

OSGi Technology in the Enterprise

2009-03-23

Agenda

- Introduction to the Alliance and its technology
- Benefits to using Enterprise offerings built with OSGi[™] technology
- Benefits to building your own OSGi applications
- What's coming to OSGi technology for the Enterprise in 2009
- Wrap-up

What's to love about OSGi in the Enterprise?...



... a lot!

What is OSGi?

- OSGi technology provides a proven service-oriented, dynamic, module system for Java[™]
 - robust, mature and consistent service programming model
 - modular execution environment for services and applications
- The OSGi Alliance is a worldwide consortium of technology innovators that advances a proven and mature process to assure interoperability of applications and services based on its component integration platform, and celebrates its 10th anniversary in 2009

Quick Introduction to OSGi Technology

- It's a module system for Java
 - Includes visibility rules, dependency management and versioning of OSGi “bundles” (modules)
- It's fully dynamic
 - Installing, starting, stopping, updating, uninstalling bundles all done dynamically at runtime
- It's service oriented (and always has been...)
 - All services are registered in a service registry, available in the well-understood publish, find and bind pattern, again all done dynamically at runtime

How can I benefit from OSGi technology?

- By acquiring and utilizing applications and infrastructure products incorporating OSGi technology
- By incorporating OSGi technology into your own applications

For I.T. Staff and Operations

What are the benefits from using OSGi based products?



**Sized
“Just Right”**



**Fully Dynamic /
Hot Pluggable**



Mature

Benefits from using OSGi based products – sized “Just Right”

- Reduced Footprint
 - Reduced footprint leads to improved IT efficiency
 - Reduce operating costs
 - Control product usage
 - Pre OSGi products
 - One-size-fits-all products
 - Add functionality to monolithic stack
 - OSGi based products
 - Tailored module sets to target problem at hand
 - Remove unused functionality
 - Package only needed functionality
 - Deploy only required services
 - Start/stop services on demand



Benefits from using OSGi based products – sized “Just Right”

- Improved Extensibility
 - Controlled environment for adding modules
 - Simplifies and standardizes third-party module integration



Benefits from using OSGi based products - Fully Dynamic / Hot Pluggable

- Improved Serviceability & Availability
 - Dynamic module management
 - Install, start, stop, update and uninstall bundles
 - Extensive dependency management
 - Fully integrated with security architecture
 - Enables zero downtime patch/upgrade
 - Add functionality on demand
 - Remove services that are no longer needed



Benefits from using OSGi based products - Mature

- The OSGi Alliance has issued 5 major releases of its set of Service Platform specifications in 10 years, and has become the de facto choice for building modular Java software
- OSGi based dynamic modularity is the basis of all Eclipse software components, and is incorporated in hundreds of enterprise software products shipping today



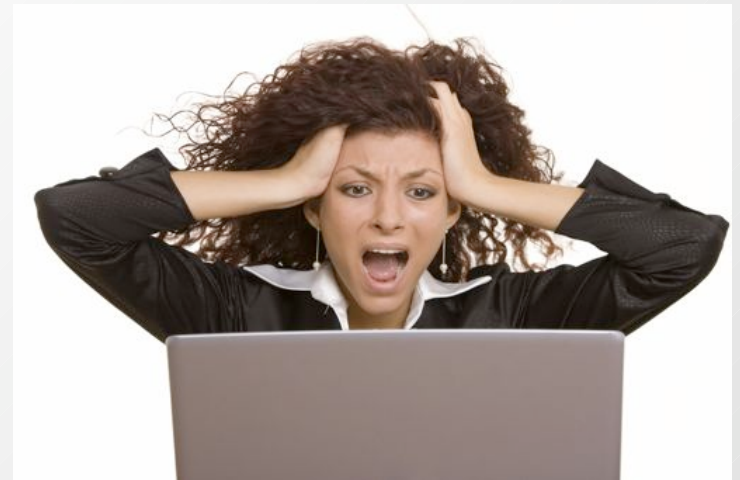


the dynamic module system for Java

For Developers

What Java Developers Tell Us

- “Java [*alone*] does not make it easy to do modular development, i.e., classpath JAR hell”
- “I need to offer new products and services while driving down my IT operating costs”
- “I want to make it easy for my developers to do what is right, and make it difficult for them to do what is wrong”



Why Use OSGi Technology to Build Enterprise Applications Today?



**Sized
“Just Right”**



**Fully Dynamic /
Hot Pluggable**



Mature

Benefits from building your own applications with OSGi technology – sized “Just Right”

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Benefits from building your own applications with OSGi technology – sized “Just Right”

- Improved Extensibility
 - Controlled environment for adding modules
 - Class-loading model protects private resources
 - Replaces single class-path model or proprietary solutions
 - Built-in versioning
 - Run multiple versions of module in same application
 - Service registry to control dynamic interactions among modules
 - Simplifies and standardizes third-party module integration
 - More predictable interactions between modules via service registry



Benefits from building your own applications with OSGi technology – Fully Dynamic / Hot Pluggable

- Improved Serviceability & Availability
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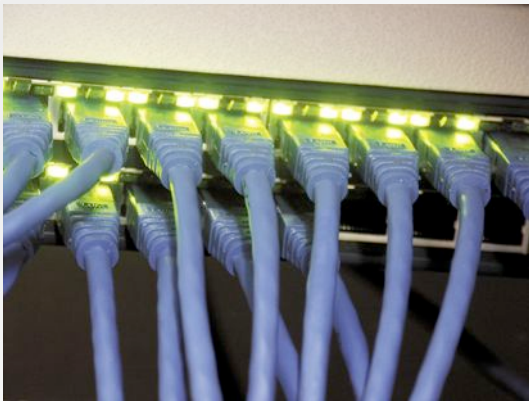


Benefits from building your own applications with OSGi technology – Mature

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What's Coming for Developers in the New Enterprise Releases of the OSGi Service Platform?



**Distributed
Connectivity**



**Increased
Productivity
With Blueprint
Component
Model**



**Java EE
Modularity**

Distributed Connectivity



- Enables an organization to deploy its OSGi application on multiple machines.
- Every part of the application can see and use other local and remote OSGi services in a standardized way. Additional metadata also allows integration.

Increased Developer Productivity with Blueprint Service & Component Model

- Boosts developer productivity
- Uses the Blueprint Service metadata model to make it much easier for developers to implement and consume OSGi services
- Developers now just have to understand the business logic of what they are trying to do, and the new Blueprint Component Model helps to abstract from the underlying OSGi core details
- Developers can now easily link from Blueprint Components to OSGi services and hook them together easily in many different ways



Modular Java EE Mapping



- Developers will have the option to deploy existing WARs as-is in an OSGi container
- The new Modular Java EE Mapping enables developers to use the OSGi programming model AND to pick and choose many QoS features from Java EE environments, including persistence, web apps, transaction manager, DB drivers and security, as OSGi bundles
- Estimated availability: Preview in summer, general availability in fall 2009

Conclusion

OSGi delivers:

- Enterprise applications and infrastructure that are always fit-for-purpose without excess
- 10 years of maturation of one of the first true SOA technologies in the market
- The 7/24 capabilities that can be provided by the industry's only standardized fully dynamic / hot-pluggable component system

Where can you learn more?

- Get started using OSGi technology today:
<http://www.osgi.org/About/HowOSGi>
- Join the Alliance and help create the future of Enterprise service and application technology:
<http://www.osgi.org/About/Join>



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