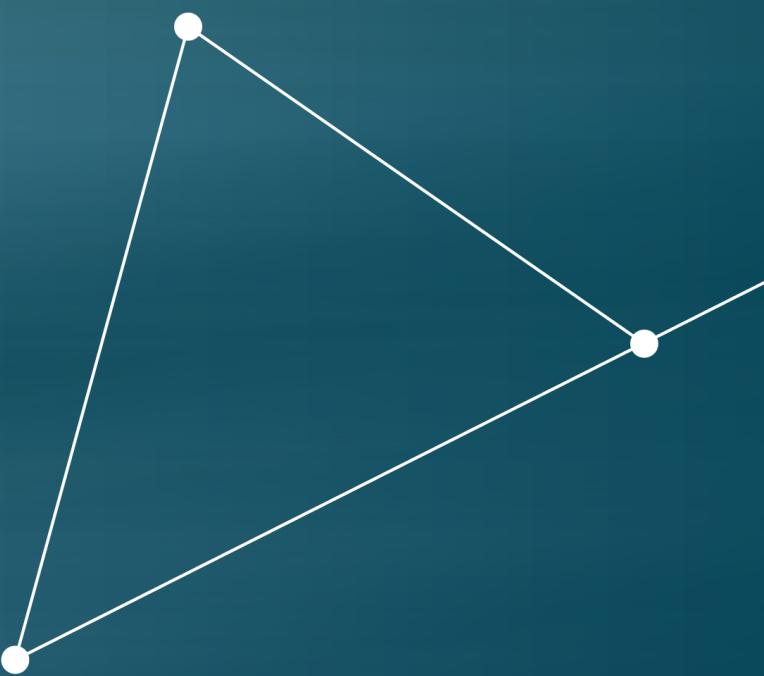


Camel on WildFly

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Agenda

- | Introduction
- | Deployment Options
- | Camel-WildFly Subsystem
- | Impact on Red Hat Products



Introduction

What is Camel

Open-Source Integration Framework based on known Enterprise Integration Patterns

Defines Routing and Mediation Rules

Similar to an ESB

Core Integration Component in JBoss Fuse and JBoss Fuse Service Works

What is WildFly

Open-Source Java Application Server from JBoss

Upstream project for JBoss Enterprise Application Platform

Similar to an ESB

Core Integration Component in JBoss Fuse and JBoss Fuse Service Works

The Middle Layer

RED HAT JBOSS FUSE

Development and tooling

Develop, test,
debug, refine,
deploy

JBoss Developer
Studio including
JBoss Fuse IDE

Web services framework

Web services standards,
SOAP, XML/HTTP, RESTful
HTTP

Apache CXF

Integration framework

Transformation, mediation,
enterprise integration patterns

Apache Camel

Reliable messaging

JMS/STOMP/NMS/MQTT, publishing-subscribe/point-to-point, store and forward

Apache ActiveMQ

Container

Life cycle management, resource management, dynamic deployment,
security, and provisioning

Apache Karaf + Fuse Fabric

Management and monitoring

System and web services
metrics, automated
discovery, container
status, automatic
updates

JBoss Operations
Network
+
JBoss Fabric
Management Console

RED HAT ENTERPRISE LINUX

Windows, UNIX, and other Linux

Deployment Options



Bundled with Application

Include Libraries like any other JAR

Manually Manage Camel Context

Manually Manage Routes

Works with JEE/CDI, Spring, or Servlets

Camel-Wildfly Subsystem

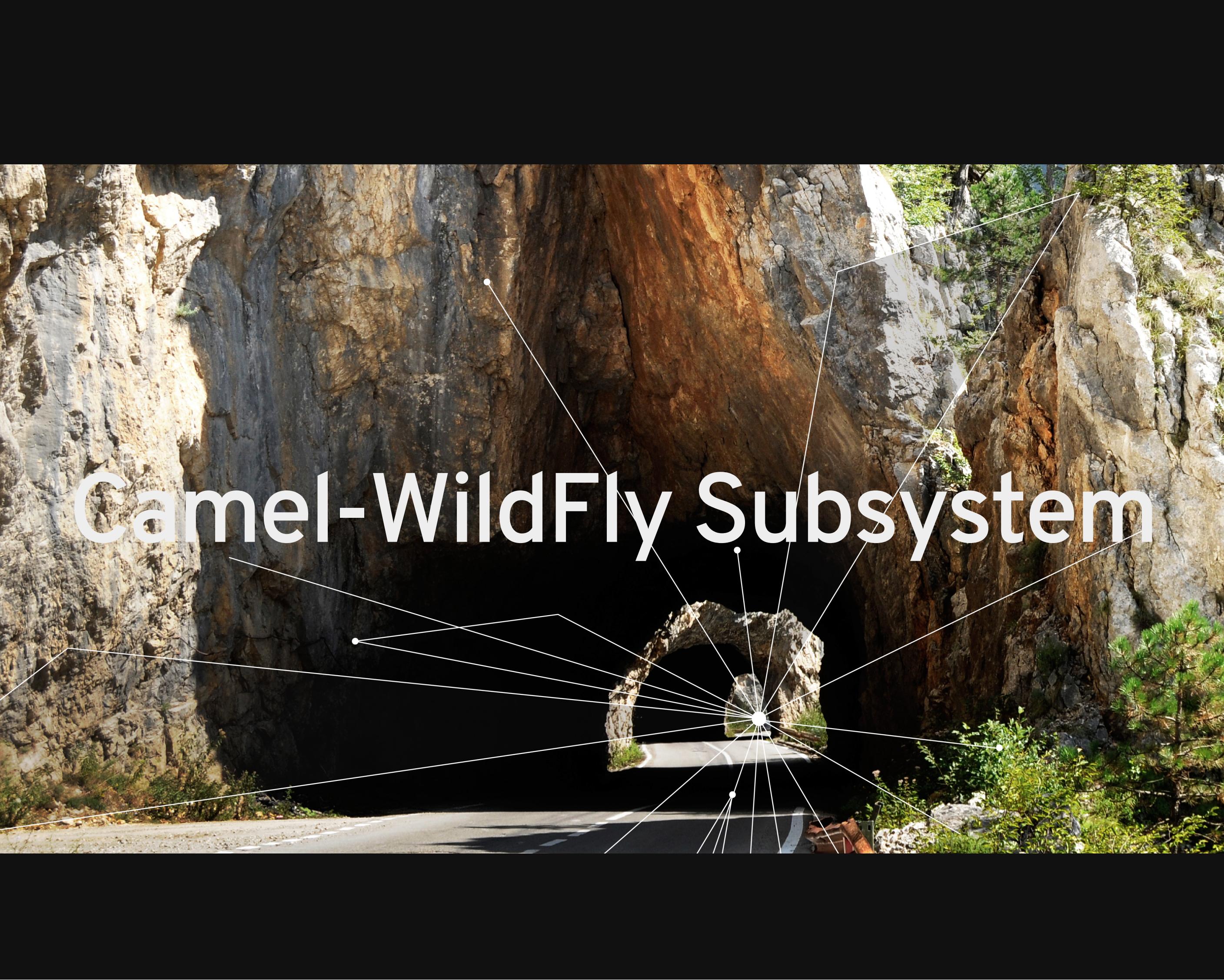
Available now in Wildfly 8.1+

Recommended Approach

Provides Best Integration with JEE

No Need to Manually Manage Context or Routes

Includes Management Console based on HawtIO

A photograph of a winding asphalt road through a rugged, rocky mountain pass. The mountains are dark grey and brown, with patches of green vegetation and trees on the right side. In the center, there's a large, dark opening of a tunnel. The sky is clear and blue. Overlaid on the image is a white network diagram. A central white circle is connected by lines to several small black dots scattered across the scene, representing nodes in a network.

Camel-WildFly Subsystem

Context Definitions & Deployments

Defined inside standalone XML file

Deployed with a **-camel-context.xml** suffix

Deployment can contain multiple contexts

Contexts are injectable via CDI

```
@Resource(name = "java:jboss/camel/context/mycontext")  
CamelContext camelContext;
```

Sample Context

```
<subsystem xmlns="urn:jboss:domain:camel:1.0">
  <camelContext id="system-context-1">
    <! [CDATA[
      <route>
        <from uri="direct:start"/>
        <transform>
          <simple>Hello #{{body}}</simple>
        </transform>
      </route>
    ] ]>
  </camelContext>
</subsystem>
```

Management Console

Based on HawtIO

Full Management of Camel

- | Start/Stop Routes
- | Manage Contexts
- | Debug and Monitor Message Flows
- | Etc...

The screenshot shows the HawtIO management interface for Camel. The browser address bar indicates the URL is `localhost:8080/hawtio/jmx/attributes?tab=camel&nid=camelContexts`. The HawtIO header includes links for ActiveMQ, Camel, Connect, Dashboard, Health, JBoss, JMX, Logs, Threads, and Wiki. The Camel tab is selected. On the left, a sidebar shows a tree view with a collapsed 'Camel Contexts' node expanded to show 'system-context-1' and 'webapp-cdi-context'. The main content area displays a table of Camel Contexts with the following data:

State	Context	Uptime	Version	Completed #	Failed #	Failed Handled #	Total #	Inflight #
●	system-context-1	4 minutes	2.14.0	0	0	0	0	0
●	webapp-cdi-context	4 minutes	2.14.0	0	0	0	0	0

Arquillian Support

Uses WildFly Arquillian Managed Container

Uses Custom Test Enrichers

Allows Injection of WildFly Camel Specific Types

```
@ArquillianResource  
CamelContextFactory contextFactory;  
  
@ArquillianResource  
CamelContextRegistry contextRegistry;
```

JEE Integration

Supports all Major JEE Standards

- | CDI
- | JAX-RS
- | JAX-WS
- | JMS
- | JMX
- | JNDI
- | JPA

Relies on Existing Camel JEE Related Components

Building a Route

Routes Automatically Started at Runtime

No Need to Manually Manage Routes or Add to Context

```
@Startup  
@ApplicationScoped  
@ContextName("cdi-context")  
public class MyRouteBuilder extends RouteBuilder {  
  
    @Override  
    public void configure() throws Exception {  
        from("direct:start").transform(body().prepend("Hi"));  
    }  
}
```

A high-speed train with green and yellow stripes is traveling along a curved track through a rugged, mountainous landscape. The foreground shows rocky ground and sparse vegetation. In the background, there are large, rugged mountains under a clear sky.

Impact on Red Hat Products



Camel on EAP Subsystem

Full EAP Subsystem

Full Integration with JEE Standards

Updated JEE Related Camel Components

Full Arquillian Support

Official Support in future Fuse Release

| Targeted for Fuse 6.2

Questions?

Presentation is Available At

https://github.com/bsaunder/camel_on_wildfly