



# JBossESB In Practice – The Lab

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# Agenda

- What is JBossESB?
- How does it work?
- Exercise

# JBossESB

- Enterprise Service Bus
  - Message-based communication
  - Integration layer
  - Key SOA component
- JBoss.org community project
- Part of *JBoss Enterprise SOA Platform* commercial offering

# How does it work?

- Service
  - Queues
  - Listeners
  - Actions
- Once service is deployed:
  - Messages -> Queues.
  - Listeners -> Services.
  - Service -> Actions.

# Action pipeline

- Action – custom class.
  - Extends `org.jboss.soa.esb.actions.AbstractActionLifecycle`
- Actions form a pipeline.
- Message passes through the whole pipeline.
- Action returns the message.
  - Null – processing over, message delivered.
  - Exception – processing failed, possible redelivery.

# Service Configuration

- *jboss-esb.xml*
- Providers:
  - *<ftp-provider />*
  - *<jms-provider />*
  - ...
- Services:
  - *<services />* contains various...
  - *<service />*(s) with some...
  - *<listener />*(s) and some...
  - *<action />*(s).

# Excercise

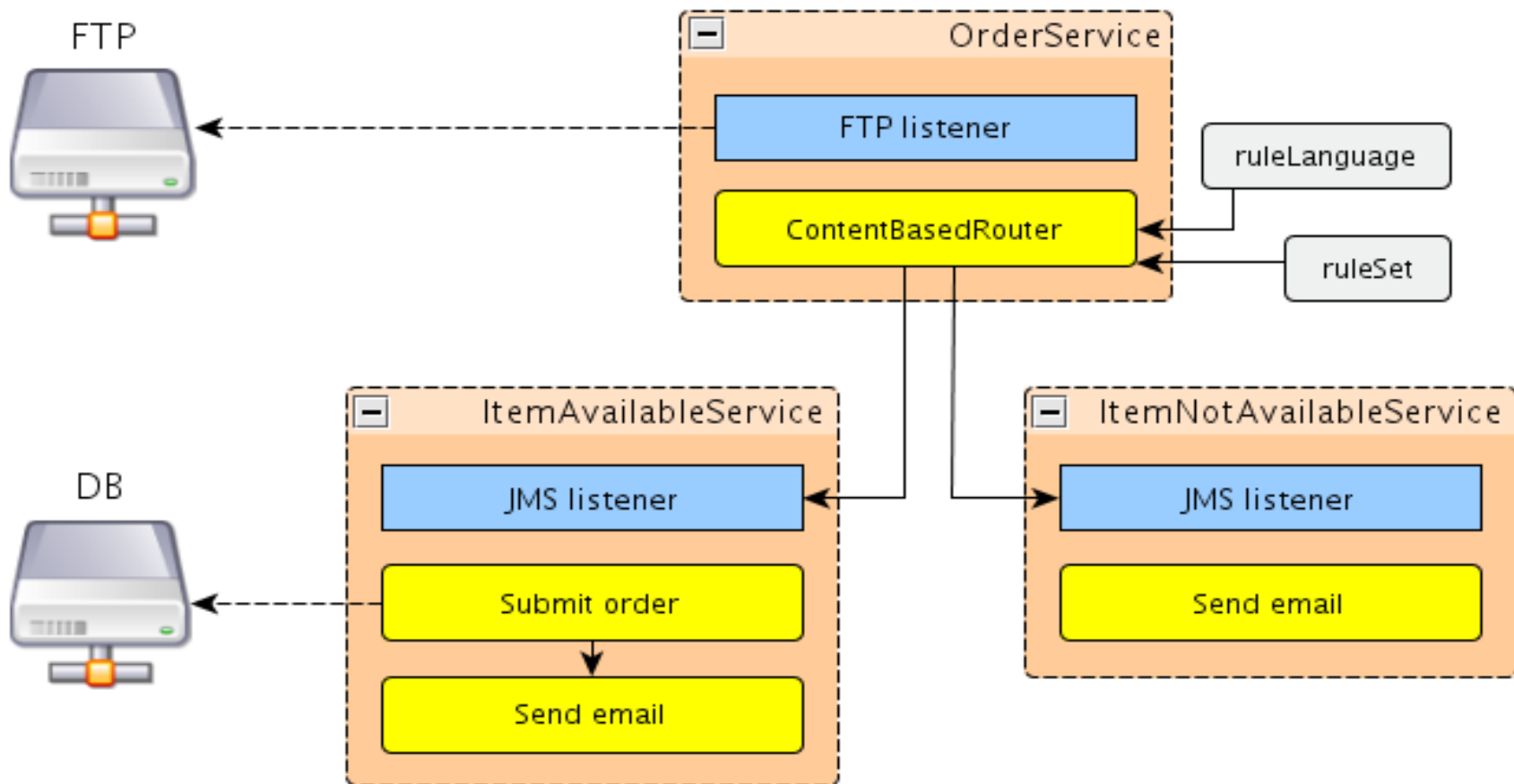
- Scenario
- First steps
- Tasks
  - FTP provider
  - Service action - Email
  - Bug hunting

# The scenario

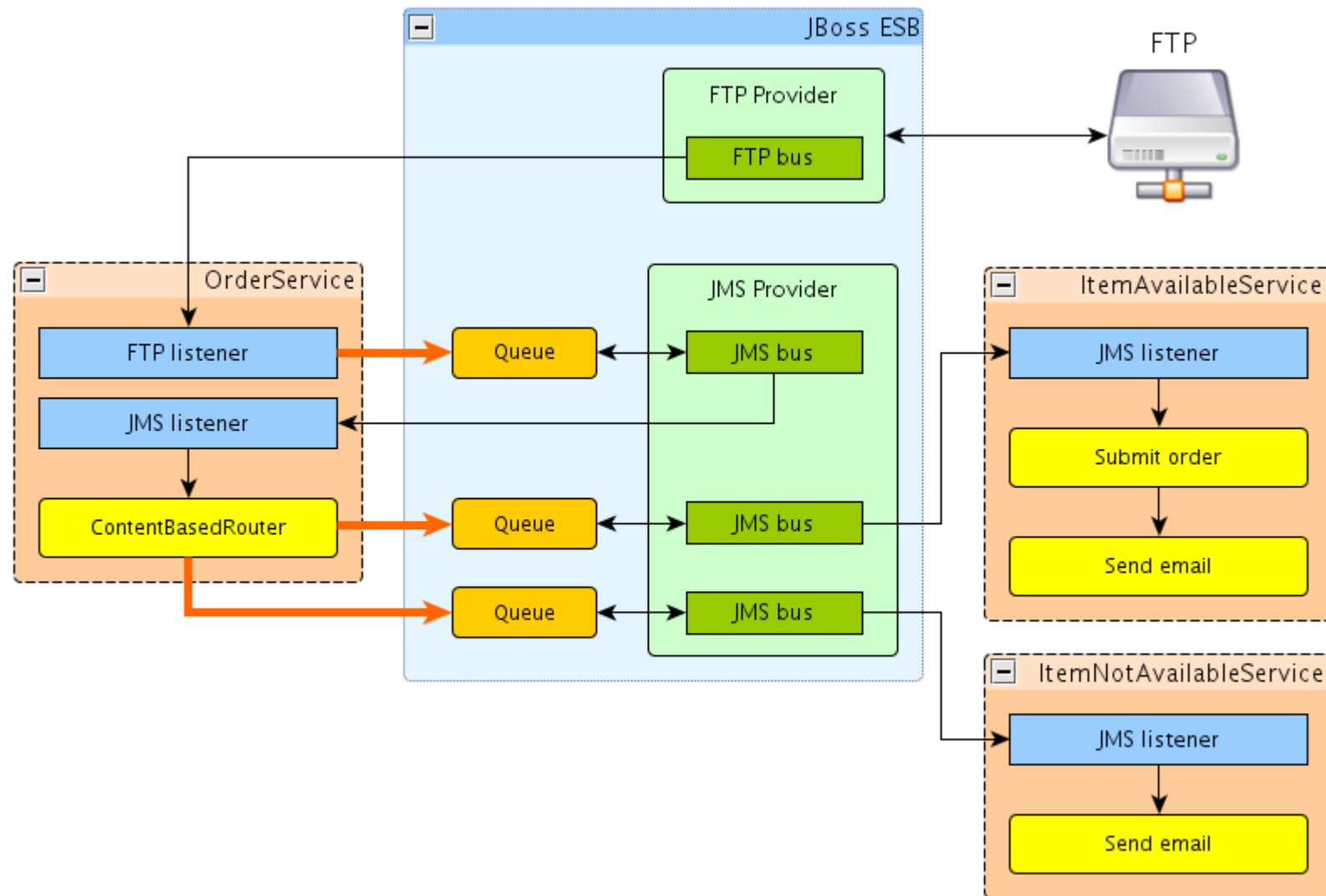
- Simple ordering application
- XML Orders placed on the FTP
  - When on stock, insert in DB and send e-mail.
  - When not on stock, send e-mail.



# The scenario – use case



# The scenario – underlying ESB



# First moves - quickstart

- Locate *[PROD-FOLDER]/samples/quickstarts/conf*
- Copy/move *quickstarts.properties.example* to *quickstarts.properties*
- Uncomment and configure lines beginning with “#org.”
  - *org.jboss.esb.server.home=[PROD-FOLDER]*
  - *org.jboss.esb.server.config=all*
- Download [FILE]
  - Unzip to *[PROD-FOLDER]/samples/quickstarts*
  - Switch to newly created directory

# First moves - SMTP

- Open

*[PROD-FOLDER]/server/all/deploy/jbossesb.sar/jbossesb-properties.xml*

- Find and configure

- `<property name="org.jboss.soa.esb.mail.smtp.host" value="[SMTP_HOST]"/>`
- `<property name="org.jboss.soa.esb.mail.smtp.user" value="[SMTP_USER]"/>`
- `<property name="org.jboss.soa.esb.mail.smtp.password" value="[SMTP_PASSWORD]"/>`
- `<property name="org.jboss.soa.esb.mail.smtp.port" value="[SMTP_PORT]"/>`
- `<property name="org.jboss.soa.esb.mail.smtp.auth" value="[true/false]"/>`

# Task #1 – Configure FTP

- TODO: configure FTP provider to following FTP server
  - Host: lajka
  - User: jbesb
  - Password: jbesbpass
  - Directory: pub/devcon2009/[machine]

# Task #1 – Configure FTP

```
<jbossesb ... >
  <services>
    <service category="DevCon2009" description="..." name="OrderService">
      <listeners>
        <ftp-listener
          name="ftp-listener" busidref="ftp-bus"
          is-gateway="true" maxThreads="2" schedule-frequency="5"
        />
        <jms-listener busidref="jms-bus-ftp" maxThreads="2" name="jms-listener" />
      </listeners>
      <actions mep="OneWay">...</actions>
    </service>
    ...
  </services>
</jbossesb>
```

# Task #1 – Configure FTP

```
<jbossesb ... >
  <providers>
    ...
    <ftp-provider hostname="lajka" name="ftp-provider">
      <ftp-bus busid="ftp-bus">
        <ftp-message-filter ... />
      </ftp-bus>
    </ftp-provider>
    ...
  </providers>
  <services>
    ...
  </services>
</jbossesb>
```

# Task #1 – Configure FTP

...

```
<ftp-message-filter
  protocol="ftp"
  passive="true"
  username="jbesb"
  password="jbesbpass"
  directory="pub/devcon2009/[machine]"
  input-suffix=".xml"
  work-suffix=".ESBWORKING"
  post-delete="true"
  post-suffix=".COMPLETE"
  error-delete="false"
  error-suffix=".ERROR"
/>
```

...



## Task #2 – Insert notifying action

- TODO: insert notifying action into ItemAvailableService after order submit
- Action class  
`org.jboss.soa.esb.devcon2009.SendEmailAction`
- Method  
`send`
- Properties  
see the action class code :)

## Task #3 – Bug hunting

- TODO: find and fix the bug
- Bug description:

While request an order with item count set to 5 following error occure:

```
13:34:07,575 ERROR [ContentBasedWiretap] No rule  
destination(s) [item-not-available, item-available]  
were matched, . Please fix your configuration and/or  
routing rules.
```

# Where do we go from here?

- It's up to you!
  - *Learn*: <http://www.jboss.org/jbossesb/docs/index.html>
  - *Play*: <http://jboss.org/jbossesb/downloads/>
  - *Contribute!*
- Questions?
  - ...
- Further questions?
  - [lpetrovi@redhat.com](mailto:lpetrovi@redhat.com)
  - [pmacik@redhat.com](mailto:pmacik@redhat.com)

# Thank you for your attention!

- Coming up next:
  - *JBoss Portal* by *Marek Posolda* and *Viliam Ročkai*