apache, ISAPI, and NSAPI plug-ins.
- Apache 1.3.19
- Microsoft IIS 4.0 and higher
- iPlanet Web Server

supported application server/servlet engines
- HP-AS 8.0
- Tomcat

additional support
- Application Framework: Cocoon2
- XML Parser: Xerces 1.4
- Stylesheet: Xalan 2.1.0
- Listeners: HTTP, HTTPS, SMTP
- Security: XML Digital Signatures

standards support
- WSDL
- SOAP
- UDDI (V1 and V2)
- UDDI4J
- JAXM

product support

HP offers a comprehensive standard support and maintenance agreement, as well as many options to assist your web development option.

support options include:
- customer care standard maintenance and support
- customer care extended maintenance and support
- partner care extended maintenance and support
- consulting services offered through the Hewlett-Packard consulting organization
- training services offered through Hewlett-Packard Enterprise Services Group

customer care standard includes:
- hot-line technical support, Monday through Friday 8:30am - 5:30pm local time
- product updates including maintenance packs developers forums for posting
- developers forums for posting questions to the entire hp middleware user community on-line

More information regarding product support can be found at:
http://www.hpmiddleware.com/support.

sales

We want your HP experience to be a positive one. If at any time you would like to contact HP regarding our application server technologies, please call us at 1-888-258-3786, or send us an e-mail at: hpmdsales@hp.com.