The Developer’s Dream

Maintainable and dynamic extensions in Liferay 7

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LIFERAY SYMPOSIUM

Full lifecycle! ♻

coding
compiling
assembling
testing
executing
debugging

Easy to Create! 👊

plain old Jars

Concise and easy to understand! 👌

less boilerplate code
fewer descriptors

Decoupled! 💑

contracts
contracts
contracts

Versioning! ≠

semantic versioning is critical

Services! 🚆

implied risk
cornerstone of reactive programing

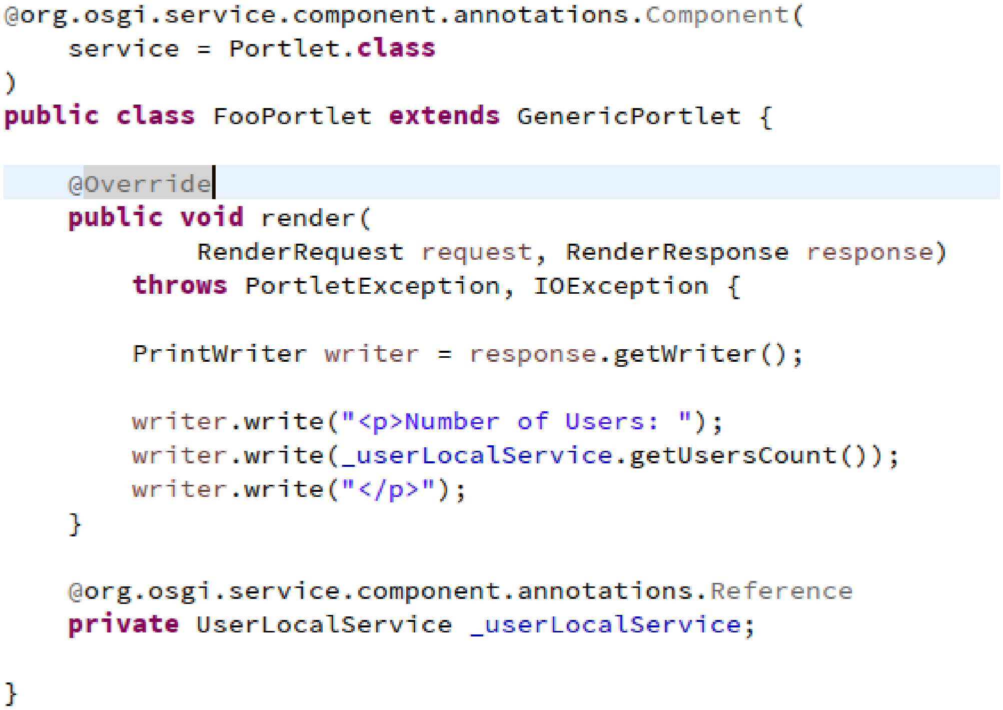
Elements of Liferay 7 extensions!

OSGi
core framework
cmpn/ee specifications
open source implementations

DS (Declarative Services)! 💪

OSGi Compendium
§ 112, Version 1.3

component
framework



```
@org.osgi.service.component.annotations.Component(
    service = Portlet.class
)
public class FooPortlet extends GenericPortlet {

    @Override
    public void render(
            RenderRequest request, RenderResponse response)
        throws PortletException, IOException {

        PrintWriter writer = response.getWriter();

        writer.write("<p>Number of Users: ");
        writer.write(_userLocalService.getUsersCount());
        writer.write("</p>");
    }

    @org.osgi.service.component.annotations.Reference
    private UserLocalService _userLocalService;

}
```

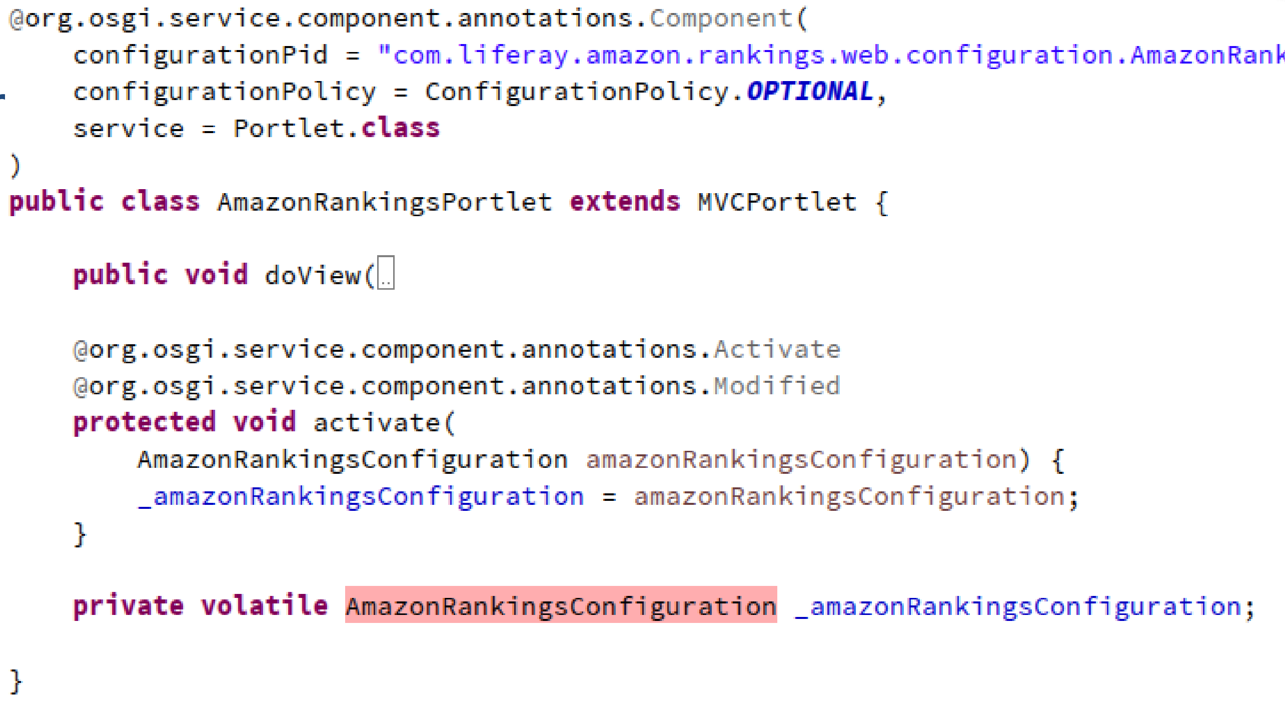
Configuration! 🔧

hard to get it right

CM (Configuration Admin)! 👍

OSGi Compendium
§ 104, Version 1.5

configuration
management



```
@org.osgi.service.component.annotations.Component(
    configurationPid = "com.liferay.amazon.rankings.web.configuration.AmazonRank
    configurationPolicy = ConfigurationPolicy.OPTIONAL,
    service = Portlet.class
)
public class AmazonRankingsPortlet extends MVCPortlet {

    public void doView(..

    @org.osgi.service.component.annotations.Activate
    @org.osgi.service.component.annotations.Modified
    protected void activate(
        AmazonRankingsConfiguration amazonRankingsConfiguration) {
        _amazonRankingsConfiguration = amazonRankingsConfiguration;
    }

    private volatile AmazonRankingsConfiguration _amazonRankingsConfiguration;

}
```

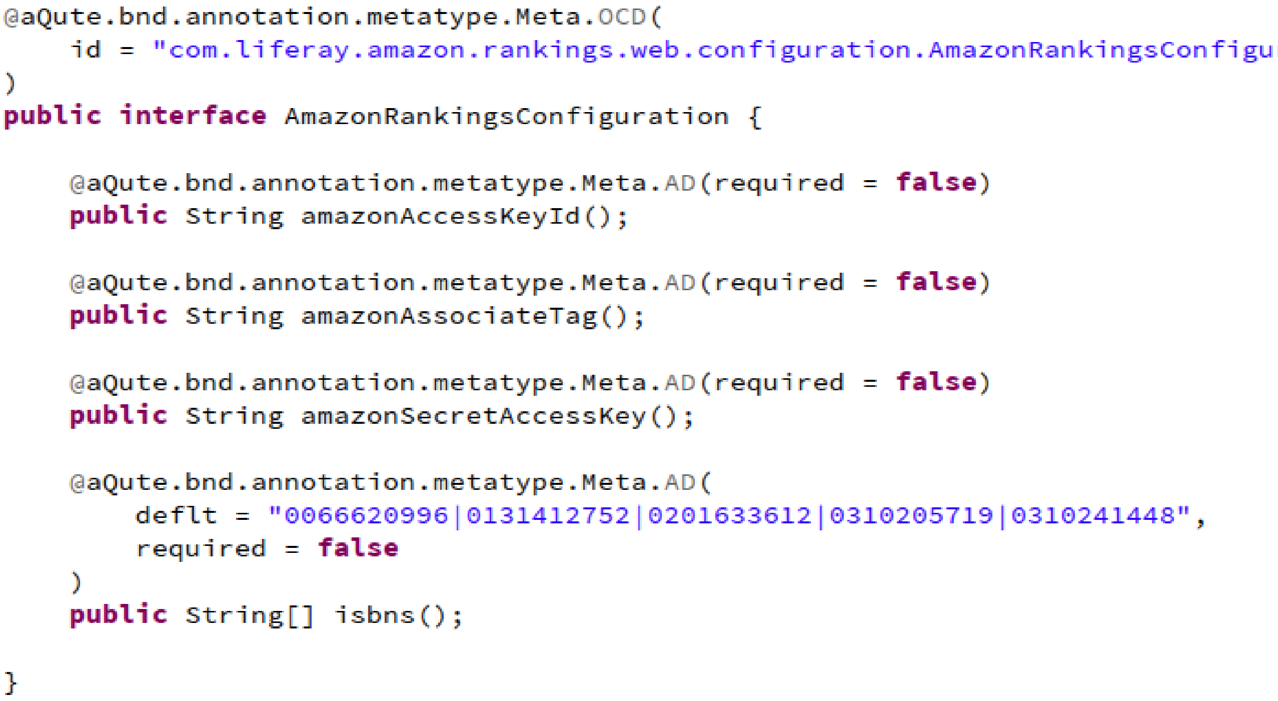
Configuration Schema! 📜

contracts
contracts
contracts

Metatype!

OSGi Compendium
§ 105, Version 1.3

schema for
configuration



```
@aQute.bnd.annotation.metatype.Meta.OCD(
    id = "com.liferay.amazon.rankings.web.configuration.AmazonRankingsConfigu
)
public interface AmazonRankingsConfiguration {

    @aQute.bnd.annotation.metatype.Meta.AD(required = false)
    public String amazonAccessKeyId();

    @aQute.bnd.annotation.metatype.Meta.AD(required = false)
    public String amazonAssociateTag();

    @aQute.bnd.annotation.metatype.Meta.AD(required = false)
    public String amazonSecretAccessKey();

    @aQute.bnd.annotation.metatype.Meta.AD(
        deflt = "0066620996|0131412752|0201633612|0310205719|0310241448",
        required = false
    )
    public String[] isbns();

}
```

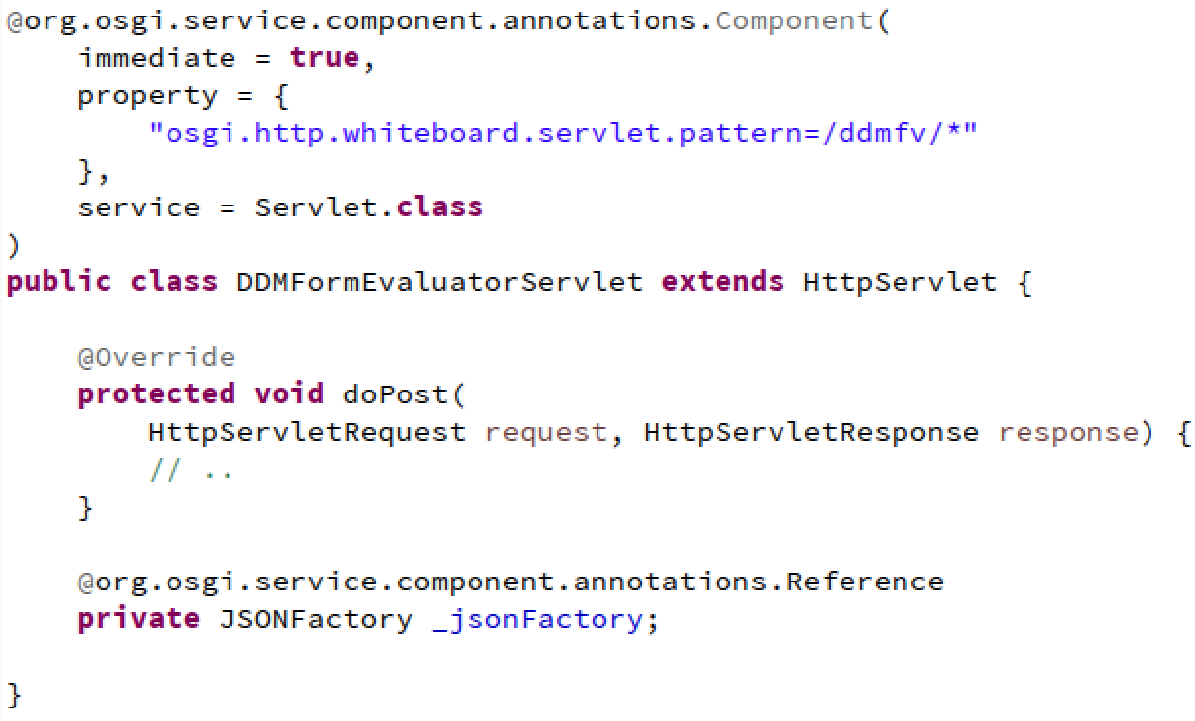
Web! 🌐

servlets
filters
listeners

Http Whiteboard!

OSGi Compendium
§ 140, Version 1.0

traditional web
programming
but with services



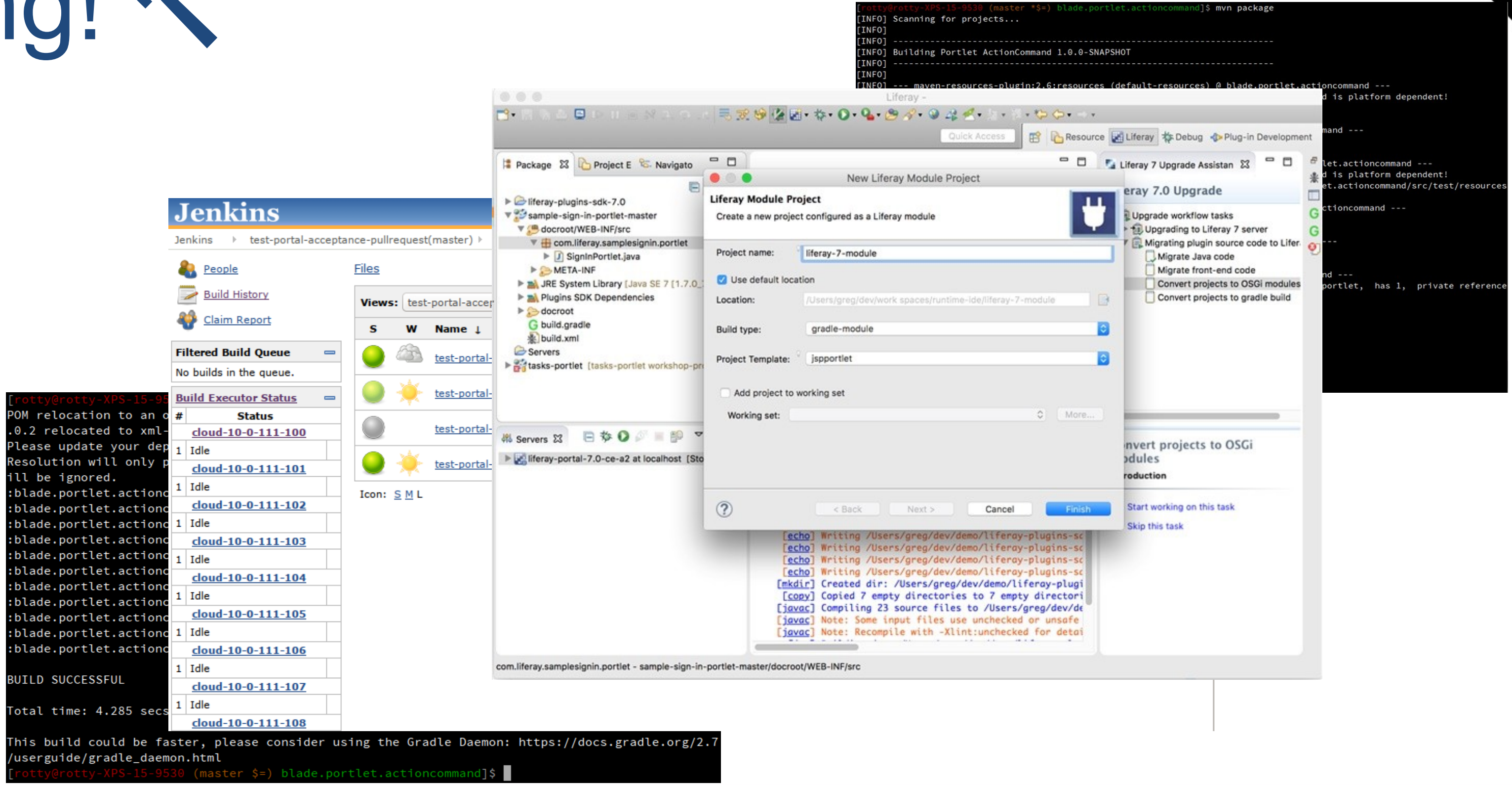
```
@org.osgi.service.component.annotations.Component(
    immediate = true,
    property = {
        "osgi.http.whiteboard.servlet.pattern=/ddmfv/*"
    },
    service = Servlet.class
)
public class DDMFormEvaluatorServlet extends HttpServlet {

    @Override
    protected void doPost(
        HttpServletRequest request, HttpServletResponse response) {
        // ..
    }

    @org.osgi.service.component.annotations.Reference
    private JSONFactory _jsonFactory;

}
```

Tooling! 🔨

IDEs

builds

CI



```
[rotty@rotty-XPS-15-9530 (master *$=) blade.portlet.actioncommand]$ mvn package
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building Portlet ActionCommand 1.0.0-SNAPSHOT
[INFO] ------------------------------------------------------------------------
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ blade.portlet.actioncommand ---
d is platform dependent!

mand ---

let.actioncommand ---
d is platform dependent!
et.actioncommand/src/test/resources

ctioncommand ---

---

nd ---
portlet,  has 1,  private reference
```

Jenkins

Jenkins ▸ test-portal-acceptance-pullrequest(master) ▸

People

Build History

Claim Report

Files

Views: test-portal-accep

S	W	Name ↓
●	☁	test-portal-
●	☀	test-portal-
●		test-portal-
●	☀	test-portal-

Icon: S M L

Filtered Build Queue

No builds in the queue.

Build Executor Status

#	Status
	cloud-10-0-111-100
1	Idle
	cloud-10-0-111-101
1	Idle
	cloud-10-0-111-102
1	Idle
	cloud-10-0-111-103
1	Idle
	cloud-10-0-111-104
1	Idle
	cloud-10-0-111-105
1	Idle
	cloud-10-0-111-106
1	Idle
	cloud-10-0-111-107
1	Idle
	cloud-10-0-111-108

```
[rotty@rotty-XPS-15-95
POM relocation to an o
.0.2 relocated to xml-
Please update your dep
Resolution will only p
ill be ignored.
:blade.portlet.actionc
:blade.portlet.actionc
:blade.portlet.actionc
:blade.portlet.actionc
:blade.portlet.actionc
:blade.portlet.actionc
:blade.portlet.actionc
:blade.portlet.actionc
:blade.portlet.actionc
:blade.portlet.actionc
:blade.portlet.actionc

BUILD SUCCESSFUL

Total time: 4.285 secs

This build could be faster, please consider using the Gradle Daemon: https://docs.gradle.org/2.7
/userguide/gradle_daemon.html
[rotty@rotty-XPS-15-9530 (master $=) blade.portlet.actioncommand]$ ▌
```

Liferay -

- liferay-plugins-sdk-7.0
- sample-sign-in-portlet-master
  - docroot/WEB-INF/src
    - com.liferay.samplesignin.portlet
      - SignInPortlet.java
    - META-INF
  - JRE System Library [Java SE 7 [1.7.0_
  - Plugins SDK Dependencies
  - docroot
  - build.gradle
  - build.xml
- Servers
- tasks-portlet [tasks-portlet workshop-pr

Servers

- liferay-portal-7.0-ce-a2 at localhost [Sto

New Liferay Module Project

Liferay Module Project

Create a new project configured as a Liferay module

Project name: liferay-7-module

☑ Use default location

Location: /Users/greg/dev/work spaces/runtime-ide/liferay-7-module

Build type: gradle-module

Project Template: jspportlet

□ Add project to working set

Working set:

```
[echo] Writing /Users/greg/dev/demo/liferay-plugins-sc
[echo] Writing /Users/greg/dev/demo/liferay-plugins-sc
[echo] Writing /Users/greg/dev/demo/liferay-plugins-sc
[echo] Writing /Users/greg/dev/demo/liferay-plugins-sc
[mkdir] Created dir: /Users/greg/dev/demo/liferay-plugi
[copy] Copied 7 empty directories to 7 empty directori
[javac] Compiling 23 source files to /Users/greg/dev/de
[javac] Note: Some input files use unchecked or unsafe
[javac] Note: Recompile with -Xlint:unchecked for detai
```

Liferay 7 Upgrade Assistan

eray 7.0 Upgrade

- Upgrade workflow tasks
  - Upgrading to Liferay 7 server
  - Migrating plugin source code to Lifer
    - Migrate Java code
    - Migrate front-end code
    - Convert projects to OSGi modules
    - Convert projects to gradle build

nvert projects to OSGi odules

roduction

Start working on this task

Skip this task

com.liferay.samplesignin.portlet - sample-sign-in-portlet-master/docroot/WEB-INF/src

Thank you!