



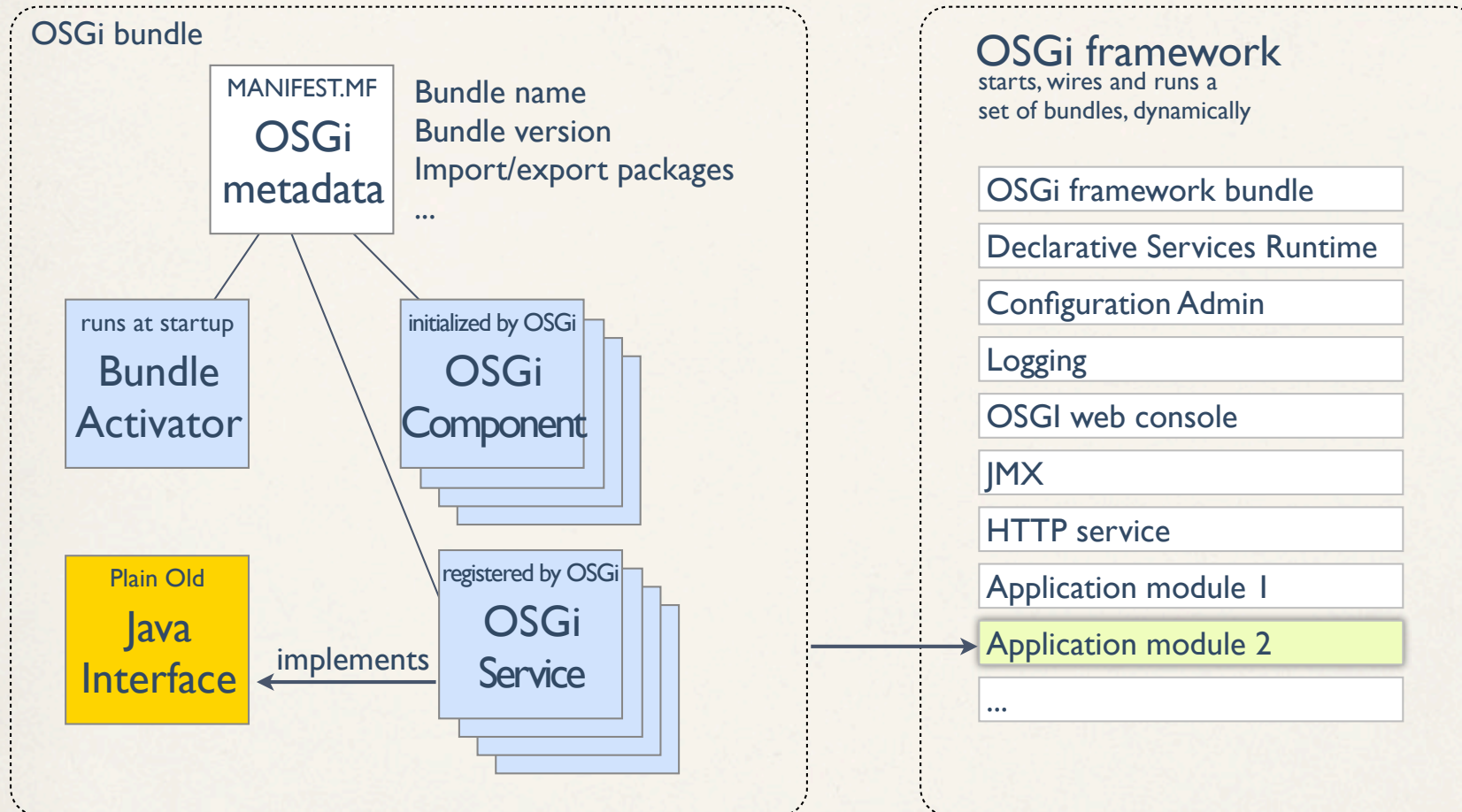
OSGi in Apache Stanbol

a modular software stack and reusable set of components for semantic content management

OSGi?

java modularization specs from the OSGi alliance, www.osgi.org

an OSGi bundle is a jar file with metadata, can provide an *Activator* and *Services*



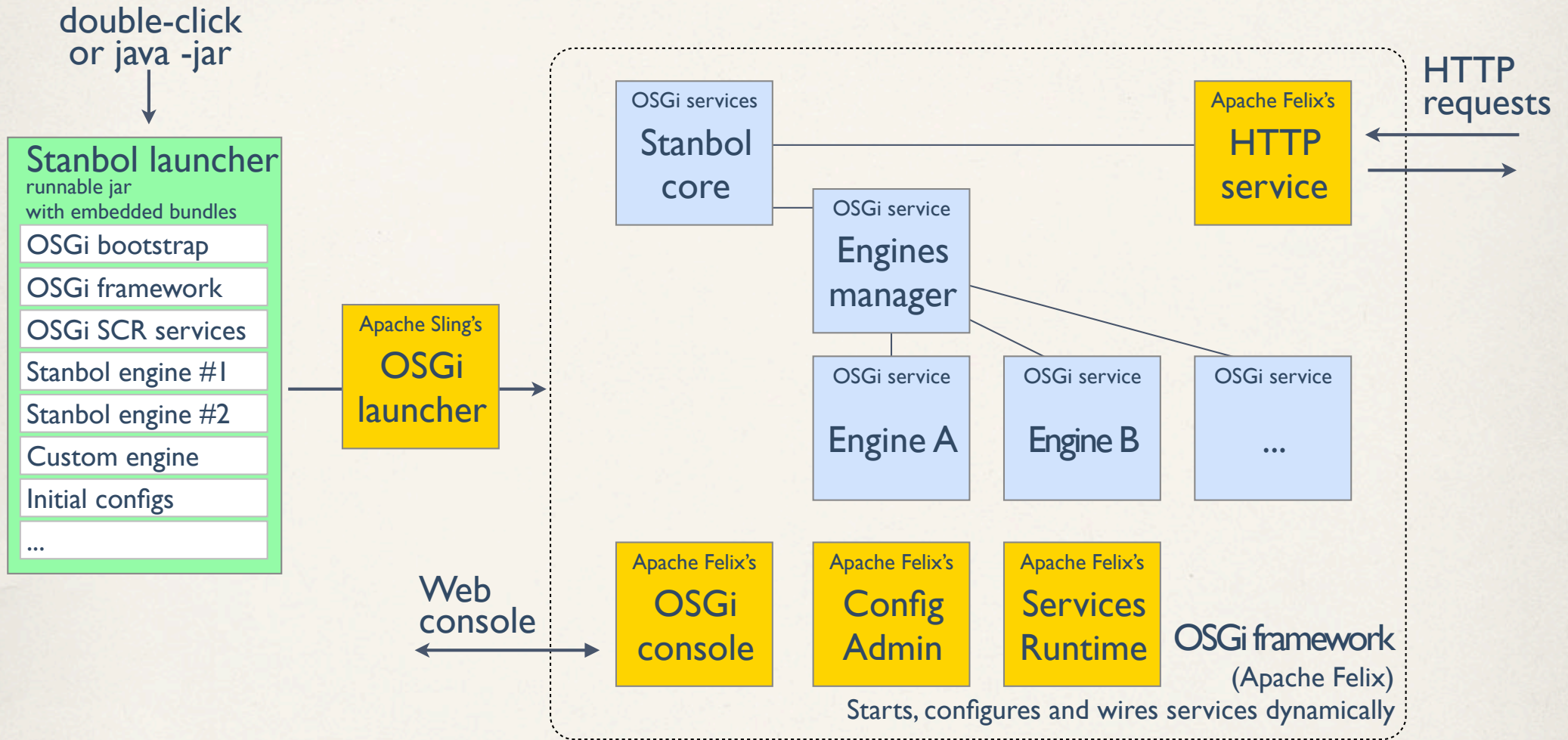
Building Stanbol

as a runnable jar file that embeds OSGi bundles to install at startup



Starting Stanbol

Start the OSGi framework, which starts all available bundles and services



Configuring Stanbol

Using the Apache Felix webconsole

← → ↻ localhost:8080/system/console/configMgr ☆

Apache Felix Web Console Configuration

APACHE felix

Bundles Components Configuration Configuration Status Deployment Packages Licenses Log Service

Apache Stanbol Enhancer Engine: Geonames.org

This Enhancement Engine uses the geonames.org webservice to look up locations. It only processes TextAnnotations of the dc:type dbpedia-ont:Place

Name	geonames	The name of the enhancement engine as used in the (stanbol.enhancer.engine.name)
Ranking	-100	If two enhancement engines with the same name are to process parsed content items. (service.ranking)
Minimum score	0.33	Only locations with an equals or higher score will be included. (org.apache.stanbol.enhancer.engines.geonames.locationEnhancementEngine.min-score)
Maximum Locations	3	The maximum number of recommended entities. (org.apache.stanbol.enhancer.engines.geonames.locationEnhancementEngine.max-locations)
Minimum hierarchy score	0.7	The minimum score of a location so that also the hierarchy is requested and - if found - added as Entity Enhancements. (org.apache.stanbol.enhancer.engines.geonames.locationEnhancementEngine.min-hierarchy-score)
geonames.org Server	<input type="text" value="http://api.geonames.org/"/>	The URL of the geonames.org server to use. Defaults to "http://ws.geonames.org". This server does not require user authentication. There is an other free server at "http://api.geonames.org" that requires to set up AND ACTIVATE a free user account. Users with a premium account may also need to change the value of this field. (org.apache.stanbol.enhancer.engines.geonames.locationEnhancementEngine.serverURL)

```
// corresponding code excerpts:  
private static final double DEFAULT_MIN_SCORE = 0.33;  
  
@Property(doubleValue = DEFAULT_MIN_SCORE)  
public static final String MIN_SCORE  
    = "locationEnhancementEngine.min-score";  
  
...  
  
@Activate // called when OSGi component is activated  
protected void activate(ComponentContext ce) {  
    Dictionary<String, Object> properties = ce.getProperties();  
    setMinScore((Double) properties.get(MIN_SCORE));  
  
    ...  
}
```

Extending Stanbol

Adding a custom EnhancementEngine

```
@Component
@Service
public class MyEngine implements EnhancementEngine {

    @Activate
    public void activate(ComponentContext c) {
        // initialize, configure, ...
    }

    public int canEnhance(ContentItem item) {
        if(...item matches our expectations...) {
            return ENHANCE_SYNCHRONOUS;
        } else {
            return CANNOT_ENHANCE;
        }
    }

    public void computeEnhancements(ContentItem item) {
        // run the engine and add results to item's
        // RDF graph based on the item's InputStream
    }
}
```

