OSGi Technology for System and Network Architects

DECEMBER 2013
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 (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
OSGi for Simplicity

- Framework for modularity - avoids classpath JAR file hell
- Package/Use/Deploy/Stop just what you need
- Reduced footprint means reduced TCO
- Reuse modular code “out of the box”
- Simplifies third-party module integration
- Simplifies lifecycle and dependency management
- Manages deployments locally or remotely
- Enables smaller, distributed, and diverse teams
- Extensive tool support to hide complexity
OSGi for Flexibility

• No lock in, many providers of core technology including many open source
• Install, start, stop, update, uninstall bundles, all dynamically at runtime means new features can be added or stopped dynamically for rapid adaptability
• Users can run multiple versions of the same module in the same application
• Users can implement their own bundles to extend product capabilities without breaking existing functionality
**OSGi for Stability**

- Deploy only what you need, reducing complexity, and improving stability
- Set-up visibility rules, dependency management and versioning at the bundle level for ease of deployment, scalability and serviceability
- Ability to run multiple versions simultaneously to test effects and minimize risk of upgrades
- Enables zero-downtime patch/upgrades
- Service registry provides control and predictability of interactions across modules
- Fully integrated with security architecture
Conclusion
OSGi Delivers:

• Applications and infrastructure that are always fit-for-purpose without excess

• More than 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

• A growing ecosystem to extend service providers’ business
  • Potential partners and customers including white good and CE manufacturers, utility providers and app developers
  • New value-added services on existing infrastructure via OSGi chips, gateways, computers, routers, etc.
Getting Started with OSGi

• About OSGi Alliance and its technology
  http://www.osgi.org/Technology/WhyOSGi
• Learn more about OSGi technology now
  http://www.osgi.org/Technology/HowOSGi
• OSGi Application Framework
  http://www.slideshare.net/mfrancis/web-applications-made-simple-with-osgi-peter-kriens
• And the people driving the revolution
  http://www.osgi.org/WG/HomePage
• And join in
  http://www.osgi.org/Join/HomePage