

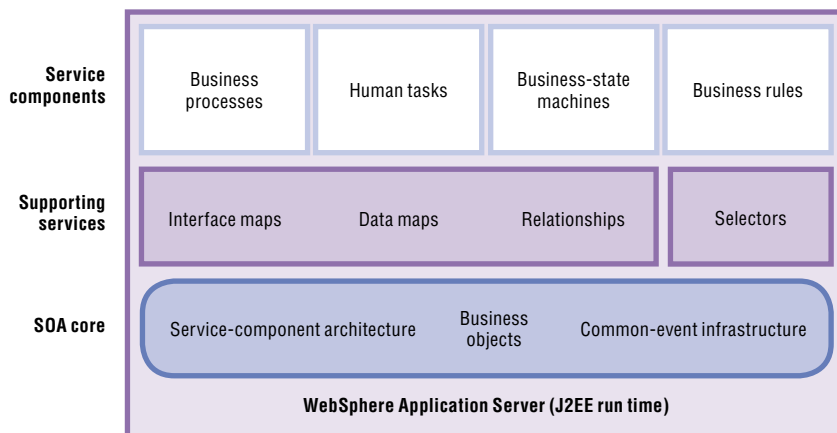
**WebSphere.** software

## IBM WebSphere Process Server for Multiplatforms, Version 6.0

### Highlights

- ***Integrates business processes using a new service-component architecture that delivers one programming model to connect and use existing IT resources***
- ***Delivers constructs for dynamic processes, including business rules, business-state machines and selectors, events and role-based task capabilities***
- ***Provides simplified tooling to describe, create and manage business processes with minimal skills***
- ***Provides high performance and quality of service with advanced fault-tolerance and error-detection capabilities***
- ***Enables rapid assembly of business solutions by wiring reusable service components together***
- ***Helps you potentially gain improved incremental economic benefits from sustained use of enterprise services***

Many organizations are under constant pressure to deliver more business value without increasing IT costs. Instead of expanding heterogeneous, widely distributed and complex infrastructures, companies are exploring how they can reuse select parts of their existing IT assets to achieve their business goals. Doing this means you must transform your IT resources to a composite application-development framework that is built on an open-standards-based service oriented architecture (SOA). Instead of reinventing the development process with every new application you build, you can take advantage of the flexibility of an SOA that enables your business to adapt as your needs change.



*WebSphere Process Server provides SOA-based automation of business processes through a single process-integration framework.*

### Shift to On Demand Business with WebSphere Process Server

IBM WebSphere® Process Server for Multiplatforms, Version 6.0 software is designed to enable you to transform your business processes based on an SOA model. This comprehensive process-automation server uses open-standards-based technology to integrate business processes with a unified programming model that spans people, workflows, applications, systems, platforms and architectures.

WebSphere Process Server, Version 6.0 features include:

- *A service-component architecture to facilitate composite application development*
- *Support for human tasks and workflows with role-based tasks and the ability to notify decision makers about emerging business conditions*
- *Capabilities to enable solution assembly from service components, such as human tasks and integrated testing and deployment*
- *Business-state machines to implement event-driven business processes*
- *A common administrative console*
- *Support for a common event infrastructure and Java™ 2 Platform, Enterprise Edition (J2EE) Connector Architecture (JCA) adapters*
- *Support for open standards including Web Services Business Process Execution Language (WS-BPEL) and Common Base Events (CBEs)*
- *Support for business-to-business (B2B) scenarios through an included copy of IBM WebSphere Partner Gateway software*

### **Delivering on the SOA promise**

Business processes have life cycles that are driven by business goals and implemented by IT. As a result, to achieve your business goals, you have to align IT processes that span your entire organization with your business goals. However, you might be dealing with an IT infrastructure that is complex

and inflexible. One that comprises a wide range of applications and technologies—each designed to address specific business and IT challenges. SOA and composite-application development enable you to solve this problem by using existing IT resources as services that you can rapidly assemble to create business-process flows.

The strength of an SOA depends on the extent to which it can help you use your existing IT infrastructure to meet your business objectives. An effective SOA should:

- *Take into account the complete life cycle of business processes to help ensure that IT aligns with the business.*
- *Render existing IT artifacts as consumable services.*
- *Manage services to enable efficiency and reuse.*

WebSphere Process Server, Version 6.0 provides all of these capabilities. Together with WebSphere Integration Developer, WebSphere Business Modeler and IBM WebSphere Business Monitor, WebSphere Process Server delivers a comprehensive SOA offering that completes the life cycle of business processes.

As the cornerstone of IBM WebSphere process-integration products, designed to help you build an SOA, WebSphere Process Server includes the following capabilities:

- *Enables the life cycle of business processes by integrating with WebSphere Business Modeler to seamlessly transform business models into IT flows and, with WebSphere Business Monitor, to provide real-time visibility into your business processes.*
- *Interoperates with products across the IBM WebSphere software portfolio, enabling you to take advantage of capabilities for people, information and application integration.*
- *Delivers a broad reach across a range of integration solutions through its use of enterprise service bus (ESB) technologies and support for IBM WebSphere Adapters, providing easy connectivity to business applications.*

### **Designed to provide leading-edge integration-development capabilities**

WebSphere Process Server, Version 6.0 offers robust process automation, advanced human workflow, business rules, application-to-application (A2A) integration and B2B capabilities. These capabilities are provided on a common run time that includes native Java Message Service (JMS) support. WebSphere Process Server builds on IBM WebSphere Application Server to provide a premier J2EE and Web services technology-based application platform for deploying enterprise Web services solutions for dynamic

On Demand Business. WebSphere Process Server includes all of the features available in WebSphere Application Server Network Deployment, Version 6 such as J2EE, Version 1.4 support, Web services gateway, IBM Tivoli® Performance Viewer, and clustering and workload-management support. WebSphere Process Server also includes limited-use licenses for IBM DB2® Universal Database™ Enterprise Edition, IBM Directory Server and IBM WebSphere Partner Gateway.

Together, WebSphere Process Server and WebSphere Integration Developer provide comprehensive services to enable the development of composite integration applications. These service components include:

- *Business processes*
- *Human tasks*
- *Business-state machines*
- *Business rules*
- *Interface maps*
- *Business-object maps*
- *Relationships*
- *Selectors*
- *Java objects*
- *Imports and exports for Web services, adapters, JMS and Enterprise JavaBeans (EJB)*

### *Business processes*

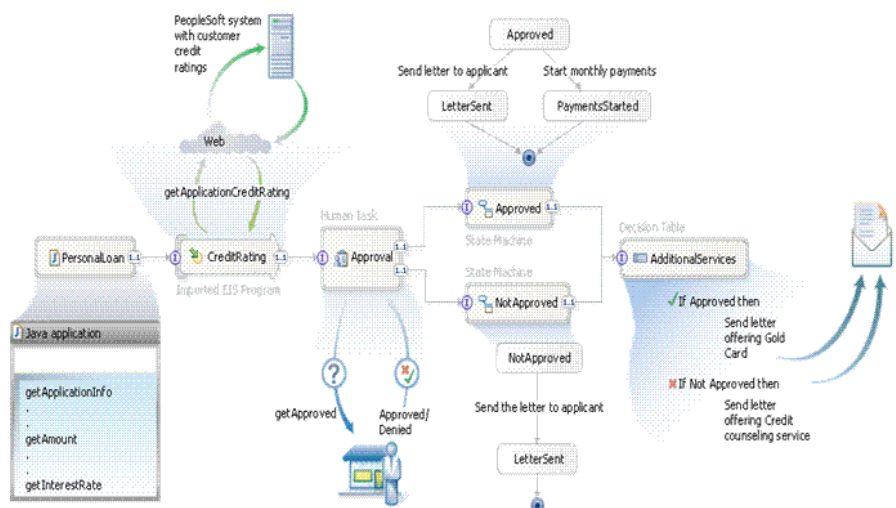
The business-process component in WebSphere Process Server uses a Web services-BPEL (WS-BPEL) technology-compliant process engine. WS-BPEL defines a model and a grammar for describing the behavior of a business process based on interactions between the process and its partners. Support for WS-BPEL includes:

- *An improved business-process editor with an easy-to-use authoring experience*
- *Intuitive drag-and-drop tools to visually define the sequence and flow of WS-BPEL business processes*
- *A visual business-process debugger to step through and debug WS-BPEL business processes*
- *Long- and short-running business processes*

- *Compensation support to provide transaction rollback-like function for loosely coupled business processes that cannot be undone automatically by the application server*
- *Integrated fault handling to provide an easy and integrated means of performing in-flow exception handling*
- *The ability to include Java snippets and artifacts as part of a business process*

### *Human tasks*

WebSphere Process Server and WebSphere Integration Developer provide human-task support that expands the reach of WS-BPEL to include activities requiring human interaction as steps in an automated business process. Business processes involving human interaction can be *interruptible* and *persistent* (a person might take a long time to complete the task) and can resume when the person completes the task. Human-task support includes:



WebSphere Process Server helps you define the flow of your critical business processes.

- *The ability to invoke human tasks from a business process to represent a step in a business process that is performed manually*
- *The ability to assign people to specific instances of a process using staff queries that are resolved at run time using an existing enterprise directory*
- *A graphical browser-based interface that can be used to query, claim, work with, complete and transfer work items to another user*
- *JavaServer Faces (JSF) components to create custom clients*
- *Advanced work-item management support that enables users to create, transfer and delete work items*
- *Dynamic setting of duration and calendar attributes for staff activities*
- *Dynamic setting of staff assignment using custom attributes*
- *Originating task support to invoke any kind of service (including a business process)*
- *Ad hoc creation and tracking of human tasks*
- *Administrative tasks*

You can use the human-tasks function to invoke services (such as a business process), participate in a business process (traditional staff activity) or administer a business process (process administrator). Pure human tasks are also available to implement ad hoc processing. By separating human-task support from the core WS-BPEL engine, WebSphere Process Server and WebSphere Integration Developer enable you to create pure WS-BPEL code without IBM extensions for human tasks.

### ***Business-state machines***

WebSphere Process Server provides a business-state-machine component that you can use to model heavily event-driven business-process scenarios. These event-driven scenarios are sometimes hard to model in a WS-BPEL model, but can be very easy to model in a state-machine diagram. The WebSphere Process Server business-state machine is designed to emulate Unified Modeling Language (UML) state-machine diagrams. The combination of WS-BPEL business processes with business-state machines gives you more business-process-automation choices—enabling you to address business problems more effectively.

### ***Business rules***

WebSphere Process Server contains a business-rule component that provides support for rule sets (if-then rules) and decision tables. Business rules are categorized into rule groups that hide implementation details from the consumer and are accessed just like any other component.

WebSphere Process Server also provides a Web client with plain-text display capabilities to enable on-the-fly changes to business rules to be deployed using an intuitive user interface. By separating the business-rules component from the individual business-process flows, WebSphere

Process Server enables a rule to be managed by the domain expert for that particular business rule. Also, by encapsulating rules as a service component, WebSphere Process Server enables a rule to be used across multiple processes for maximum business flexibility.

### ***Supporting components***

WebSphere Process Server provides a wide range of supporting components designed to facilitate component-based application development. These supporting components include:

- *Interface maps that can be used to convert semantically, but not syntactically, identical interfaces. You can use interface maps to import existing services that might have an interface definition that doesn't meet requirements already in place. You can also use them to implement a completely canonical integration solution where one component has no knowledge of the implementation details of another component.*
- *Business-object maps that can be used to translate one business object into another. For example, as part of an interface map, it is often necessary to translate the arguments of an operation because the parameters of the operations might be described differently. These business-object maps can also be invoked from a business process to translate data (such as extracting an address out of a customer record).*

- Relationships that can be used to convert key information to access the same data sets in various back-end systems and keep track of which data sets represent identical data. This component enables cross-referencing and federation of heterogeneous business objects across disparate enterprise information systems (EISs). You can also define lookup relationships for static data (such as mapping postal codes into city names).
- Selectors that can be used to dynamically invoke different components based on various rules (such as date). You can increase flexibility by combining the selector component with interface maps. WebSphere Process Server provides a Web interface that enables you to change selector rules on the fly.
- Enhanced JCA, Version 1.5 resource adapter support that uses IBM WebSphere Adapters
- Support for the entire suite of WebSphere Adapters
- Easy-to-use tools that you can use to create services out of JCA resource adapters or WebSphere Adapters, and that enable you to include those services as part of an integration application
- Sophisticated wizards to manage the low-level data-handling requirements for JCA resource adapters
- Support for Web services (based on Java Specification Request [JSR] 109 and Java application programming interface [API] for XML-Remote Procedure Call [JAX-RPC] technology)
- Support for JMS through integrated WebSphere messaging resources (with full connectivity to existing IBM WebSphere MQ technology-based networks)
- Support for calling EJB session beans
- Wizards to quickly and simply expose IBM CICS® or IBM IMS™ programs as enterprise services, including the ability to import definitions from COBOL, C structures, CICS basic mapping support (BMS), and IMS Message Format Service (MFS) definitions

#### *Back-end system connectivity*

Together with WebSphere Integration Developer, WebSphere Process Server provides integrated, open-standards-based support for building composite applications, such as WS-BPEL business processes that integrate with back-end systems. Features include:

- Integrated tool support for using J2EE Connector Architecture (JCA), Version 1.0 and Version 1.5 resource adapters to access back-end systems
- Enhanced tool integration for JCA adapters with tool plug-in extensions (available from IBM and IBM Business Partners)

#### *J2EE application server*

WebSphere Process Server builds on WebSphere Application Server capabilities to provide a J2EE and Web services technology-based application platform for deploying enterprise Web services solutions for dynamic On Demand Business.

#### **Market-leading middleware designed to put you on the path to becoming an On Demand Business**

IBM WebSphere Process Server, Version 6.0 and IBM WebSphere Integration Developer, Version 6.0 enable you to take advantage of IBM's extensive experience and long history in providing solutions that resolve your business-integration challenges. By exploiting open standards, SOA and capabilities found in predecessor products, WebSphere Process Server and WebSphere Integration Developer enable you to build composite integration applications that allow you to reuse more of your existing IT assets.

#### **For more information**

To learn more about IBM WebSphere Process Server for Multiplatforms, Version 6.0, contact your IBM representative or IBM Business Partner, or visit:

[ibm.com/software/integration/wps](http://ibm.com/software/integration/wps)

To join the IBM WebSphere Global Community, visit:

[www.websphere.org](http://www.websphere.org)

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## IBM WebSphere Process Server for Multiplatforms, Version 6.0 at a glance

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### Hardware requirements

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#### *For IBM AIX®*

- IBM @server® pSeries® at 375MHz or faster
  - 2GB minimum available disk space for installation (600MB available disk space also required in the temporary directory during installation)
  - 512MB RAM minimum; 1GB recommended
  - CD-ROM drive
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#### *For Linux® on Intel® (x86)*

- Intel x86 (or equivalent) processor at 1GHz or faster (32-bit kernel support only)
  - 2GB minimum available disk space for installation (600MB available disk space also required in the temporary directory during installation)
  - 1GB RAM minimum
  - CD-ROM drive
- 

#### *For Microsoft® Windows® 2000 and 2003*

- Intel Pentium® (or equivalent) processor at 1GHz or faster
  - 2GB minimum available disk space for installation (600MB available disk space also required in the temporary directory during installation)
  - 1GB RAM minimum
  - CD-ROM drive
- 

#### *For HP-UX*

- PA-RISC processor at 440MHz or faster
  - 1100MB minimum available disk space for installation (includes Software Developer Kit [SDK])
  - 512MB RAM minimum; 1GB recommended
  - CD-ROM drive
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#### *For Linux on IBM @server iSeries™*

- iSeries models that support logical partitioning (LPAR) (64-bit kernel support only) with 450 commercial processing workload (CPW) minimum in the Linux partition
  - 16GB minimum available disk space for the IBM OS/400® partition; 2.5GB minimum available disk space for the Linux partition
  - 512MB RAM minimum; 1GB recommended for the OS/400 partition
  - CD-ROM drive
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#### *For Linux on pSeries*

- pSeries models that support Linux (64-bit kernel support only)
  - 995MB minimum available disk space for installation
  - 512MB RAM minimum; 1GB recommended
  - CD-ROM drive
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#### *For Sun Solaris operating environment*

- Sun Solaris SPARC workstation at 440MHz or faster
  - 1000MB minimum available disk space for installation (includes SDK)
  - 512MB RAM minimum; 1GB recommended
  - CD-ROM drive
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**Note:** For the latest hardware requirements for WebSphere Process Server, visit [ibm.com/support/docview.wss?rs=2307&context=SSQH9M&uid=swg27006205](http://ibm.com/support/docview.wss?rs=2307&context=SSQH9M&uid=swg27006205).

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## IBM WebSphere Process Server for Multiplatforms, Version 6.0 at a glance (continued)

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### Software requirements

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#### *Base application server*

- IBM WebSphere Application Server Network Deployment, Version 6.0.1 with Fix Pack (FP) 2 and the latest cumulative interim fix (included with WebSphere Process Server)
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#### *Operating environment (one of the following)*

- IBM AIX, Version 5.2 with Maintenance Level (ML) 5
  - IBM AIX, Version 5.3 with ML2
  - HP-UX 11i, Version 1 with December 2004 Quality Pack
  - Sun Solaris operating environment, Version 9 with April 2005 Patch Cluster
  - Sun Solaris operating environment, Version 10
  - Red Flag Advanced Server, Version 4.1 with FP1 (supported in China only)
  - Red Hat Enterprise Linux (RHEL) AS, Version 3.0 with Update 5
  - RHEL ES, Version 3.0 with Update 5
  - RHEL WS, Version 3.0 with Update 5
  - RHEL AS, Version 4.0
  - RHEL ES, Version 4.0
  - RHEL WS, Version 4.0
  - SUSE LINUX Enterprise Server (SLES), Version 9.0 with Service Pack (SP) 1
  - SLES, Version 8.0
  - Windows 2000 Advanced Server with SP4
  - Windows 2000 Professional with SP4
  - Windows 2003 Enterprise with SP1
  - Windows 2003 Standard with SP1
  - Windows XP Professional with SP2
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#### *Web server (one of the following)*

- Apache Server, Version 2.0.49
  - IBM HTTP Server, Version 2.0.47.1
  - IBM HTTP Server, Version 6.0
  - IBM HTTP Server, Version 6.0.1
  - Internet Information Services, Version 5.0
  - Internet Information Services, Version 6.0
  - IBM Lotus® Domino® Enterprise Server, Version 6.0.3
  - IBM Lotus Domino Enterprise Server, Version 6.5.1
  - Sun Java System Web Server, Version 6.0 with SP7
  - Sun Java System Web Server, Version 6.1 with SP1
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## IBM WebSphere Process Server for Multiplatforms, Version 6.0 at a glance (continued)

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### Software requirements (continued)

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#### *Database (one of the following)*

- IBM Cloudscape™, Version 5.1
- IBM DB2® Universal Database™ Enterprise Server Edition, Version 8.1 with FP8
- IBM DB2 Universal Database Enterprise Server Edition, Version 8.1 with FP1
- IBM DB2® Workgroup Server Edition, Version 8.1 with FP8
- IBM DB2 Workgroup Server Edition, Version 8.2 with FP1
- IBM DB2 Connect, Version 8.2 with FP1
- IBM WebSphere Information Integrator Advanced, Version 8.1 with FP8
- IBM WebSphere Information Integrator Advanced, Version 8.2 with FP1
- IBM Informix® Dynamic Server, Version 9.4
- Oracle 9i Enterprise Edition, Release 2
- Oracle 9i Standard Edition, Release 2
- Oracle 10g Enterprise Edition, Release 1
- Oracle 10g Standard Edition, Release 1
- Microsoft SQL Server Enterprise 2000 with SP3a
- Sybase Adaptive Server Enterprise, Version 12.5.x

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#### *Web browser (one of the following)*

- Microsoft Internet Explorer, Version 6.0
- Mozilla, Version 1.4
- Mozilla, Version 1.7

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#### *Java (one of the following)*

- IBM 32-bit SDK, Java 2 Technology Edition, Version 1.4 with Service Release (SR) 1a
- Hewlett-Packard (HP) SDK for Java 2 Standard Edition (J2SE) HP-UX 11i platform, adapted by IBM for IBM Software, Version 1.4.2 with SR1a
- IBM 32-bit SDK for Solaris, Java 2 Technology Edition, Version 1.4.2 with SR1a
- IBM SDK, Version 1.4.2

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#### *Lightweight Directory Access Protocol (LDAP) server (one of the following)*

- IBM Tivoli® Directory Server, Version 5.1
- IBM Tivoli Directory Server, Version 5.2
- Lotus Domino Enterprise Server, Version 6.0.3
- Lotus Domino Enterprise Server, Version 6.5.1
- Novell eDirectory, Version 8.7.3
- Sun ONE Directory Server, Version 5.1 with SP3
- Sun ONE Directory Server, Version 5.2
- Microsoft Windows Active Directory 2000
- Microsoft Windows Active Directory 2003

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#### *Resource adapter (one of the following)*

- IBM CICS Transaction Gateway, Version 6.0
- IBM IMS Connector for Java, Version 9.1.0.2

**Note:** For the latest software requirements for WebSphere Process Server, visit [ibm.com/support/docview.wss?rs=2307&context=SSQH9M&uid=swg27006205](http://ibm.com/support/docview.wss?rs=2307&context=SSQH9M&uid=swg27006205).

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