



OSGi Alliance Community Event

OSGi 4.1 Overview Short Talk

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Version 4.1 - An incremental improvement

- A number of minor enhancements, clarifications and errata fixes.
- The 2 major changes in Version 4.1 occurred in the life cycle layer.
 - Adding a transient flag to the Bundle start and stop methods
 - Adding a lazy activation mode to Bundle start.



Persistent Start and Stop

- Normally when [Bundle.start\(\)](#) or [Bundle.stop\(\)](#) are called, the framework must persistently remember the autostart setting of the bundle
- That is, if a bundle is started with `Bundle.start()`, then, when the framework is next restarted, that bundle will automatically be restarted*

* Assuming the bundle's startlevel is met



Transient Start and Stop



New in 4.1

- The Bundle start and stop methods have now been overloaded with new variants that take option flags
 - See the new [Bundle.start\(int\)](#) and [Bundle.stop\(int\)](#) methods
- Two of these option flags control whether the start or stop action is transient
 - That is, whether the framework must alter the persistent autostart setting of the bundle
- If the transient option is specified, then the framework does not alter the persistent autostart setting when performing the start or stop operation



“Eager” Activation

- Normally, when Bundle.start is called, the bundle will be activated*
 - That is, the [BundleActivator](#) is called
- During framework launch starting many bundles can result in a lots of bundles being activated slowing down the launch process
- Many of these bundles don't actually need to be activated during launch
- They just need to be activated prior to being used

* Assuming the bundle's startlevel is met



Lazy Activation



New in 4.1

- Allows the activation of a bundle to be delayed until the first class load is made from the bundle
- The caller of `Bundle.start` can ignore the lazy activation policy declared in the bundle's manifest by using a [new start option](#)
 - This allows an admin agent to require "eager" activation even when the manifest says "lazy"
- Finally, there is a new [bundle event type](#) that can be received by [SynchronousBundleListeners](#) to advise them that a bundle has started and is lazily awaiting activation
 - This can be used by extender bundles like OSGi Declarative Services, [Spring OSGi](#) and [iPOJO](#) to receive notification that the bundle has been started and now has a valid [BundleContext](#)
 - The extender bundle can then act on behalf of the bundle and do things like register services for the bundle



Download Version 4.1 Now

- The spec is now final and published
- It can be downloaded from <http://www2.osgi.org/Download/Release4V41>