

AEM OSGi Service Development

The purpose of this document is to define how to register an OSGi service and how to access the service from components and servlets.

OSGi Services

OSGi services are plain old java objects (POJOs) that are exposed as a service. These classes can contain business logic, provide an integration abstraction to AEM services or REST/SOAP web services. An OSGi service is defined by applying Apache Felix tags to a class and at build time the service is registered inside the OSGi jar file's metadata.

Service registration example:

```
@Service
@Component(metatype = true)
@Properties({
    @Property(
        name = "service.vendor",
        value = "Your Company Name")
})
public class CookbookServiceImpl implements CookbookService {
```

After the OSGi bundle has been installed inside AEM you can view the service definition inside the Felix Bundle Console. You can search for the bundle by name then view the services defined within the bundle.

Adobe CQ Web Console Bundles

Main > OSGi > Sling > Web Console >					
Bundle information: 307 bundles in total, 301 bundles active, 6 active fragments, 0 bundles resolved, 0 bundles installed.					
cook	<input type="checkbox"/> Apply Filter <input type="button" value="Filter All"/>	<input type="button" value="Reload"/>	<input type="button" value="Install/Update..."/>	<input type="button" value="Refresh Packages"/>	
Id	Name	Version	Category	Status	Actions
304	Cookbook Bundle (<i>cookbook.cookbook-bundle</i>)	1.0.0.SNAPSHOT		Active	
<input type="checkbox"/> Apply Filter <input type="button" value="Filter All"/> <input type="button" value="Reload"/> <input type="button" value="Install/Update..."/> <input type="button" value="Refresh Packages"/>					
Bundle information: 307 bundles in total, 301 bundles active, 6 active fragments, 0 bundles resolved, 0 bundles installed.					

Service definition:

Service ID 2031 Types: com.cookbook.cq.service.CookbookService
Service PID: com.cookbook.cq.service.impl.CookbookServiceImpl
Component Name: com.cookbook.cq.service.impl.CookbookServiceImpl
Component ID: 2599
Vendor: Digitaria

Accessing OSGi Services

A registered OSGi service can be accessed by a Servlet or Component within the AEM instance.

Component Access

To access an OSGi service from within a AEM component you need to write scriptlet code to lookup the service. From within a component that includes the `<cq:definedObjects/>` tag you

have access to a sling variable that has a getService() method for looking up services. If the service is undefined a build time exception will be thrown.

Scriptlet example:

```
<%  
CookbookService service = sling.getService(CookbookService.class);  
%>
```

Servlet Access

To access an OSGi service from a servlet inside the AEM instance you can easily inject the service using an Apache Felix @reference annotation. This requires that the servlet is configured to be an OSGi servlet. From within the servlet you can treat the service like any other Java class.

Servlet config annotations:

```
@SlingServlet(paths = {"/services/cookbook/books"})  
public class BookServlet extends SlingAllMethodsServlet {
```

Service reference annotation:

```
@Reference  
private CookbookService cookbookService;
```