OSGi ALLIANCE RELEASES FOUR NEW OSGi SPECIFICATIONS

Core, Enterprise, Residential and Compendium specifications now available for download

SAN RAMON, Calif. – June 13, 2012 – The OSGi™ Alliance announced today the availability of four new OSGi specifications that make software development easier. The new specifications now available for download are OSGi Core Release 5, OSGi Enterprise Release 5, OSGi Service Platform Release 4 Residential Version 4.3, and OSGi Service Platform Release 4 Compendium Version 4.3.

OSGi technology provides a modular architecture for today’s large-scale distributed systems as well as small, embedded applications. Building systems from in-house and off-the-shelf modules significantly reduces complexity and thus development and maintenance expenses.

“OSGi technology is already shipping in millions of units worldwide, and is deployed by Fortune Global 500 companies in enterprise, desktop, embedded home and telematics markets. These new specifications continue OSGi technology’s market-driven, service-oriented commitment to software modularity,” said Richard Nicholson, president of the OSGi Alliance. “Each addition or update is intended to streamline and increase development and maintenance efficiencies and address challenges developers face daily in real-world scenarios.”

The new specifications and some of their notable features include:

**OSGi Core Release 5**
- New Resource API for modeling generic capabilities and requirements.
- New Version Range class.

**OSGi Enterprise Release 5**
- New Repository Service Specification provides declarative access to artifact repositories based on the generic capabilities and requirements model. Where traditional repositories have typically provided artifacts based on their name, version and group, the OSGi Repository can provide artifacts based on capabilities, such as packages exported, services provided, extender functionality provided or custom-defined capabilities.
- New Resolver Service Specification. Based on the generic capabilities and requirements model, a management agent can use the Resolver service to compute the set of necessary resources needed to satisfy the given set of requirements. The Resolver is designed to work with the Repository Service, if available.
- New Subsystems Service Specification provides the ability to group multiple bundles into a single manageable entity, allows for complete isolation as well as various sharing models of code, services, and resources through a management agent. The Subsystem Service Specification defines an archive format to package multiple bundles, the Enterprise Subsystem Archive (.esa).
- New Service Loader Mediator Specification addresses common problems of bundles that rely on the java.util.ServiceLoader API to load custom Service Provider Implementations. It describes
how to use the service registry for lookup of Service Providers as well as a solution for existing code to continue functioning using Service Loader API in an OSGi environment.

- New Common Namespaces Specification for use with the generic OSGi capabilities and requirements model.
  - The Extender Namespace allows a bundle that requires an extender, such as Declarative Services or Blueprint, to express this dependency.
  - The Contract Namespace provides a shorthand for many Import-Package statements for technologies which span multiple packages.
  - The Service Namespace allows a bundle to express that it provides or consumes a certain service.

- Updated JMX Management Model Specification.
  - Object names now contain framework name and UUID, which allow multiple frameworks to be represented side-by-side.
  - Updated the JMX API to reflect the latest Core API, specifically the bundle wiring API.
  - Many improvements as requested by users, often focused on limiting the amount of data communicated via JMX APIs.

- Updated Configuration Admin Specification.
  - Added targeted PIDs, which can be useful when configuring multiple versions of the same bundle through Configuration Admin.
  - Added persistent change count to make it easier to detect changes.
  - Added Synchronous Configuration Listener.

**OSGi Service Platform Release 4 Residential Version 4.3**

The services of the Residential specification were designed to support requirements for execution environments in consumer premises equipment (CPE) and other consumer devices, as well as protocols for the management of residential environments. The Residential specifications are aligned with HGI, the Broadband Forum (BBF) and the UPnP Forum, which define requirements, architecture and management protocols for the smart home environment. Here, the scope of management protocols spans the remote management of thousands and millions of CPE devices by a telecommunications provider as well as local management of single consumer devices in a home or residence building.

- The Dmt Admin Service Specification provides an API for a remote manager to manage the device and the diverse services running on it.
- The Residential Device Management specification defines a Residential Management Tree providing a general Dmt Admin object model that allows browsing and managing the OSGi environment remotely over different Protocol Adapters.
- The TR-157a3 Software Module Guidelines specification provides a recommended mapping for the generic concepts defined by the Broadband Forum in “TR-157/3 Component Objects for CWMP” to the OSGi Framework concepts.
- The TR-069 Connector Service Specification provides an API based on the TR-069 Remote Procedure Calls concept that is implemented on top of Dmt Admin. This connector supports data conversion and the object modeling constructs defined in the Dmt Admin service.
OSGi Service Platform Release 4 Compendium Version 4.3

- Includes specifications introduced by the Enterprise Release 4 Version 4.2.
  - Remote Services Admin, JTA, JDBC, JNDI, JPA, Web Applications, SCA Configuration Type.
- New Coordination Specification, which provides a mechanism for multiple parties to collaborate on a common task without a priori knowledge of who will collaborate in that task. A collaborator can participate by adding a Participant to the Coordination. The Coordination will notify the Participants when the coordination is ended or when it is failed.
- Updated Configuration Admin.
  - Allow multiple bundles to access the same configuration.
  - Updated security model to allow configuration "regions".
- Updated Declarative Services.
  - Allow service references to receive service updates.
  - Allow greedy service bindings.
  - Compile time annotations to simplify authoring components.
- Updated Event Admin.
  - Allow out of order asynchronous delivery of events.

Alliance members develop and facilitate the deployment of OSGi specifications, which serve as the platform for universal middleware in server and embedded environments. Deployment of these open OSGi standards greatly increases the value of a wide range of computers and devices that use Java technology.

About the OSGi Alliance
The OSGi Alliance is a worldwide consortium of technology innovators that advances a proven and mature process to enable the componentization of applications into well-defined software modules, and ensure interoperability of applications and services over a broad variety of devices. The Alliance provides specifications, reference implementations, test suites and certification to foster a valuable cross-industry ecosystem. OSGi technology is shipping in millions of units worldwide, and is deployed by Fortune Global 500 companies in enterprise, desktop, embedded home and telematics markets. Member companies collaborate within an egalitarian, equitable and transparent environment and promote adoption of OSGi technology through business benefits, user experiences and forums. For more information on the non-profit technology corporation, visit http://www.osgi.org.

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Media Contact:
Alisa Hicks
OSGi Alliance
+1.775.720.5071
ahicks@inventures.com
www.osgi.org