IBM System i platform enhances Web services and IBM Secure Perspective products

At a glance

The System i platform enhances its service-oriented architecture (SOA) offering by integrating a Web services server for Integrated Language Environment® (ILE) into i5/OS and enabling several new SOA technologies to run natively on i5/OS.

- i5/OS Integrated Web services server for ILE (5722-SS1 Option 3) V1.0
- WebSphere® Application Server V6.1 Feature Pack for Web Services
- WebSphere Enterprise Service Bus (ESB) V6.1
- WebSphere Process Server V6.1
- WebSphere Integration Developer V6.1
- i5/OS Integrated Web Application Server V7.1

Overview

The System i™ platform extends Web services integration and SOA enablement on i5/OS™ by:

- Simplifying the implementation of Web services for ILE products
- Integrating a Web services server and client
- Extending SOA enablement with new SOA-related offerings

VMware

Supports virtual storage for VMware with iSCSI attached IBM BladeCenter® and System x™ servers.

Secure Perspective

- Enables organizations to create enforceable security and compliance policies using natural language
- Manages security of data across platforms
- Acts as a single view of compliance and data security across an organization

Planned availability date

Refer to the Description section for availability.

Description

VMware

System i integration with iSCSI attached BladeCenter and System x servers is enhanced to support virtual storage for VMware ESX server V3.0.1. VMware is one of the leading virtualization products for x86 processor-based servers. It can help reduce the number of physical servers through virtualization. It also enables multiple virtual machines, each with an installed network operating system running on a single server. VMware ESX supports Windows™, Linux™, NetWare, and Solaris virtual machines. You can install the ESX server on an iSCSI attached BladeCenter or System x server and use the System i disks for all of the storage for the ESX server, extending the value of the i5/OS storage management. VMware ESX is now enabled through a PTF to i5/OS V5R4.

Secure Perspective (5733-PS1)

Secure Perspective is an application that allows organizations to create enforceable security and compliance policies using natural language. The policies can be created by business leaders who know how information should be protected without needing knowledge of where that information is stored. Data owners and system administrators can then map terms from the policy to digital assets. Your organization's policy can be enforced or compliance checked with the click of a button.

With this update of Secure Perspective you can now manage the security of data across platforms. In addition to securing access to data on i5/OS systems, you can manage data on Microsoft™ Windows systems, AIX® systems, and in DB2® databases from one central location. This central management location may be an i5/OS instance or a Microsoft Windows system.

Securing data can be a complex task, especially when done in response to regulations. Secure Perspective reduces the work and complexity by using one policy to specify the security you need across i5/OS, AIX, Windows, and DB2 systems, and one interface to map files, apply policy, and check compliance. You get a single view of compliance and data security across an organization, removing the challenges and complexities of dealing directly with the security control mechanisms for each platform. The natural language capabilities combined with an easy-to-use interface can make it simple for even the most nontechnical person to evaluate data security and compliance.

The enhanced Secure Perspective is planned to be available October 19, 2007.

Web Services and SOA for i5/OS (5722-SS1 Option 3)

The i5/OS operating system integrates a Web services server for ILE and enables the latest SOA technologies on i5/OS. This SOA-ready system embeds a Web services server directly into i5/OS and enables the programming model to leverage the latest advancements for SOA.

Integrated Web services server for ILE: The integrated Web services server is an ILE starting step for Web services and SOA on the System i platform. This server is an i5/OS functional enhancement making Web services and SOA interoperability easier. The Web services server supports the consumption and externalization of services within the ILE programming environment. It embeds a Web services engine and run time integrated within the System i architecture.

With ILE enablement i5/OS is one of the first systems to interoperate with many SOA technologies and products such as WebSphere Enterprise Service Bus and WebSphere Process Server. Refer to ZP07-0398, dated October 9, 2007. Two major components simplify the integration of ILE with SOA, Web services, and Web 2.0 on the System i platform:

- Integrated Web services server
- Integrated Web services client

The integrated Web services server greatly simplifies the process of externalizing ILE business logic as a service via the Web Administration for i5/OS GUI. This simplification has been accomplished by abstracting the hidden complexities of Web services and extending the ILE programming model to allow a System i administrator to directly externalize various ILE business tasks as services. In fact, the externalization of RPG and COBOL business logic as a service is now an administrative task on i5/OS.

The integrated Web services client for ILE includes an internal engine that supports the ILE environment to act as a client available to the ILE programming languages on System i, including RPG, COBOL, C, and C++.

Integrated Web services server: This Web service engine or run time is integrated in i5/OS to externalize ILE business logic (RPG or COBOL) as a service. i5/OS integrates a Web services run time into the operating system and enables SOA technologies directly for interaction with the operating system. This integration opens the i5/OS system to a variety of Web service client implementations, including RPG, COBOL, C, C++, Java™, .NET, PHP, WebSphere Process Server, ESB, and Web 2.0.

- Acts as easy initial step on path towards Web services and SOA on System i platform
- Supports enablement of ILE service program and programs as services
- Automatically generates and binds service information when compiling the ILE program or service program
- Uses the Web Administration for i5/OS GUI (shipped with the latest update to PTF SF99114):
  - Create Web services server with a few easy steps
  - Select and deploy ILE programs and service programs as services
  - Easily view and manage all services available on the system
- Uses administrative task to export ILE (RPG,COBOL) program or service program business logic
- Externalizes business tasks as a Web service natively on ILE (services provider)
- Opens ILE (RPG and COBOL) to business logic for a variety of Web service clients, including RPG, COBOL, C, C++, Java, .NET, PHP, and more
- Enables i5/OS to be SOA ready for service deployment
- Does not require new skills or tools for ILE enablement
- Uses and enhances existing System i development skills to interact with Web services and integrate SOA
- Dynamically generates WSDL representation for client invocation of ILE program/service programs.
- Helps ILE programmers externalize a program or service program as a service
- Uses fast interoperability of ILE programming architecture for minimal consumption of System i resources
- Integrates into i5/OS with PTFs for 5722-SS1

Integrated Web services client for ILE: The client delivers a mechanism to generate service artifacts and allow ILE (RPG, COBOL, C, and C++) to act as a services consumer. It can call a variety of Web service implementations, including RPG, COBOL, C, C++, Java, PHP, .NET, WebSphere Process Server, ESB, Web 2.0, and so on.

- Supports enablement of ILE program to consume services
- Invokes Web service client from ILE programs (RPG, COBOL, C, and C++)
- Enables ILE programmer to consume services from a program or service program.
- Uses ILE enablement to bind and call a service directly from an i5/OS program or service program
- Leverages WSDL to generate proxy client code to be integrated in a program or service program
- Uses and enhances existing System i development skills to interact with Web services and SOA
- Uses quick interoperability of ILE programming architecture for minimal consumption of System i resources with a small system footprint
- Ships as PTF delivery for 5722-SS1 Option 3
- Supports Web service client module for C, C++, RPG, and COBOL

- Supports document style literal only
- Complies with Web Services Invocation (WSI) 1.1 basic profile
- Supports Secure Sockets Layer (SSL) for ILE service
- Implements staged development for ILE:
  - Generate proxy code
  - Examine proxy code
  - Integrate proxy code into ILE source code
  - Compile and bind program or service program
  - Run ILE program or service program as a Web service client

WebSphere Application Server V6.1 Feature Pack for Web services: The Feature Pack extends the capabilities of WebSphere Application Server V6.1 on System i to enable Web services messages to be sent asynchronously, reliably, and securely, focusing on interoperability with other vendors. They are optionally installable product extensions that offer targeted, incremental new features.

Interoperable, reliable Web services

- Through support for key Web services standards, you can send messages:
  - Reliably: Be confident that your message will reach its destination.
  - Asynchronously: Communicate reliably even if one of the parties is temporarily off-line, busy, or unobtainable.
  - Securely: Rest assured your messages are not vulnerable to attack.
  - Interoperably: Use other vendors' offerings with confidence.

- Easy to implement.

  Programming model enhancements simplify application development through a standard, annotation-based model to develop Web service providers and clients. A common set of binding rules for XML and Java makes it easy to incorporate XML data and processing functions in Java applications, and a further set of enhancements help you send binary attachments, such as images or files, along with your Web services requests easily and reliably.

- Consumable and extensible.

  Simplified management using Web services profiles makes it easy to configure and reuse configurations, so you can introduce new Web services profiles seamlessly in the future. These configurations are captured in a grouping called policy sets that enable you to select and associate with an application different qualities of service. You can configure the policy sets to allow only those capabilities within a given WS-Interoperability (WS-I) profile, thereby ensuring that the only configurable portions are those you choose. WS-I is an open industry organization chartered to promote Web services interoperability across platform systems, and programming languages.

For more information on WS-I, visit

http://www.ws-i.org/

For more information, visit

http://www.ibm.com/software/webservers/appserv/was/featurepacks/

This function will be delivered via PTF SF99114 with a planned availability of December 21, 2007.

WebSphere ESB: WebSphere ESB is a flexible connectivity infrastructure for integrating applications and services, designed to enable the development of an SOA. Built on top of WebSphere Application Server, WebSphere ESB delivers a standards-based connectivity and

integration solution that allows you to create and deploy interactions quickly and easily between applications and services, with a reduced number and complexity of interfaces. You can focus on your core business, rather than on your IT. WebSphere ESB includes platform support for System i to leverage native i5/OS.

New features include the following:

- Leveraging of WebSphere Application Server for other solutions, in addition to inheriting new features and benefits introduced in WebSphere Application Server V6.1
- Support for i5/OS and remote DB2 support for System i systems to enable integration with i5/OS applications and leverage relational database management servers running on i5/OS

For more information, refer to ZP07-0398, dated October 9, 2007.

You can also visit

http://www.ibm.com/software/integration/wsesb

WebSphere ESB is planned to be available December 21, 2007, as a Web download from Passport Advantage®.

WebSphere Process Server: WebSphere Process Server helps ensure that the processes you design in WebSphere Business Modeler or WebSphere Integration Developer are executed consistently, reliably, securely, and with transactional integrity. Built on open standards, it deploys and executes processes that orchestrate services (people, information, systems, and trading partners) within your SOA or non-SOA infrastructure. When combined with the power of WebSphere Business Monitor, processes can be optimized to meet changing business requirements, giving the business a competitive advantage. WebSphere Process Server is built on, and contains, WebSphere ESB functions. WebSphere Process Server includes platform support for System i server to leverage native i5/OS.

New features in WebSphere Process Server V6.1 leverage:

- WebSphere Application Server in addition to inheriting new features and benefits introduced in WebSphere Application Server V6.1
- Native i5/OS by running on the System i platform
- Relational database management servers with DB2 support

For more information, refer to ZP07-0398, dated October 9, 2007.

You can also visit

http://www.ibm.com/software/integration/wps

WebSphere Process Server is planned to be available December 21, 2007, as a Web download from Passport Advantage.

WebSphere Integration Developer: WebSphere Integration Developer is the "one tool, one set of skills" solution for end-to-end integration in your SOA. This Eclipse-based tool builds SOA-based business process management and integration solutions across WebSphere Process Server, WebSphere ESB, and WebSphere Adapters. It simplifies integration with rich features that accelerate the adoption of SOA by rendering existing IT assets as service components, encouraging reuse and efficiency. It enables integration developers to assemble complex business solutions — whether processes, mediations, adapters, or code components — with minimal skills. You can construct process and integration solutions using drag-and-drop technology to define, in a visual way, the sequence and flow of business processes. WebSphere Integration Developer supports development deployment to WebSphere ESB on i5/OS and WebSphere Process Server on i5/OS.

New features in WebSphere Integration Developer include:

- Increased developer productivity with ease-of-use enhancements
- Enhanced human workflow
- Improved business-driven development capabilities
- Better connectivity

For more information, refer to ZP07-0398, dated October 9, 2007.

You can also visit

http://www.ibm.com/software/integration/wid

I5/OS integrated Web application server (5722-SS1): The integrated Web application server integrates an OSGi-based Web servlet container with the i5/OS operating system. This Web container includes the basics for applications to be up and running quickly and effectively on the Web. The integrated Web application server is a good place to prototype new applications or run existing small footprint or low-use applications. For applications that require a high degree of scalability, WebSphere Application Server Express is recommended. The integrated Web application server can be considered an "on ramp" to the more scalable solution. This Web container is easy to use and configure, does not require any additional products to install, and uses minimal system resources. The integrated Web application server can be completely administered using the Web Administration for i5/OS GUI. You can create, start, stop, and manage servers u9sing this commonly available interface.

Benefits of the server include the following:

- OSGi-based Web servlet container
- Support for JDK 1.5 run by default on IBM technology for Java (32-bit)
- Support for DB2 for i5 using Toolkit for Java or Java native implementations
- GUI to manage all aspects of the integrated Web application server:
  - Wizard to create a new server instance
  - Wizard to deploy applications to the instance of choice
  - Interface to manage applications, server properties, and database connection information
  - Ability to view all servers on the System i platform; start, stop, or delete servers in one easy-to-use display

  The GUI will be shipped with the latest update to PTF SF99114 planned to be available December 21, 2007

Unlimited Collaboration Users

The System i platform can deliver reliability, manageability, and lower cost of ownership for deploying collaborative solutions. With the new i5/OS Unlimited Collaboration Users feature, the System i platform offers a cost-effective option for adding IBM Lotus® collaboration solutions. The feature includes entitlement for an unlimited number of users who access i5/OS solely for the use of IBM Lotus collaboration products. A license for the actual IBM Lotus product is also required. The following collaboration products are available:

- Lotus Domino®
- Lotus Sametime®
- Lotus Quickr
- Lotus QuickPlace®

For additional information, visit

http://www.ibm.com/systems/i/os/i5os/licensinginformation

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