

Sun Java™ Composite Application Platform Suite

Flexible, modular, open source service-oriented architecture integration



Rapidly changing business conditions and objectives demand business flexibility. IT departments must respond to new business requirements by service-enabling existing applications and combining them with newly created services into a composite application. Unfortunately, IT departments are increasingly burdened with a growing portfolio of existing applications, leaving staff little time to respond to new requests.

The Sun Java™ Composite Application Platform Suite (Java CAPS) offers a modular and pluggable business integration platform with support for the complete spectrum of service integration requirements in your road map. With Java CAPS, you can service-enable a large portfolio of monolithic applications more efficiently as well as deliver immediate business value by combining existing application assets with newly created services. By leveraging business logic from these often inflexible packaged and legacy applications, IT can become more agile and better able to align with dynamically changing business objectives.

The Sun Java CAPS advantage

Modular architecture

In sharp contrast to proprietary business integration platforms with limited ability to incorporate third-party components (rules engines, process modelers, and so on), Java CAPS is based on a component architecture that allows rapid integration of standards-compliant components into the core Enterprise Service Bus.

One of the available options for utilizing external components within Java CAPS is Java Business Integration (JBI), one of the only open and pluggable standards for building an SOA available today. While many other vendors rely solely on traditional adapter technology to enable application integration, Java CAPS supports JBI and a wide variety of standards to offer more choice, flexibility, and eliminate vendor lock-in by allowing developers to more easily interact with standards- and non-standards-based applications and data stores.

Open source, community driven

More and more businesses are realizing the value of open source, community-driven innovation. Sun has taken a leading role in blending the benefits of open source innovation with the higher level of support associated with traditional enterprise software. Engineers from Sun work with the community to develop Java CAPS innovations in Open ESB, an open source community, and, as the functionality matures, incorporate the code and apply rigorous testing standards before including it in the final Java CAPS product. This gives Java CAPS customers transparency into the underlying source code as well as the ability to contribute innovation by joining the Open ESB community—along with the assurance of proven quality standards and world-class support from Sun.

Proven business integration expertise

In today's increasingly heterogeneous environments, businesses need secure, reliable cross-platform services that can easily be integrated with legacy and packaged applications. Built on more than 18 years of Sun expertise in SOA, Enterprise Service Bus, and integration platforms, Java CAPS provides new levels of flexibility for businesses with the most comprehensive composite application integration platform available. Through Sun's leadership in Web Services Interoperability Technologies (WSIT), part of the ongoing Web services interoperability efforts between Sun and Microsoft, Java CAPS offers the ability to orchestrate and interact with Web and non-Web services seamlessly across the enterprise by leveraging enhanced interoperability with Java and Microsoft .NET platforms.

Highlights

- Provides a lightweight business integration platform that offers a modular Enterprise Service Bus foundation
- Enables greater flexibility with standards-based pluggability
- Offers lower risk and greater innovation through open source with the backing of Sun Microsystems
- Delivers a unified approach to integrating the diverse components of business integration and data management including business process management, master data management, event processing, the Enterprise Service Bus, and legacy and packaged application adapters

“Mainstream Enterprise Application Suites (EASs) and Application Platform Suites (APSs) are shifting toward more modular, extensible architectures based on ‘SOA inside’ principles of modularity and isolation and enabled by emerging standards such as the OSGi Alliance and Java Business Integration (JBI).”

— “Key Issues for Platform Middleware,” Massimo Pezzini and Yefim V. Natis, Gartner, Inc., 3/4/2008

“Lock-in with any vendor is a top concern for us and Sun’s implementation of the pluggable Java Business Integration (JBI) standard combined with their open source strategy within Open ESB/Java CAPS has addressed this concern for us.”

Vince Blanchard

Director of Architecture &
New Technology, Medavie Blue Cross

Modular, open source Enterprise Service Bus integration

Typically, companies use an SOA-based business integration platform to implement a large number of projects, collectively requiring a range of components that includes adapters, process modelers, execution engines, data management, and more. However, most individual projects require only a small subset of SOA functionality. Java CAPS offers the full benefits of a unified platform suite, but introduces a new approach for lightweight, modular Enterprise Service Bus integration.

Because Java CAPS is based on a component architecture, you can lower your TCO by implementing only the necessary components to meet the specific needs of your project. You can also add additional standards-compliant components from Sun or other contributors and incorporate updates to specific modules of the core platform rather than having to swap out an entire business integration platform for a simple version upgrade. Additionally, the Java CAPS runtime experience is a lightweight deployment containing only the subset required, helping ensure a new level of rapid testing and deployment not available with traditional, monolithic suites.

Since Java CAPS implements the JBI standard, independent software vendors (ISVs) can develop pre-integrated modules designed for plug-and-play connectivity into a JBI-compliant Enterprise Service Bus. ISVs with expertise in a specialized, high-value niche of a specific industry can leverage the modular architecture of Java CAPS to provide their customers with a more comprehensive business integration solution.

Inside Java CAPS

Java CAPS consists of integration, infrastructure, security, and developer tools.

Integration products

- **Sun Enterprise Service Bus Software**

The Sun Enterprise Service Bus is a Java technology-compliant, Web services-based,

pluggable integration platform that incorporates the JBI standard to allow loosely coupled components to communicate with each other through standards-based messaging. It provides core integration, including comprehensive application connectivity, guaranteed messaging, and robust transformation capabilities, and a unified environment for integration development, deployment, monitoring, and management.

As with other components in the Sun-supported Java CAPS, developers have transparency into future versions of the Sun Enterprise Service Bus by downloading Open ESB for the Sun GlassFish Enterprise Server, known as GlassFish Enterprise Service Bus. This eliminates the risk associated with a closed, proprietary Enterprise Service Bus by allowing you to better understand the internal workings of upcoming enhancements to your infrastructure.

- **Sun Business Process Manager Software**
Layered above the Sun Enterprise Service Bus, Sun Business Process Manager enables long-lived, process-driven integration. It provides the ability to model, test, implement, monitor, manage, and optimize business processes that orchestrate the flow of activities across any number of Web services, systems, people, and partners. Sun Business Process Manager delivers an open, graphical modeling environment for the industry-standard business process execution language (BPEL).
- **Sun Intelligent Event Processor Software**
Event-driven architecture provides real-time trend detection based on a combination of business event filtering, aggregation, correlation, and analysis across multiple applications and information resources. Sun Intelligent Event Processor enables businesses to determine trends and proactively address critical business issues. For example, the software can define and recognize business events, such as a sudden increase in product refunds, and launch

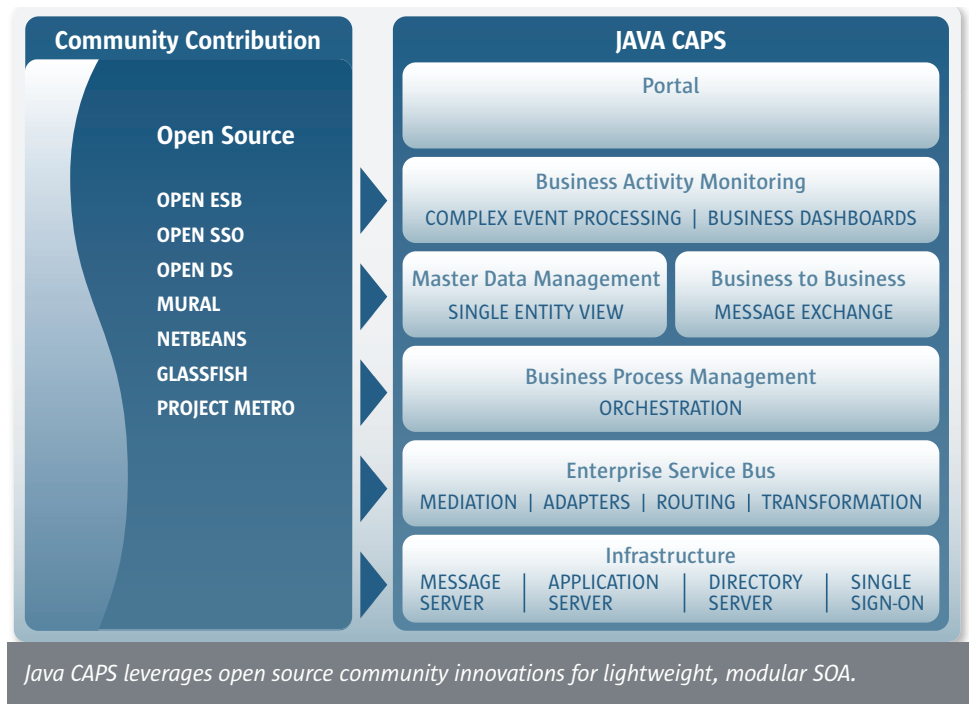
alerts so your business can proactively correct the problem before it escalates out of control. Event data can also be exposed within business dashboards to provide a deeper view into business performance than traditional business dashboards that lack the ability to incorporate trend analysis.

- **Sun Master Index Software**

In today's business world, vital information is distributed throughout the enterprise in disparate systems such as customer relationship management (CRM), enterprise resource planning (ERP), billing, e-commerce, and customer support systems. Typically, data stewards and data management experts manage MDM platforms, and the service-enabling of master data is often managed by a separate team with skills for the SOA platform. But as companies strive to migrate from an application-centric to a customer-centric model, MDM and SOA can no longer be seen as two separate functions within an organization.

Sun Master Index manages and leverages the overlapping and redundant data within disparate systems by uniquely identifying common records and using data cleansing and matching technology to automatically build a cross-index of the many different local identifiers that represent the same entity. Applications can then use this single master index to get a comprehensive view of a person or entity.

A key strength of Java CAPS is that it has a common development, deployment, and management approach spanning across MDM and SOA-based business integration. The resulting cross-index from the Sun Master Index enables Java CAPS to seamlessly share information and services between systems with a single view. Sun Master Index functionality is developed in the open source Mural community.



- **Sun Data Integrator Software**

Optimized for high-performance extraction, transformation, and loading (ETL) of bulk data between files and databases, Sun Data Integrator provides an ETL development and runtime environment that is fully integrated into the Java CAPS platform and specially optimized for processing very large record sets. Sun Data Integrator has been tightly integrated with Sun Master Index to dramatically shorten import time of large data sets for MDM.

- **Sun Adapters**

Integration with legacy applications, packaged applications, and data stores requires extreme flexibility, and Sun Adapters provide extensive support through a combination of traditional adapter technology and modern JBI and Java Connector Architecture (JCA) standards-based approaches.

Java CAPS utilizes these adapters to access disparate systems based on distributed architectures, protocols, and platforms such as the Java Platform, Enterprise Edition (Java EE platform) and Microsoft .NET; legacy technologies such as IBM's Customer Information Control System (CICS), Common Object Request Broker Architecture (CORBA), and Microsoft's Distributed Component Object Model (DCOM); as well as packaged applications from Oracle and SAP.

Infrastructure products

Java CAPS also includes core infrastructure components that provide a strong foundation of application server and identity support for the integration products as well as a portal interface to support user collaboration with composite applications.

- **Sun GlassFish Enterprise Server**

The application server for SOA-based business logic and data access, the open source Sun GlassFish Enterprise Server is easy to use, modular, comprehensive, and highly scalable.

“We needed a flexible and scalable solution. Java CAPS enables us to implement new requirements more efficiently and therefore shorten the time until product launch.”

Klaus Bruck

Head of Payment Services, easycash

Sun GlassFish Enterprise Server is the reference implementation for the Java EE 5 platform and is available under CDDL and GPL. Java EE 5 includes the latest versions of technologies such as JavaServer Pages™ (JSP) framework, JavaServer™ Faces (JSF) components, Java Servlet API, Enterprise JavaBeans™ architecture, Java API for Web Services (JAX-WS), Java Architecture for XML Binding (JAXB), Web services metadata for the Java platform, and many others.

• **Sun Java System Portal Server**

The Sun Java System Portal Server provides a user portal for collaboration with business processes and composite applications layered on top of legacy and packaged applications that are integrated using Java CAPS business integration components. Using market-leading access management technology, the Sun Java System Portal Server personalizes content for employees, partners, suppliers, and customers, increasing productivity by determining portal content depending on a user's identity-provisioned account.

• **Sun Directory Server Enterprise Edition (DSEE)**

Serving as a directory backbone for business integration behind the Sun Java System Portal Server, the Sun DSEE builds a solid foundation for identity management by providing a central repository for storing and managing identity profiles, access privileges, and application and network resource information. The Sun DSEE enables mission-critical enterprise applications and large-scale extranet applications to access consistent, accurate, and reliable identity data. It integrates smoothly into multiplatform environments and provides secure, on-demand password synchronization with Microsoft Windows Active Directory. (Limited license included with Java CAPS).

• **Sun Java System Access Manager**

The Sun Java System Access Manager delivers open, standards-based authentication and policy-based authorization within a single, unified framework for the support of composite application integration. It secures the delivery of essential identity and application information on top of the Sun DSEE and scales with growing business needs by offering single sign-on as well as enabling federation across trusted networks of partners, suppliers, and customers. (Limited license included with Java CAPS).

Developer tools

Included with Java CAPS are NetBeans tools that support business integration ranging from rapid service assembly and process mapping to in-depth Java development.

Subsets of Java CAPS available

If you're interested in a subset of the full Java CAPS integration and infrastructure functionality, the Sun Enterprise Service Bus Suite and Sun Master Data Management Suite (Sun MDM Suite) may be purchased separately.

Learn More

For more information about Java CAPS, visit sun.com/javacaps

For more information about SOA, visit sun.com/soa

For more information about the Sun Enterprise Service Bus Suite, visit sun.com/esb

For more information about the Sun MDM Suite, visit sun.com/mdm

About Sun

A singular vision, The Network is the Computer™, drives Sun in delivering industry-leading technologies that focus on the whole system — where computers, software, storage, and services combine. With a proven history of sharing, building communities, and innovation, Sun solutions create opportunities, both social and economic, around the world. You can learn more about Sun at sun.com.