

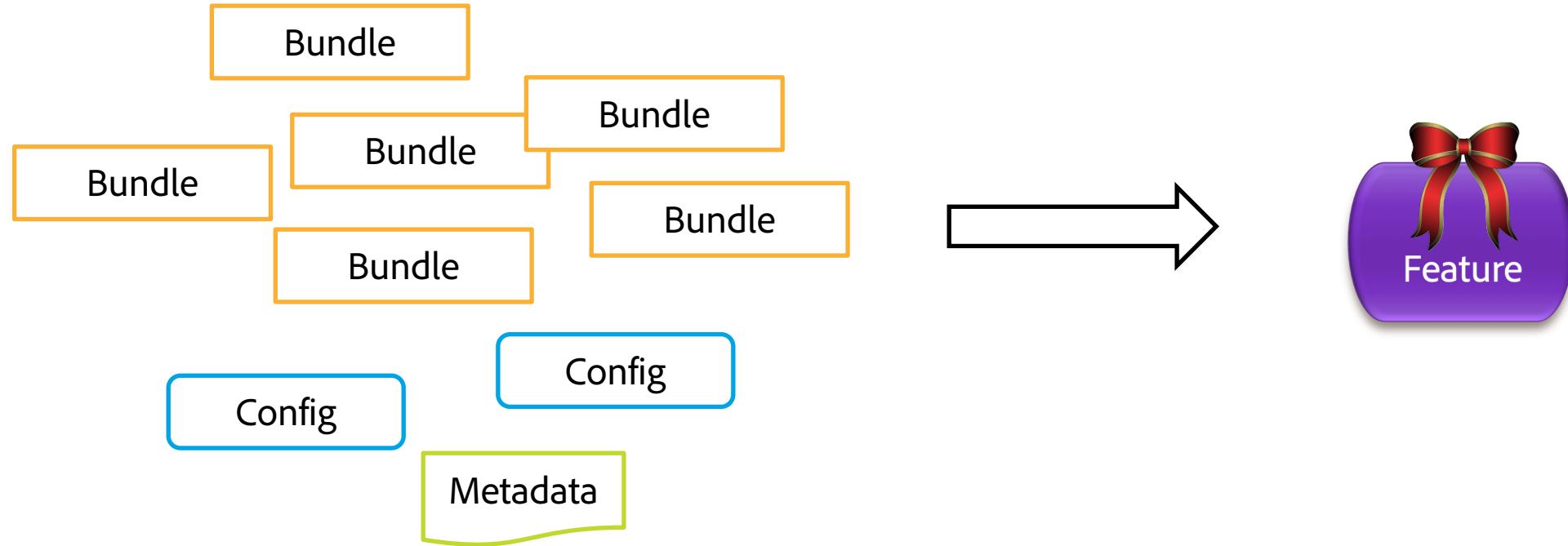
The Sling Feature Model - Revealed!

Karl Pauls and David Bosschaert

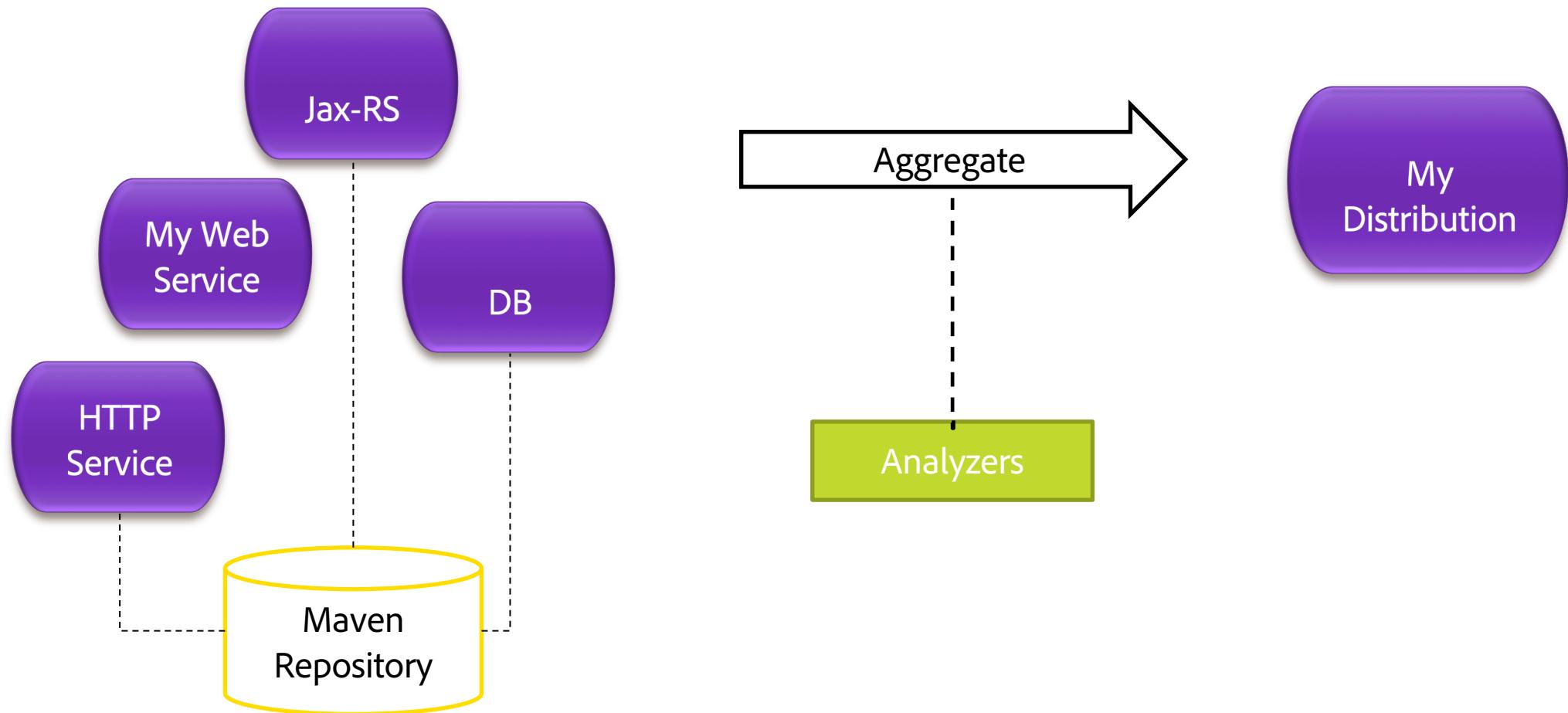
Agenda

- Feature Model 1.x
- Tools
- Practical Applications
- Demo
- @OSGi

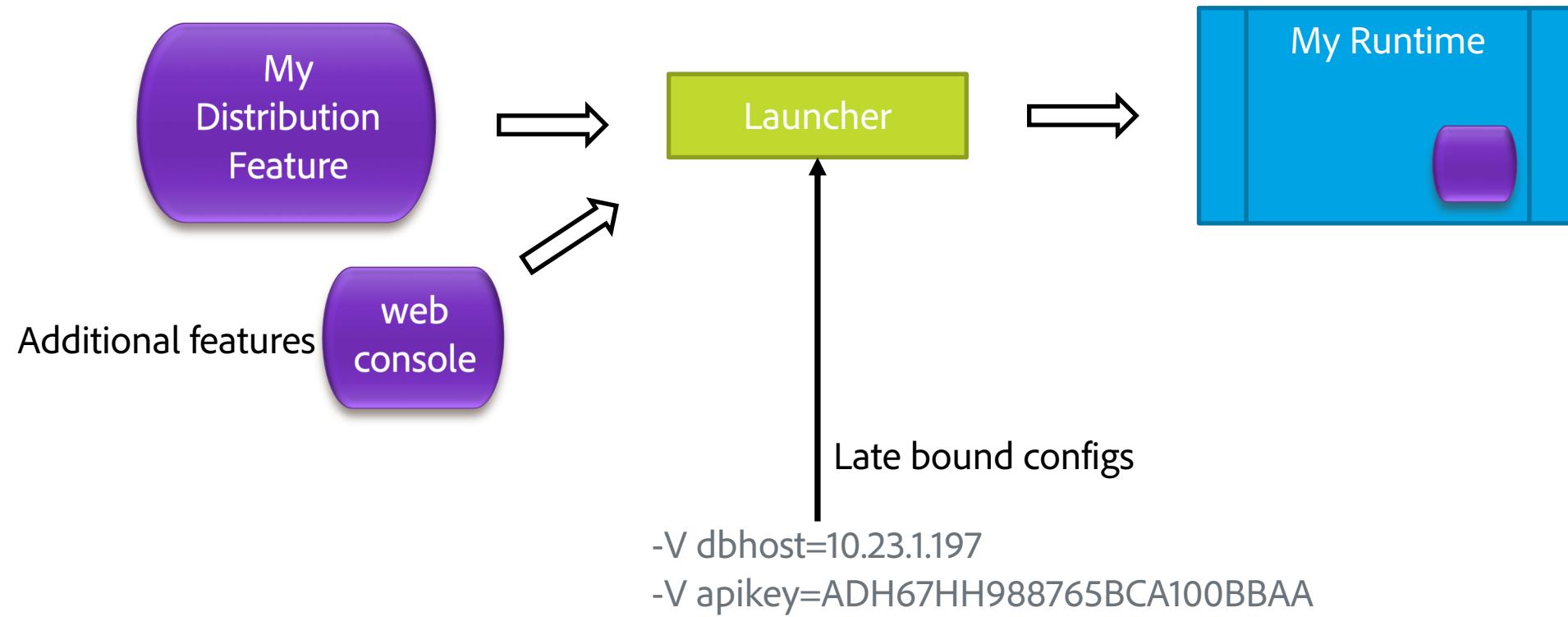
The Sling OSGi Feature Model



Reusing Features



Running Features

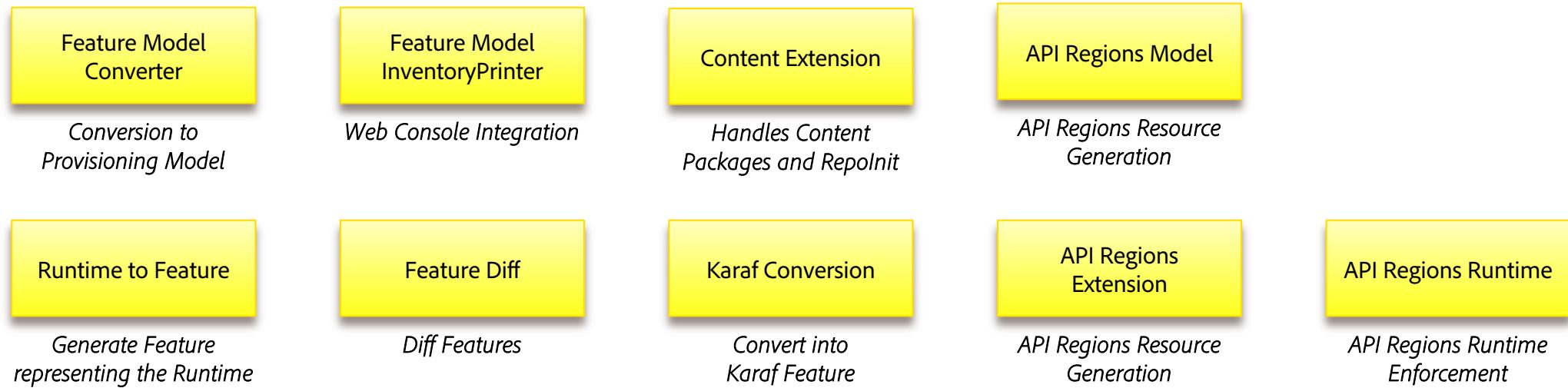


Feature Model 1.x world

Main Components



Additional Components



Example Model

```
{  
  "id": "org.foo.bar:osgi-http:1.0.2",  
  "variables": {  
    "http.port": "8080"  
  },  
  "bundles": [  
    "org.apache.felix:org.apache.felix.http.servlet-api:1.1.2",  
    "org.apache.felix:org.apache.felix.http.jetty:4.0.0"  
  ],  
  "configurations": {  
    "org.apache.felix.http": {  
      "org.osgi.service.http.port": "${http.port}",  
      "org.apache.felix.https.enable": true  
    }  
  }  
}
```

Maven Tooling: slingfeature-maven-plugin

- Aggregation
 - Assemble a larger feature from others
 - Create runnable, self-contained features
 - Merge custom extensions
- Analyzers
 - Bundle Imports and Exports
 - Requirements and Capabilities
 - Sling content package dependencies
 - OSGi Connect checker
 - API Region based
- Create a repo of all artifacts
 - Docker images without dependencies

Launcher

Simple Java CLI for

- Framework selection
- Variables and Framework properties
- Merging of features
- Artifact handling
- Extensions
 - **Launcher Extension**
 - **Extensions**
 - Merge Extensions
 - Launch Extensions

Use It! Practical Applications

In practice

- Use the maven plugin to create repository
 - Include framework, extensions
- Create docker image
 - Based on java11
 - Optional: based on alpine
 - Optional: jlink/jdeps base modules
- Use launcher
 - Optional:
 - Merging of scripts
 - Configadmin in memory
 - Extension
- Layering of images
 - add repositories,
 - add features

Demo

<https://github.com/apache/sling-whiteboard/tree/master/it-is-cloudy-here>

Feature Model @ OSGi

The Feature Model is proposed as OSGi specification

- Feature model RFP 188 accepted
- Going through the specification process
 - Currently under discussion
- Feature model RFC 241 is in github here:
<https://github.com/osgi/design/tree/master/rfcs/rfc0241>

Get Involved!

- Feature Model component in Sling
 - <https://github.com/apache/sling-org-apache-sling-feature>
- OSGi RFP in <https://github.com/osgi/design>
 - OSGi feedback channels
- Directly at OSGi

Q & A

Picture acknowledgements

- Holiday Bow: <https://www.maxpixel.net/Bow-Holiday-Bow-Seasonal-Gift-Red-Bow-Ribbon-665067> (CC0 Public Domain)





Adobe