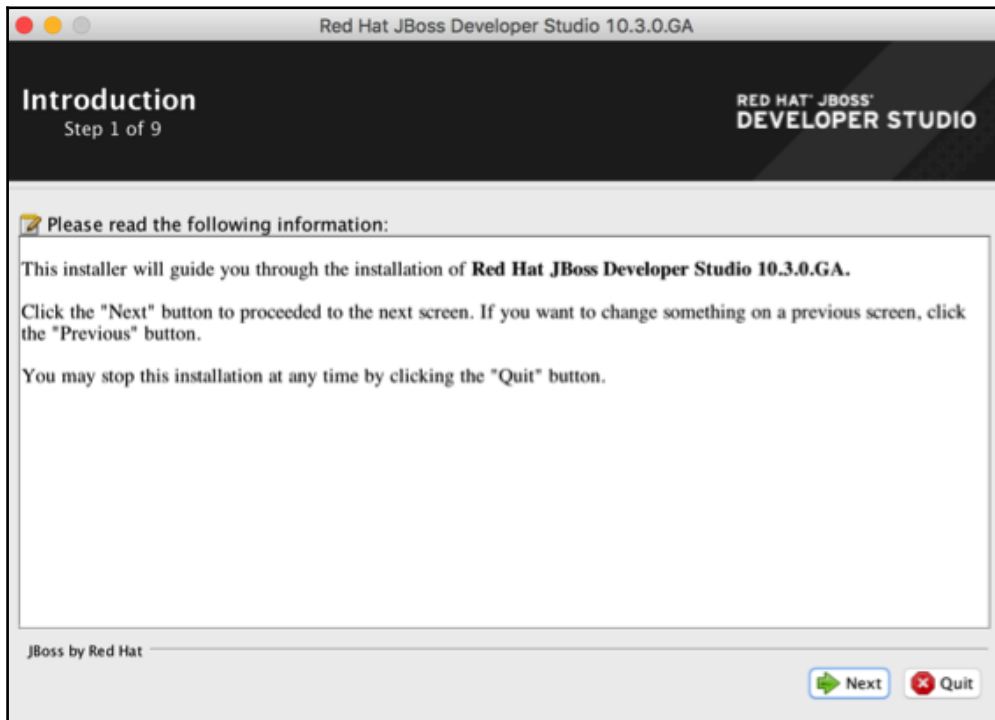



Chapter 1: Introduction to the JBoss Ecosystem



End User License Agreement

Step 2 of 9

RED HAT® JBOSS®
DEVELOPER STUDIO

 Please read the following license agreement carefully:

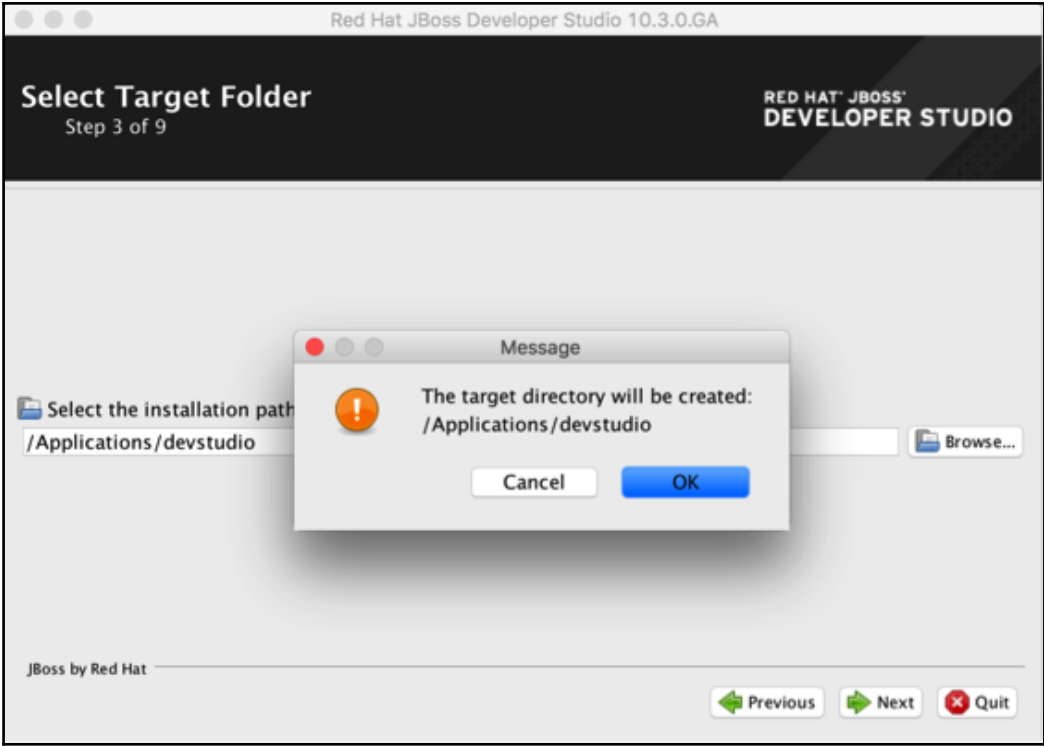
END USER LICENSE AGREEMENT RED HAT JBOSS® MIDDLEWARE™

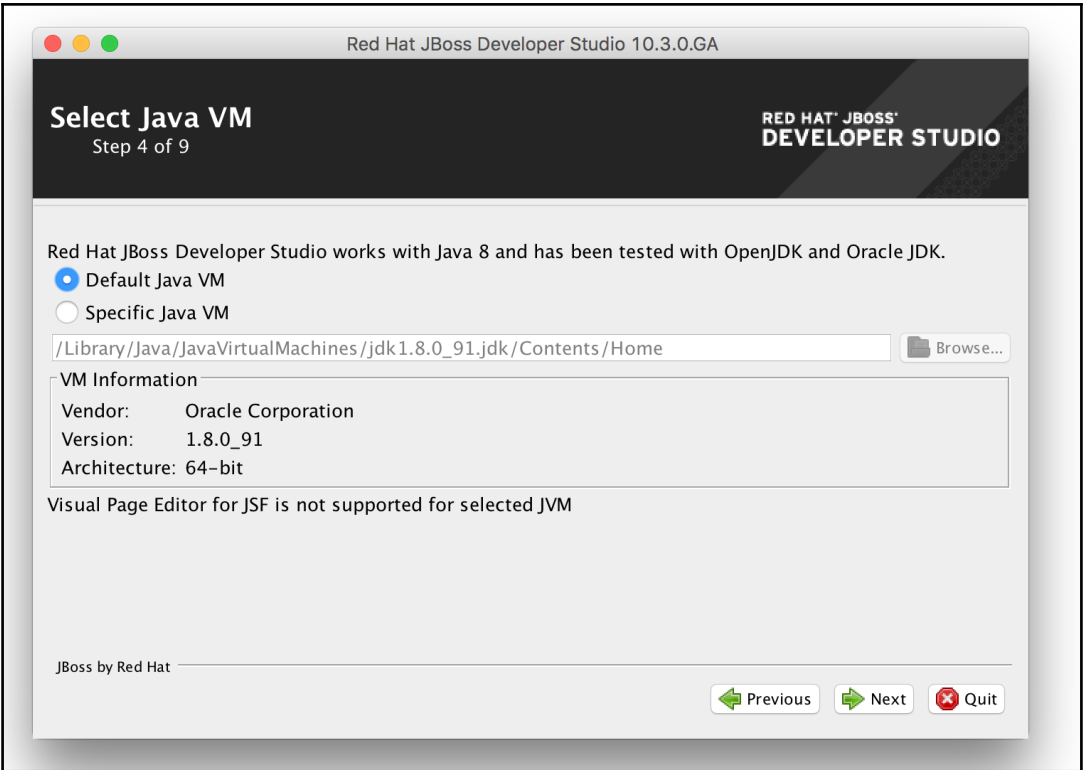
PLEASE READ THIS END USER LICENSE AGREEMENT CAREFULLY BEFORE USING SOFTWARE FROM RED HAT. BY USING RED HAT SOFTWARE, YOU SIGNIFY YOUR ASSENT TO AND ACCEPTANCE OF THIS END USER LICENSE AGREEMENT AND ACKNOWLEDGE YOU HAVE READ AND UNDERSTAND THE TERMS. AN INDIVIDUAL ACTING ON BEHALF OF AN ENTITY REPRESENTS THAT HE OR SHE HAS THE AUTHORITY TO ENTER INTO THIS END USER LICENSE AGREEMENT ON BEHALF OF THAT ENTITY. IF YOU DO NOT ACCEPT THE TERMS OF THIS AGREEMENT, THEN YOU MUST NOT USE THE RED HAT SOFTWARE. THIS END USER LICENSE AGREEMENT DOES NOT PROVIDE ANY RIGHTS TO RED HAT SERVICES SUCH AS SOFTWARE MAINTENANCE, UPGRADES OR SUPPORT. PLEASE REVIEW YOUR SERVICE OR SUBSCRIPTION

- I accept the terms of this license agreement.
 I do not accept the terms of this license agreement.

JBoss by Red Hat

 Previous Next Quit







Select Platforms and Servers

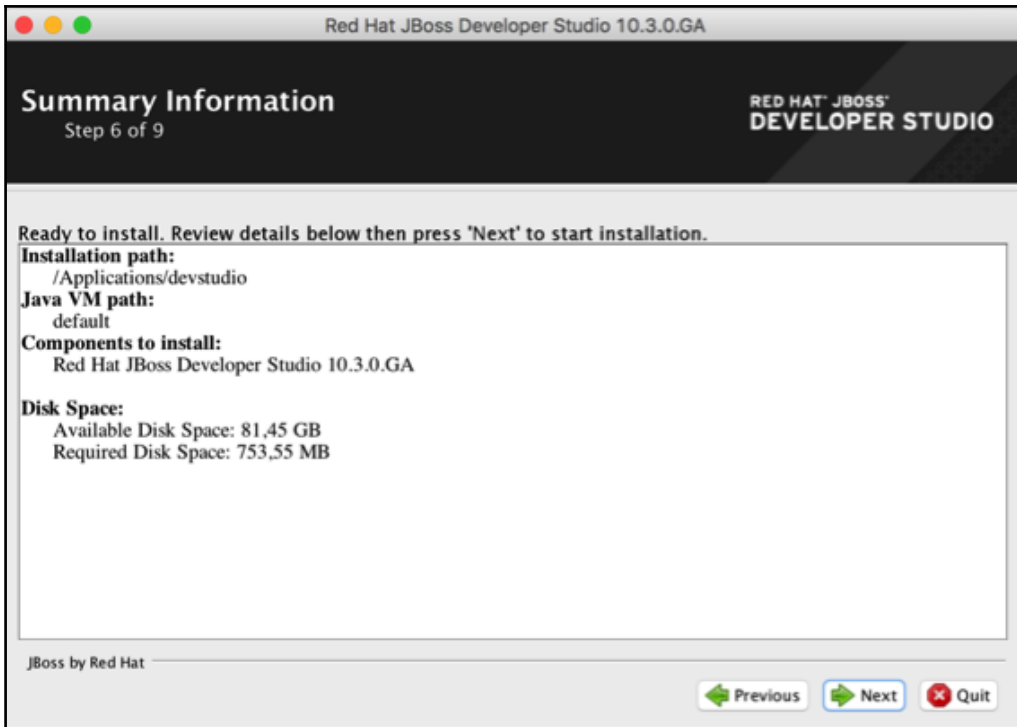
Step 5 of 9

RED HAT™ JBOSS™
DEVELOPER STUDIO

Add locations you want to be scanned to discover platforms and servers you have:

Scan every start	Location

- Add...
- Edit...
- Remove



Red Hat JBoss Developer Studio 10.3.0.GA

Installation

Step 7 of 9

RED HAT JBOSS[®]
DEVELOPER STUDIO

● Pack installation progress:

[Finished]

● Overall installation progress:

3 / 3

JBoss by Red Hat

◀ Previous ▶ Next ✖ Quit



Finish

Step 9 of 9

RED HAT JBOSS[®]
DEVELOPER STUDIO



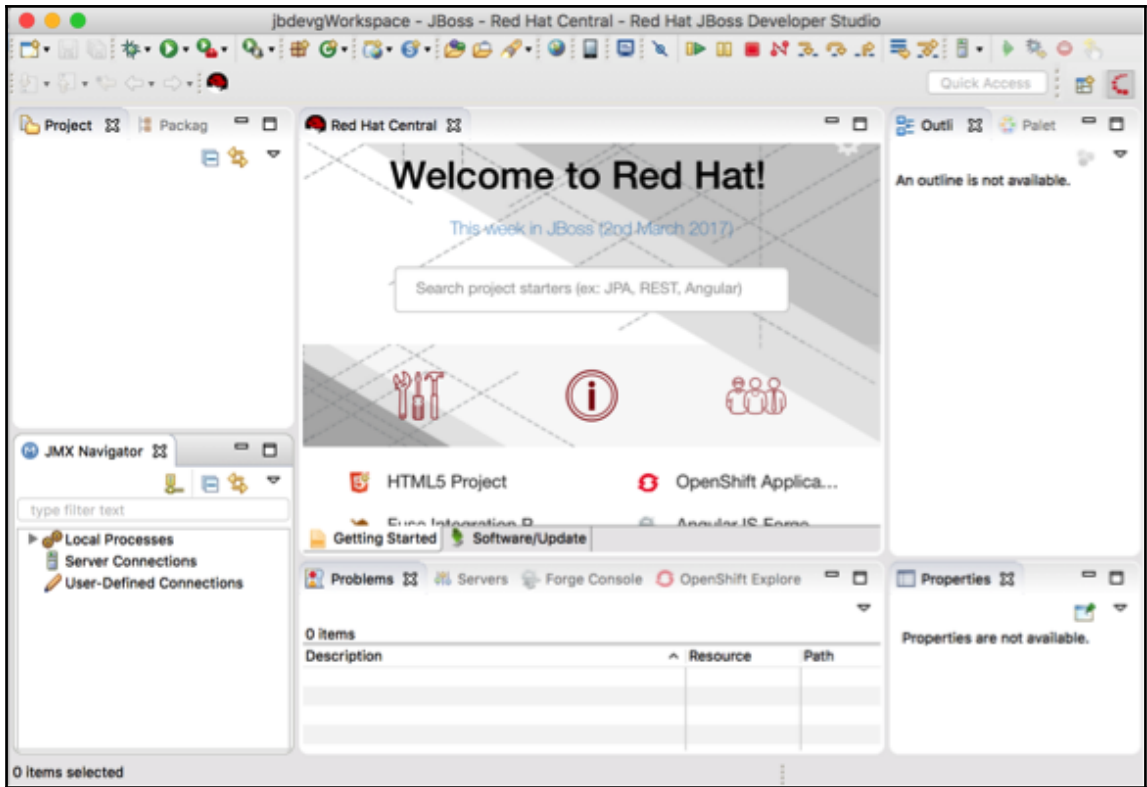
Installation has completed successfully.

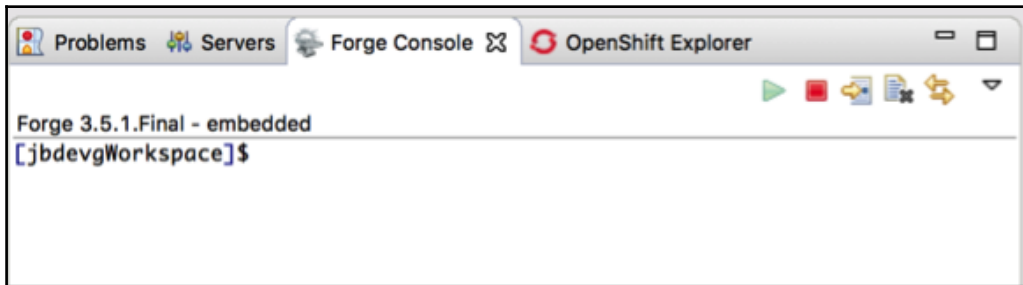
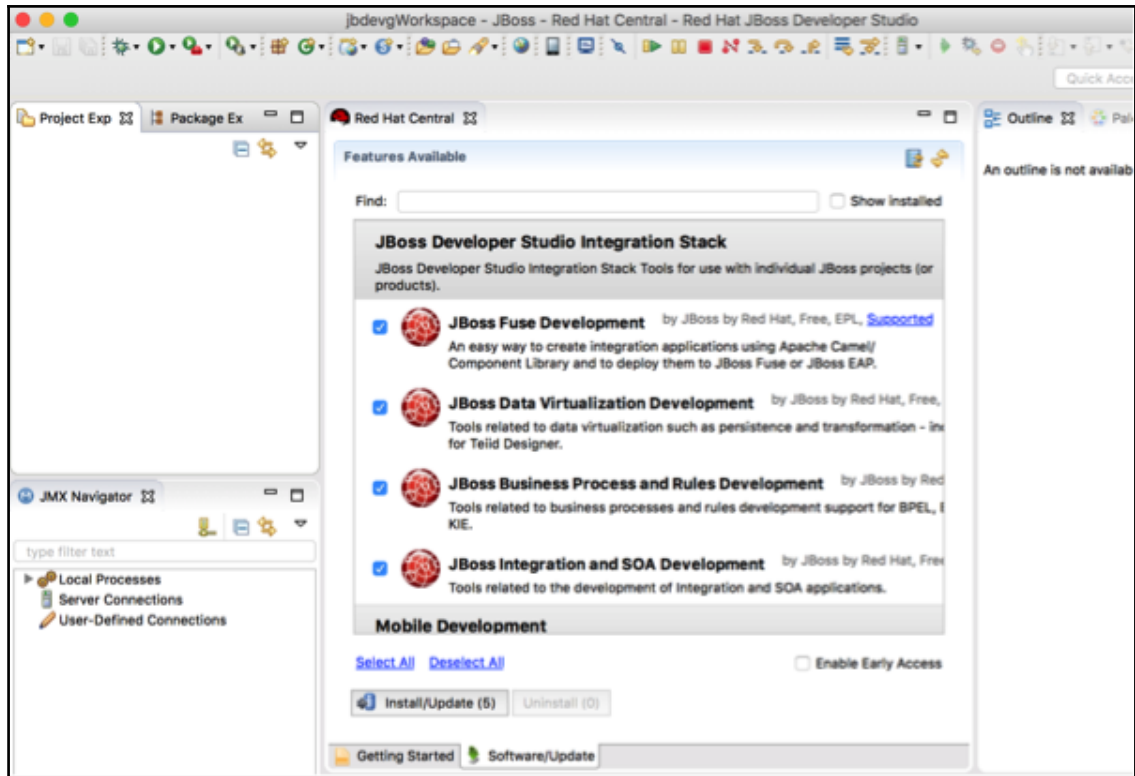


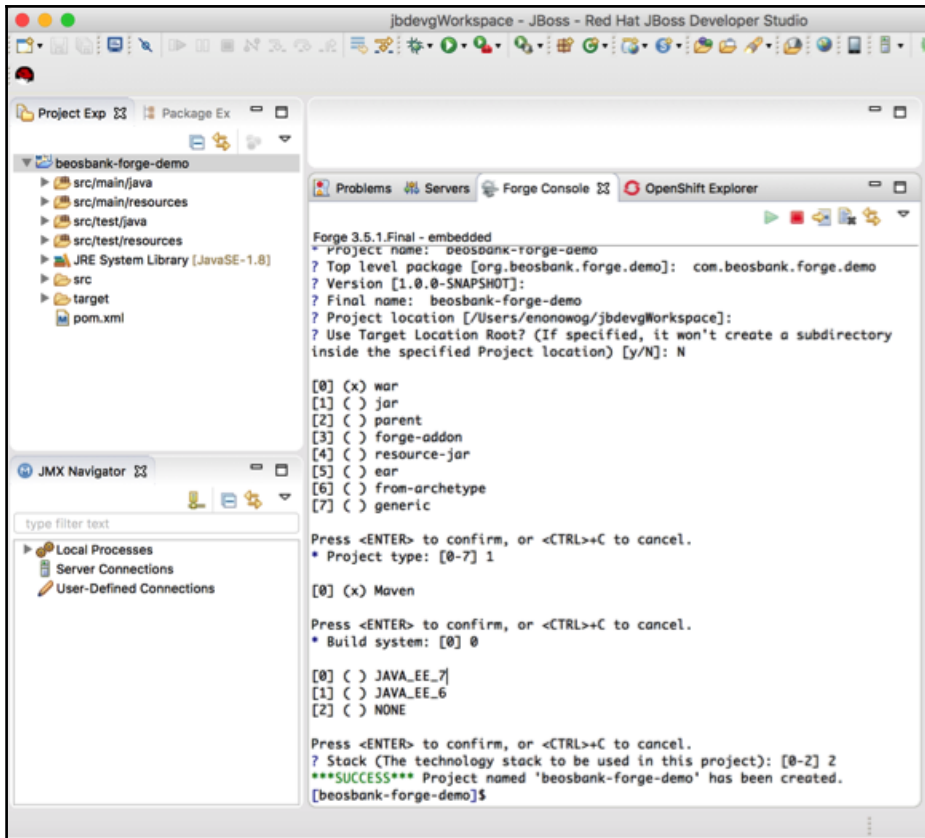
Run Red Hat JBoss Developer Studio after installation



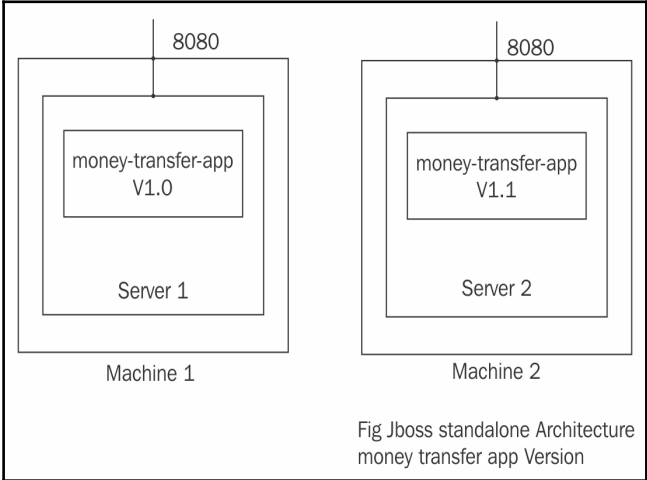
An uninstaller program has been created in:
/Applications/devstudio/Uninstaller

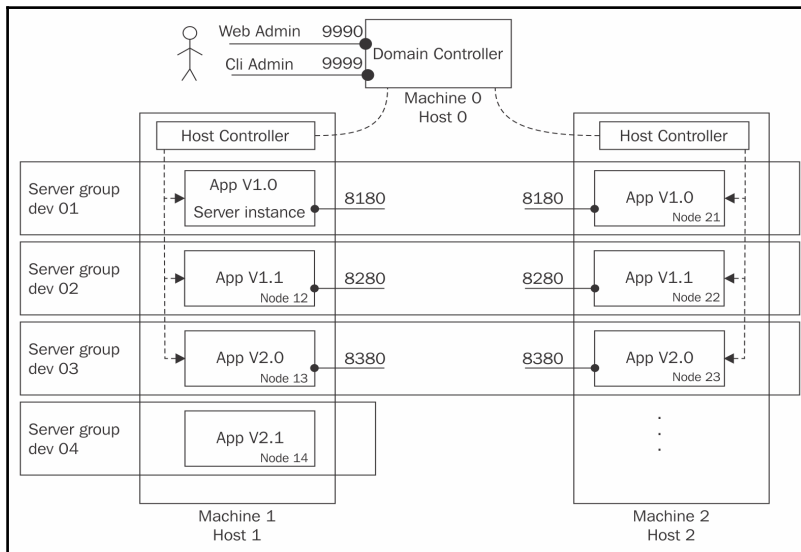
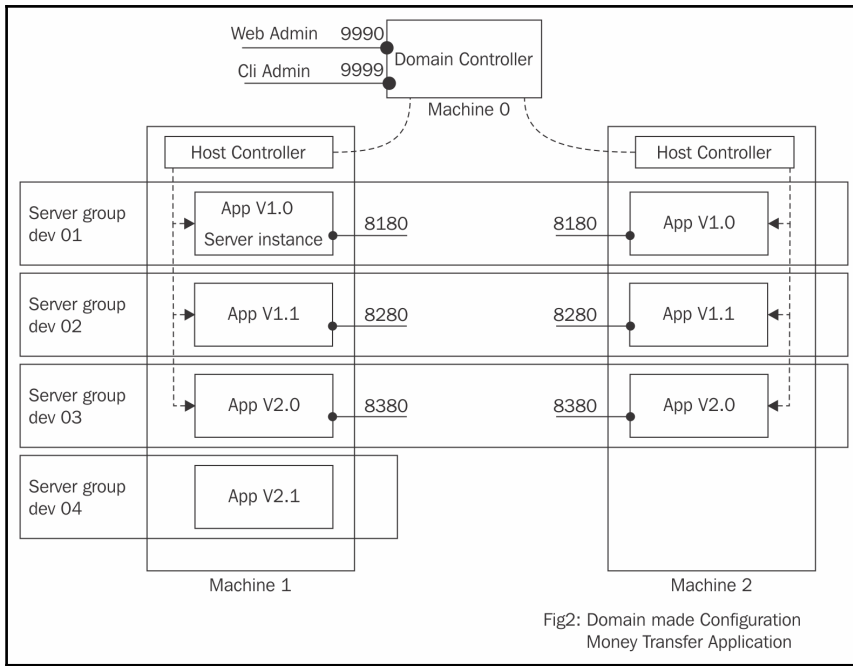






Chapter 2: Developing and Hosting Scalable Web Applications





RED HAT JBOSS® ENTERPRISE APPLICATION PLATFORM

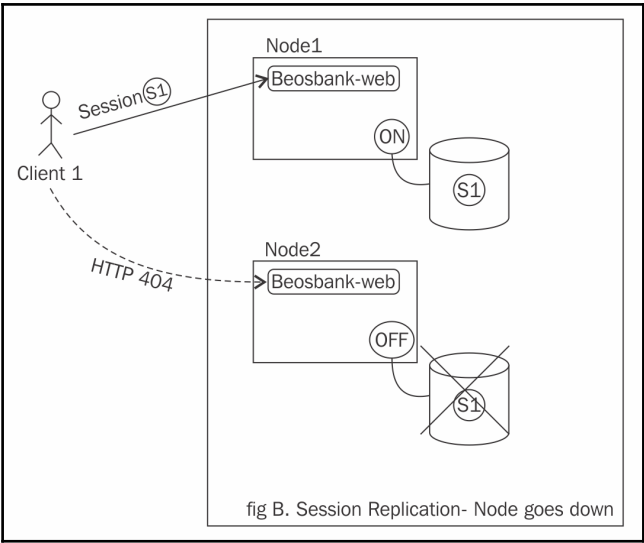
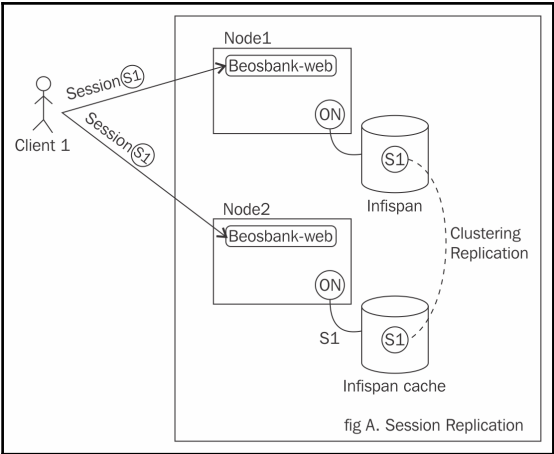
Home Deployments Configuration **Runtime** Access Control Patching

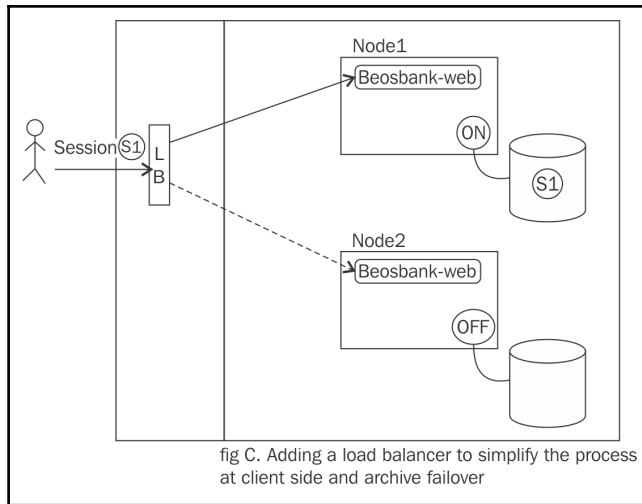
Browse Domain By	Host (3) Refresh	
Hosts >	host0-master >	<h2>Hosts</h2> <p>All hosts that are members of this domain.</p> <p>In a managed domain, multiple server groups span multiple physical or virtual machines. One host controller is configured to act as the domain controller to control the domain.</p>
Server Groups >	host1 >	
	host2 >	

RED HAT JBOSS® ENTERPRISE APPLICATION PLATFORM

Home Deployments Configuration **Runtime** Access Control Patching

Browse Domain By	Server Group (4) Add	Server (2) Add
Hosts >	Q <input type="text"/>	Q <input type="text"/>
Server Groups >	dev01 View > dev02 > dev03 > dev04 >	node11 (host1) > node21 (host2) >





BeosBank Money Transfer Web portal

JBoss Instance: [host2:node23](#)

Transfer Details **Payment Infos** **Confirmation**

Transfer Details

Sender's Country:

Receipient's Country:

Amount to send

Sender

Receiver

[→ Next](#)

localhost:8380/beosbank-web/

BeosBank Money Transfer Web portal

JBoss Instance: [host1:node13](#)

Transfer Details | Payment Infos | Confirmation

Transfer Details

Sender's Country:	<input type="text" value="France"/>	
Recipient's Country:	<input type="text" value="Cameroon"/>	
Amount to send	<input type="text" value="100,00 EUR"/>	
Sender	<input type="text" value="Noe"/>	<input type="text" value="Nono"/>
Receiver	<input type="text" value="Michele"/>	<input type="text" value="Bertille"/>

[Next](#)

localhost:8380/beosbank-web/

BeosBank Money Transfer Web portal

JBoss Instance: [host1:node13](#)

Transfer Details | **Payment Infos** | Confirmation

Payment Infos

Card Number:	<input type="text" value="0000-1111-2222-3333"/>
--------------	--

[Back](#) [Next](#)

localhost:8780/beosbank-web/

BeosBank Money Transfer Web portal

JBoss Instance: [host2:node23](#)

Transfer Details | Payment Infos | Confirmation

Transfer Details

Sender's Country:	<input type="text" value="France"/>	
Receipient's Country:	<input type="text" value="Cameroon"/>	
Amount to send	<input type="text" value="100,00 EUR"/>	
Sender	<input type="text" value="Noe"/>	<input type="text" value="Nono"/>
Receiver	<input type="text" value="Michele"/>	<input type="text" value="Bertille"/>

[→ Next](#)

localhost:9001/beosbank-web/

BeosBank Money Transfer Web portal

JBoss Instance: [host1:node13](#)

Transfer Details | Payment Infos | Confirmation

Transfer Details

Sender's Country:	<input type="text" value="USA"/>	
Receipient's Country:	<input type="text" value="Cameroon"/>	
Amount to send	<input type="text" value="50,00 USD"/>	
Sender	<input type="text" value="Barack"/>	<input type="text" value="Obama"/>
Receiver	<input type="text" value="University"/>	<input type="text" value="Yaounde1"/>

[→ Next](#)

localhost:9001/beosbank-web/

BeosBank Money Transfer Web portal

JBoss Instance: [host2:node23](#)

Transfer Details Payment Infos Confirmation

Transfer Details

Sender's Country:

Recipient's Country:

Amount to send:

Sender:

Receiver:

→ Next

localhost:9000/haproxy

HAProxy

Statistics Report for pid 14290

> General process information

pid = 14290 (process #1, nproc = 1)
 uptime = 0d 0h14m15s
 system limits: memmax = unlimited; ulimit-n = 8206
 maxsock = 8206; maxconn = 4096; maxpipes = 0
 current conn = 1; current pipes = 0; conn rate = 1/sec
 Running tasks: 1/7; idle = 100 %

- active UP
- active UP, going down
- active DOWN, going up
- active or backup DOWN
- active or backup DOWN for maintenance (MAINT)
- active or backup SOFT STOPPED for maintenance

- backup UP
- backup UP, going down
- backup DOWN, going up
- not checked

Note: "NOLB"/"DRAIN" = UP with load-balancing disabled.

stats		Queue			Session rate			Sessions				Bytes		Denied		Errors				
		Cur	Max	Limit	Cur	Max	Limit	Cur	Max	Limit	Total	LbTot	Last	In	Out	Req	Resp	Req	Conn	Resp
Frontend					1	2	-	1	1	2 000	5			1 260	19 893	0	0	0		
Backend		0	0		0	2		0	1	200	2	0s		1 260	19 893	0	0	0	2	0

haproxy_in		Queue			Session rate			Sessions				Bytes		Denied		Errors				
		Cur	Max	Limit	Cur	Max	Limit	Cur	Max	Limit	Total	LbTot	Last	In	Out	Req	Resp	Req	Conn	Resp
Frontend					0	7	-	0	6	2 000	59			52 754	981 476	0	0	0	1	

beosbank_http		Queue			Session rate			Sessions				Bytes		Denied		Errors		Warn			
		Cur	Max	Limit	Cur	Max	Limit	Cur	Max	Limit	Total	LbTot	Last	In	Out	Req	Resp		Req	Conn	Resp
node13		0	0	-	0	6	-	0	4	-	15	15	11m14s	9 911	372 343	0	0	0	0	3	0
node23		0	0	-	0	10	-	0	6	-	65	65	4m49s	42 843	608 921	0	0	0	0	2	0
Backend		0	0		0	13		0	6	200	80	80	4m49s	52 754	981 264	0	0	0	0	5	0

localhost:8280/beosbank-web-jpa/

BeosBank Money Transfer Web portal

JBoss Instance: [host1:node12](#)

Transfer Details | Payment Infos | Confirmation

Transfer Details

Sender's Country:

Receipient's Country:

Amount to send: USD

Sender:

Receiver:

[Next](#)

localhost:8280/beosbank-web-jpa/

BeosBank Money Transfer Web portal

JBoss Instance: [host1:node12](#)

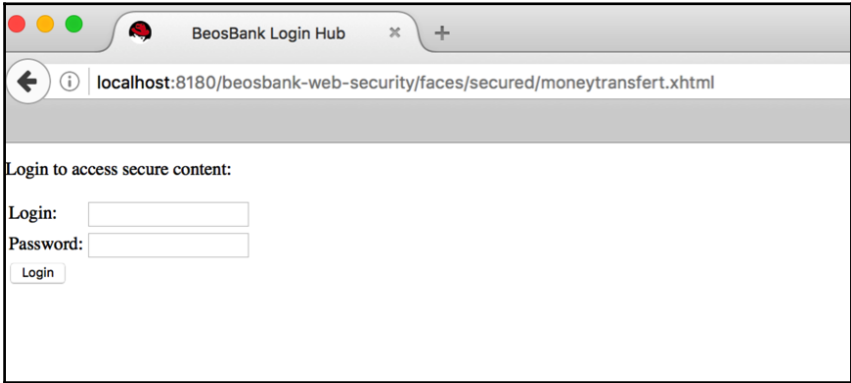
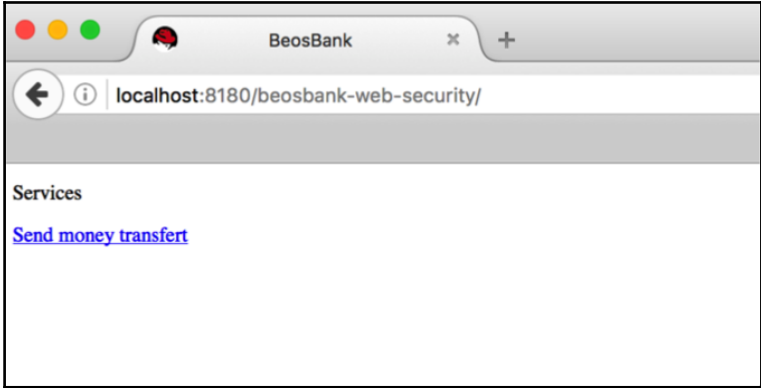
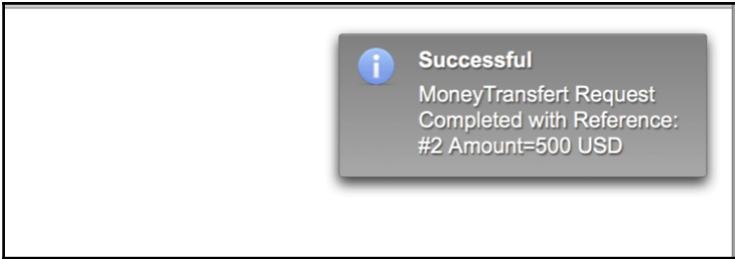
Transfer Details | **Payment Infos** | Confirmation

Payment Infos

From: John Doe (USA)
To: Baba Doe (Cameroon)
Amout: 500 USD
Card Number: 1111-2222-3333-4444

[✓ Send Money Transfer](#)

[← Back](#)



http://localho...ransfert.xhtml x +

localhost:8180/beosbank-web-security/faces/secured/moneytransfert.xhtml

BeosBank Money Transfer Web portal

JBoss Instance: [host1:node11](#)

Transfer Details | **Payment Infos** | **Confirmation**

Transfer Details

Sender's Country:

Receipient's Country:

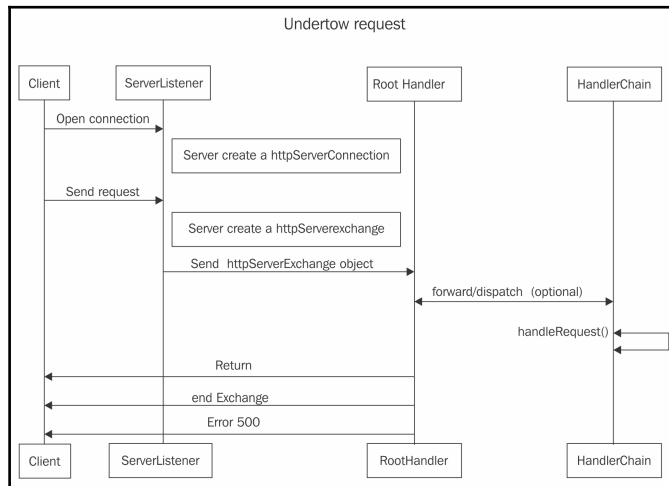
Amount to send:

Sender:

Receiver:

[Next](#)

Chapter 03: Custom Web Deployment using Undertow and Swarm



Name	Last Modified	Size
.git	Apr 10, 2017 16:37:20	--
.gitignore	Apr 10, 2017 15:40:40	277
jbdeploy	Apr 10, 2017 16:29:29	--
jbds	Apr 10, 2017 15:40:40	--
jbossas	Apr 10, 2017 15:49:57	--
LICENSE	Apr 10, 2017 15:40:40	1.04 KB
pom.xml	Apr 10, 2017 15:54:23	913
README.md	Apr 10, 2017 15:40:40	31

Beos Bank Node1 !

Beos Bank Node2 !

```
{
  "id": 3,
  "sender": {
    "id": 5,
    "firstName": "John",
    "lastName": "Doe",
    "birthDate": null,
    "address": {
      "street": null,
      "zipcode": null,
      "city": null,
      "country": "USA"
    }
  },
  "receiver": {
    "id": 4,
    "firstName": "Baba",
    "lastName": "Ahmadou",
    "birthDate": null,
    "address": {
      "street": null,
      "zipcode": null,
      "city": null,
      "country": "Cameroon"
    }
  },
  "status": "DRAFT",
  "sendingDate": "2017-04-11",
  "withdrawalDate": null,
  "creditCardNumber": "1111-2222-3333-4444",
  "keyCode": null,
  "amountExcludingFees": null,
  "fees": null,
  "amountIncludingFees": null,
  "vatRate": null,
  "totalAmountExcludingVat": null,
  "totalAmountIncludingVat": null,
  "senderCurrencyCode": "USD",
  "receiverCurrencyCode": null,
  "amountExcludingFeesInReceiverCurrency": null
}
```



```
localhost
localhost:8080/mcs01/api/MoneyTransfer/3
localhost:8080/mcs01/api/MoneyTransfer/3
{"id":3,"sender":{"id":5,"firstName":"John","lastName":"Doe","birthDate":null,"address":{"street":null,"zipcode":null,"city":null,"country":"USA"}}, "receiver":{"id":4,"firstName":"Baba","lastName":"Ahmadou","birthDate":null,"address":{"street":null,"zipcode":null,"city":null,"country":"Cameroon"}}, "status":"DRAFT", "sendingDate":"2017-04-11", "withdrawalDate":null, "creditCardNumber":"1111-2222-3333-4444", "keyCode":null, "amountExcludingFees":null, "fees":null, "amountIncludingFees":null, "vatRate":null, "totalAmountExcludingVat":null, "totalAmountIncludingVat":null, "senderCurrencyCode":"USD", "receiverCurrencyCode":null, "amountExcludingFeesInReceiverCurrency":null}
```

localhost

localhost:8080

BeosBank Money Transfer Web portal

JBoss Instance: [macbook-pro-de-elvadas](#)

Transfer Details | **Payment Infos** | **Confirmation**

Transfer Details

Sender's Country:

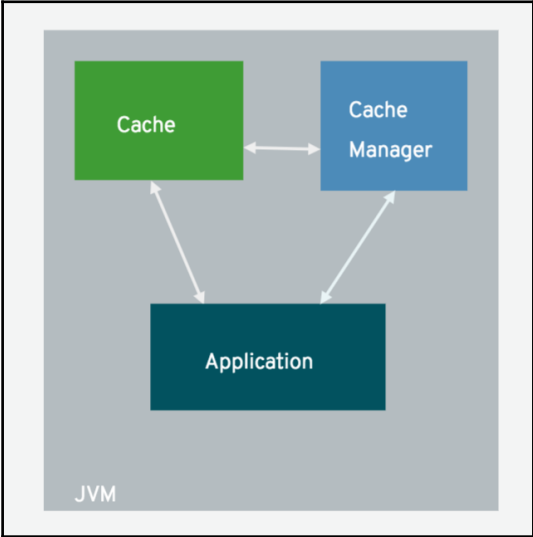
Recipient's Country:

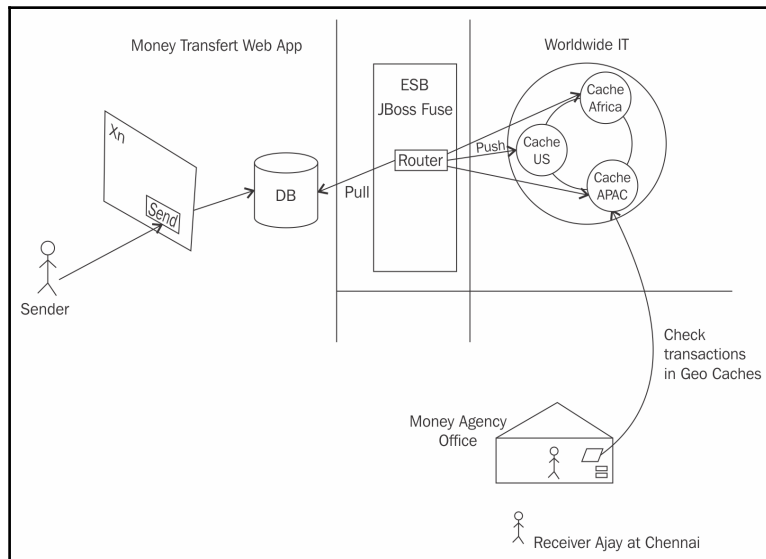
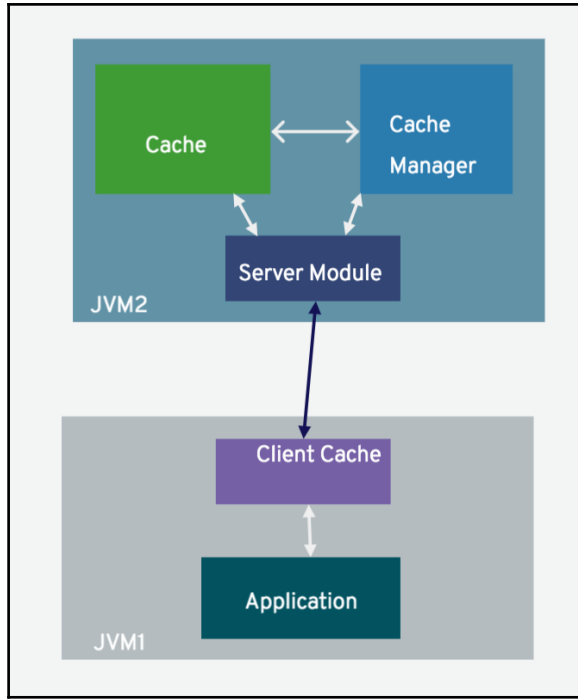
Amount to send:

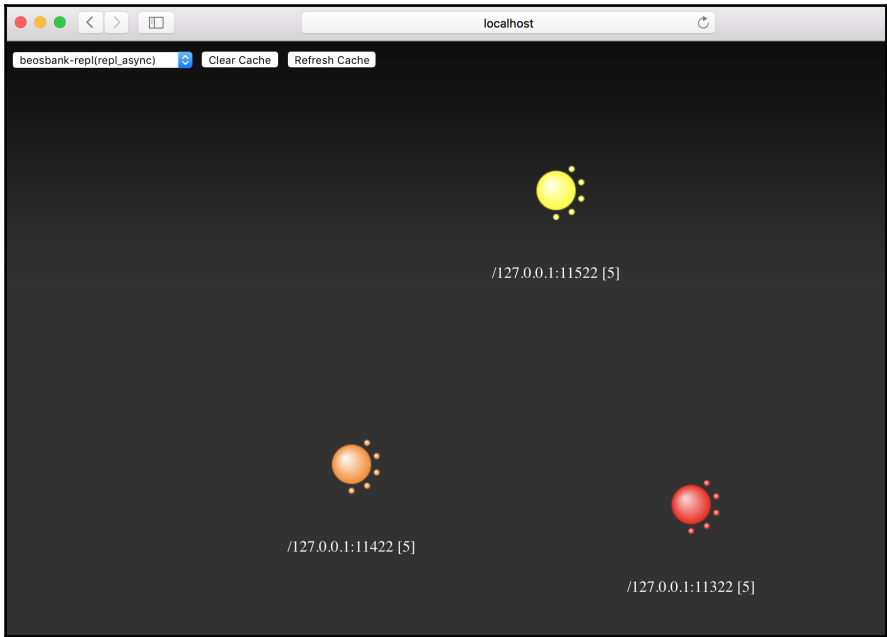
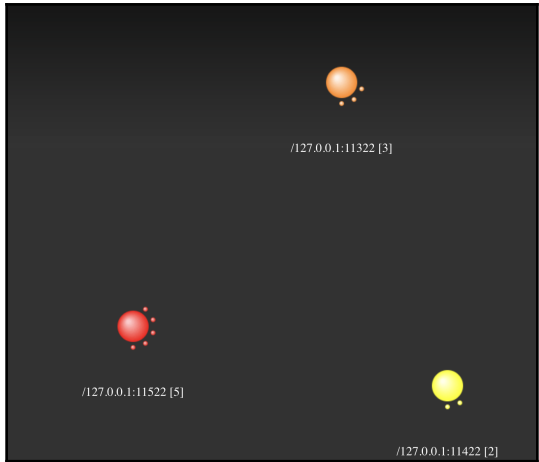
Sender:

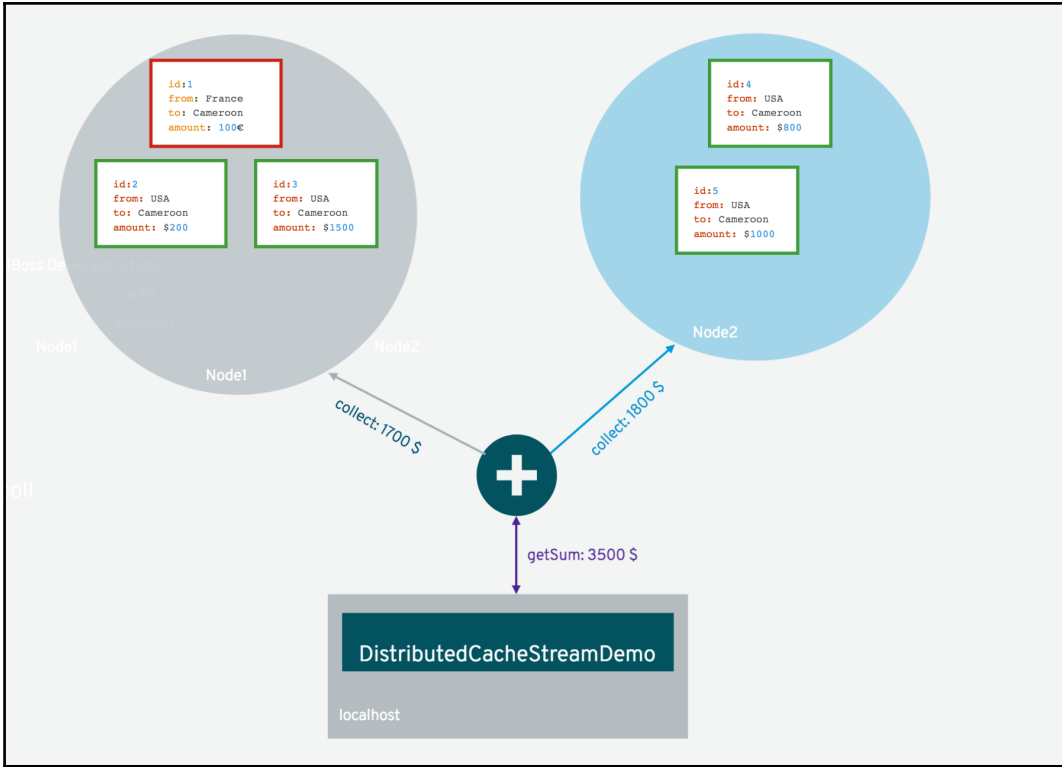
Receiver:

Chapter 4: Storing and Accessing Distributed Data

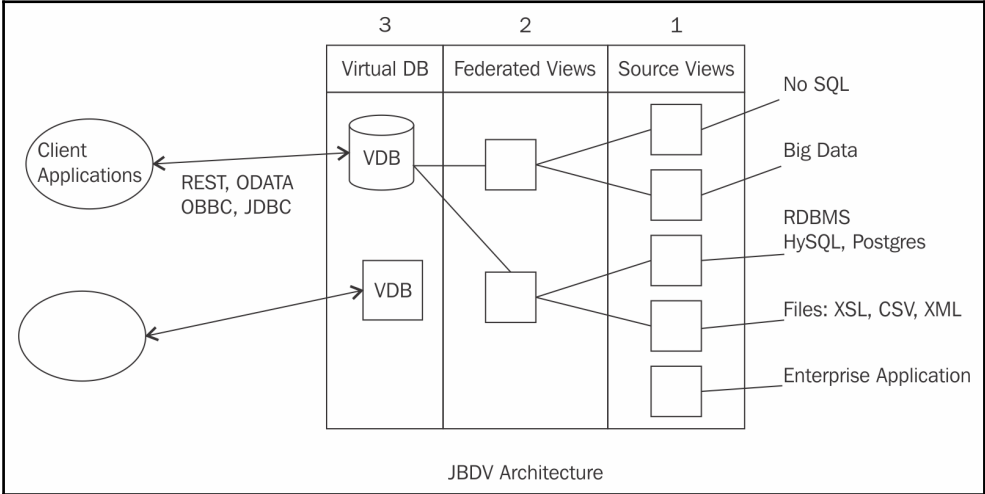


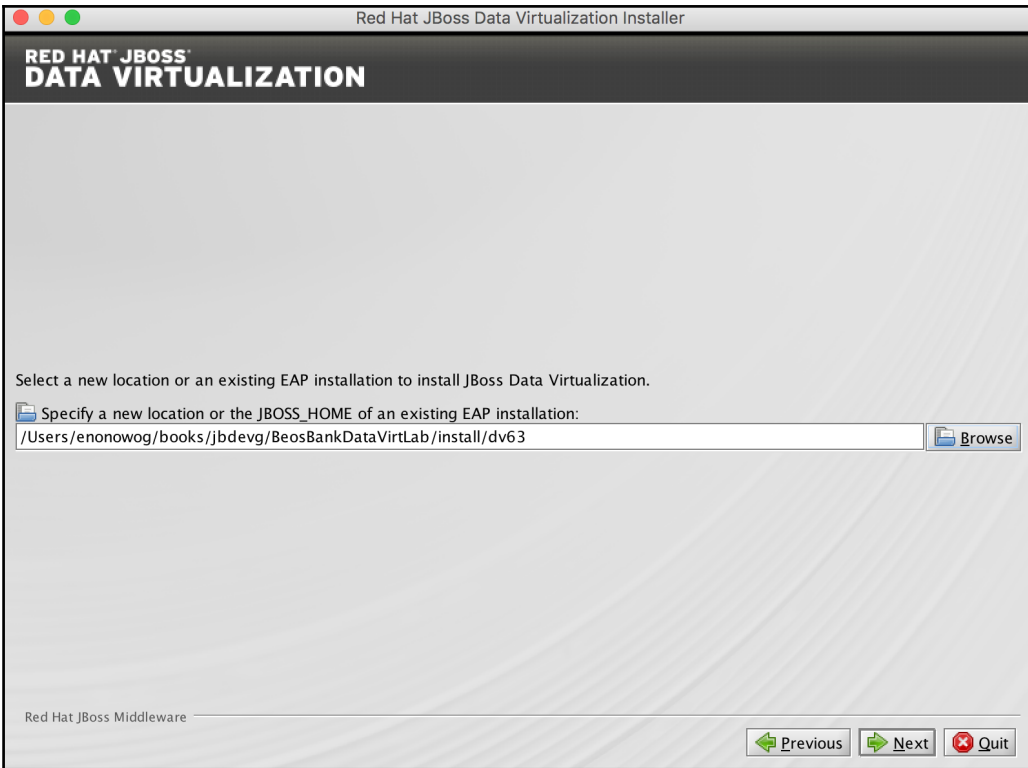






Chapter 5: Exposing Data as a Service





Red Hat JBoss Data Virtualization Installer

RED HAT JBOSS DATA VIRTUALIZATION

Check to use one password for all default passwords.

The EAP admin user will be added to the host container's ManagementRealm. It can be used to access the management console and the management CLI, as well as other applications secured with the ManagementRealm.

EAP admin username:

EAP admin password:

Confirm EAP admin password:

The Dashboard admin user is used to create and manage Dashboards.

Dashboard admin username:

Dashboard admin password:

Confirm Dashboard admin password:

The Teiid data access user is used for queries to Teiid VDBs and to view Dashboards.

Teiid data access username:

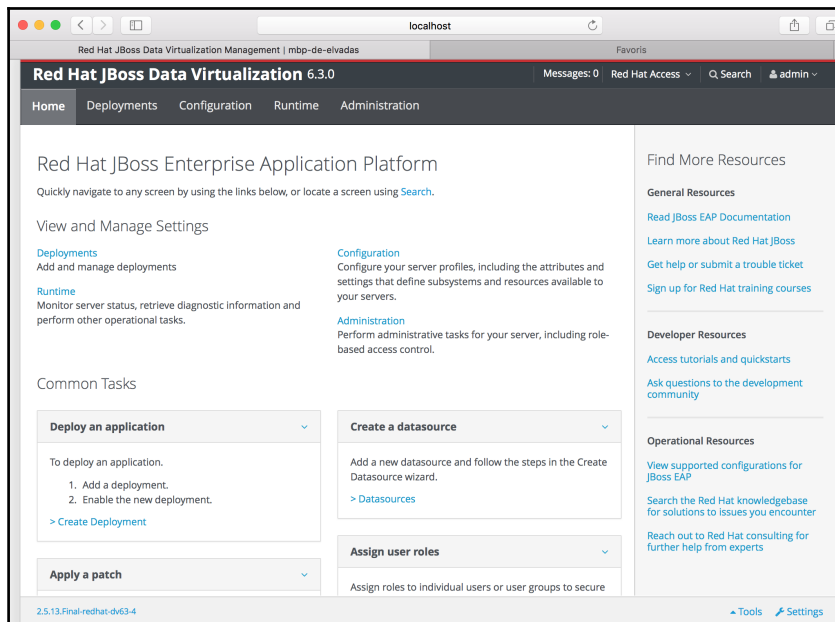
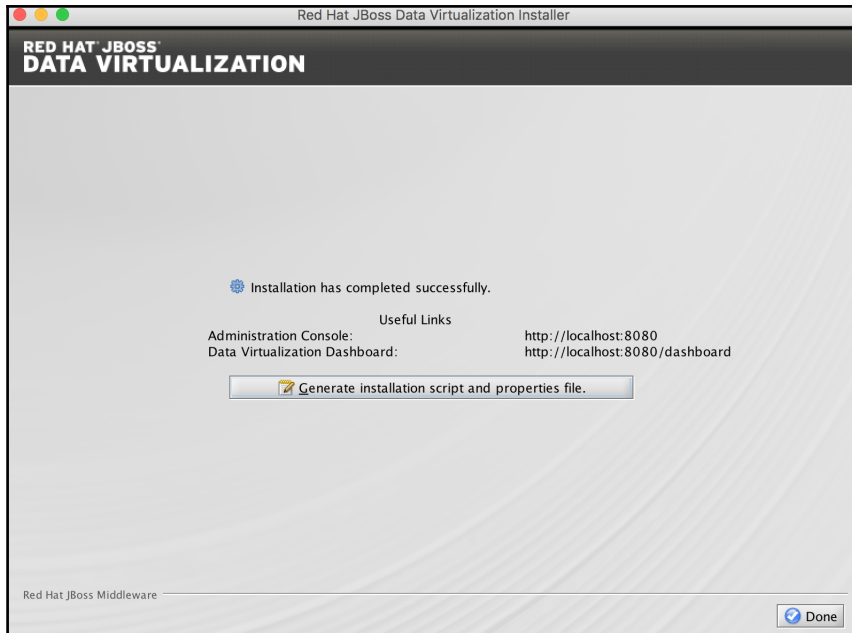
Teiid data access password:

Confirm Teiid data access password:

Add OData role

Add logging role

Red Hat JBoss Middleware



Edit Navigate Search Project Run Window Help

BeosBankWorkspace - JBoss - Red Hat Central - Red Hat JBoss Developer Studio

Red Hat Central

Features Available

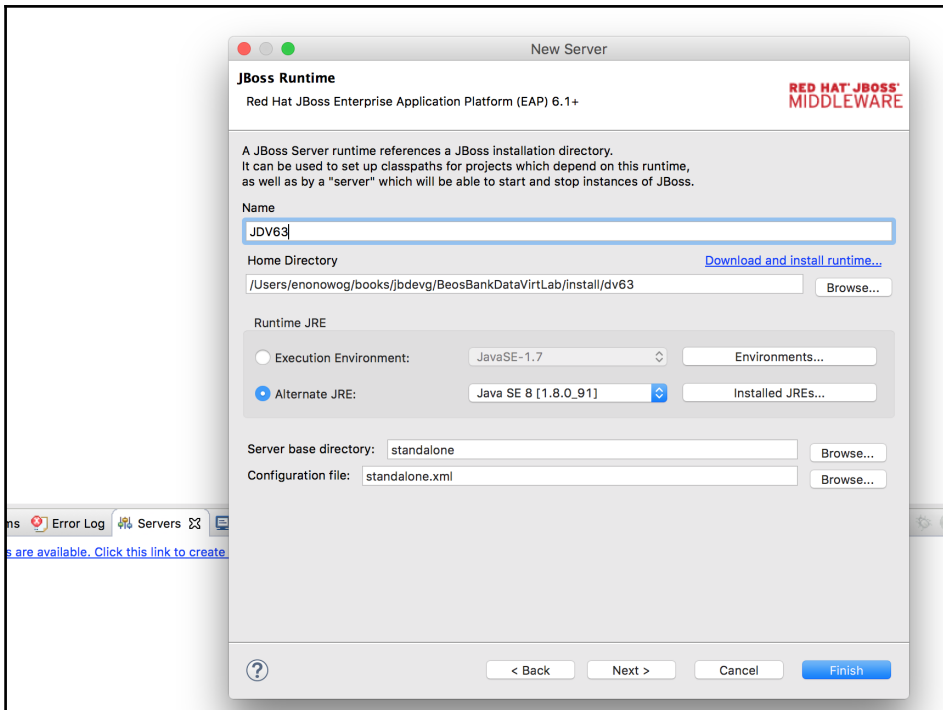
Find: Show installed

JBoss Developer Studio Integration Stack

JBoss Developer Studio Integration Stack Tools for use with individual JBoss projects (or products).

- JBoss Data Virtualization Development** by JBoss by Red Hat, Free, EPL, [Supported](#)
Tools related to data virtualization such as persistence and transformation - includes support for Teiid Designer.
- JBoss Business Process and Rules Development** by JBoss by Red Hat, Free, EPL, [Supported](#)
Tools related to business processes and rules development support for BPEL, BPMN2, Drools, jBPM6 and KIE.
- JBoss Integration and SOA Development** by JBoss by Red Hat, Free, EPL, [Supported](#)

[Select All](#) [Deselect All](#) Enable Early Access



JBoss Server JDV63

Host localhost

Teiid Runtime Version 8.12.5

Administration Connection

Administration is performed via the jboss management configuration

Port 9999

[Test Administration Connection](#) OK

JDBC Connection

User name teiidUser

Password

Port 31000

Port Override 31000

JDBC connection uses SSL

[Test JDBC Connection](#) OK

Overview | Deployment | Teiid Instance

Problems | Error Log | Servers

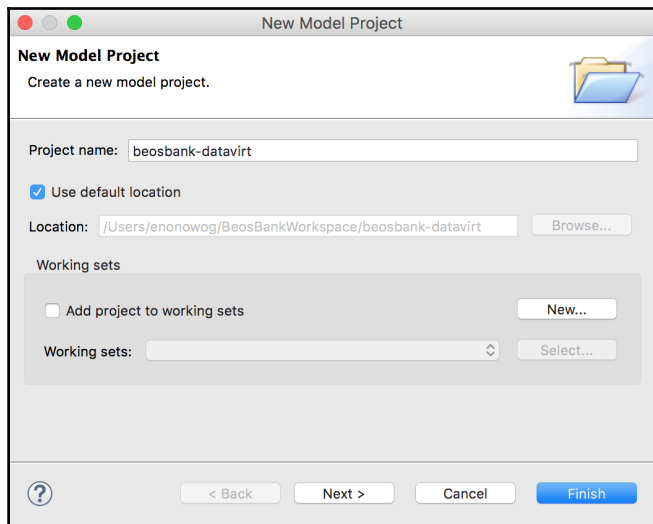
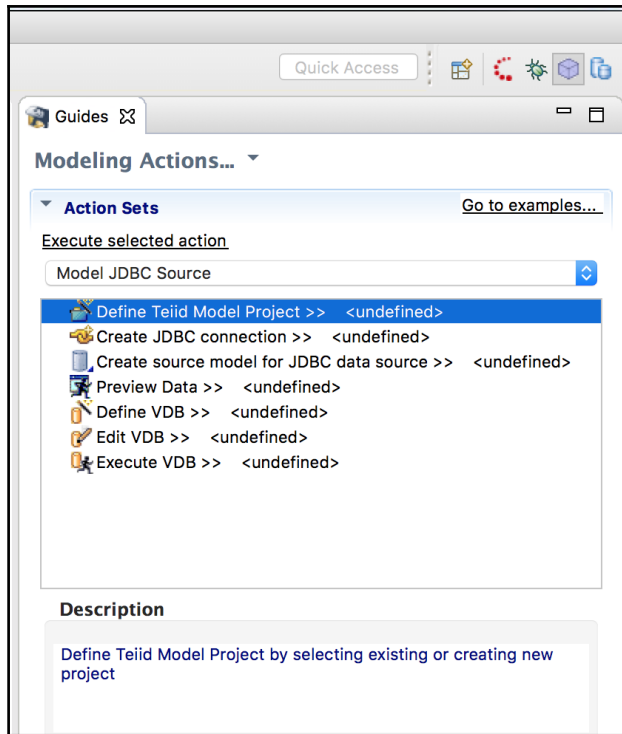
JDV63 [Started, Synchronized]

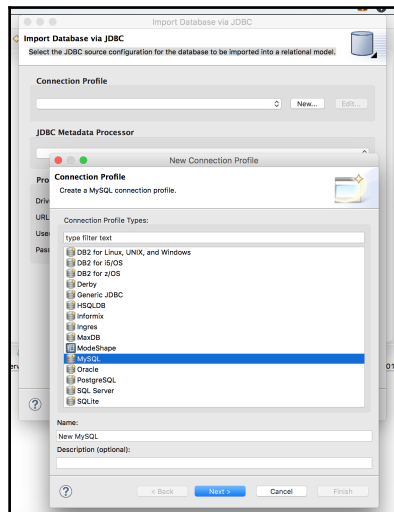
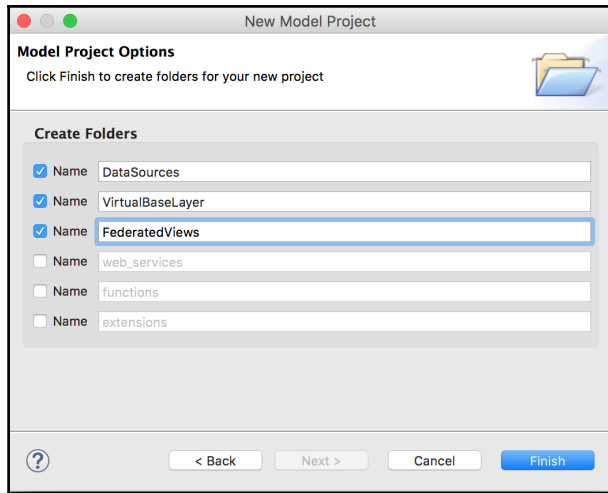
- XML Configuration
- Server Details
- Filesets
- JMX[Disconnected]
- Teiid Instance Configuration

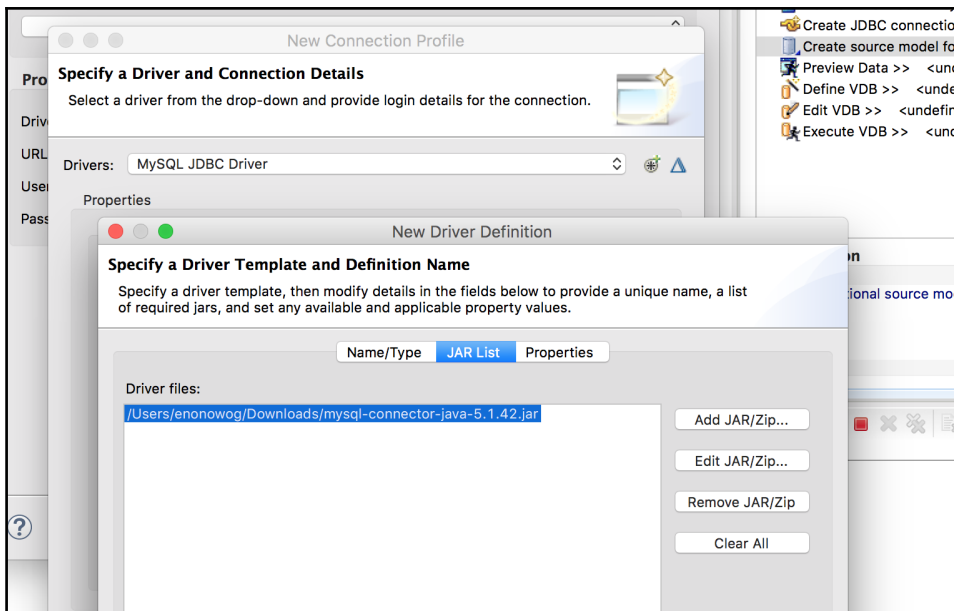
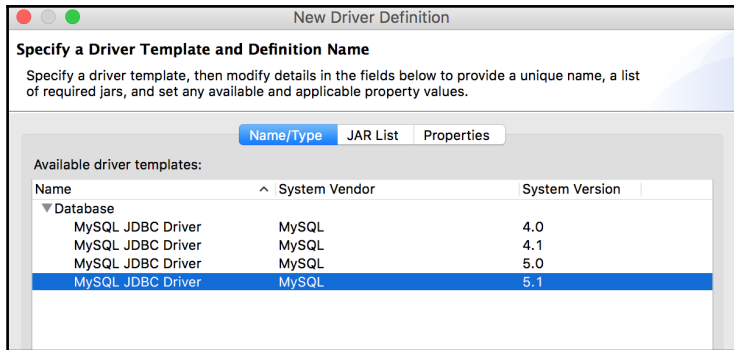
```

MacBook-Pro-de-elvadas:~ enonowog$ docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED            STATUS              PORTS                               NAMES
12508858b07c      docker_posgres_db_eurapa  "docker-entrypoint..." 3 minutes ago     Up 3 minutes      0.0.0.0:6432->5432/tcp              docker_posgres_db_eurapa_1
3b6af150c0da      docker_mysql_db_africa  "docker-entrypoint..." 3 minutes ago     Up 3 minutes      0.0.0.0:3406->3306/tcp              docker_mysql_db_africa_1
5a3ea060fb8e      mongo:3.4.4          "docker-entrypoint..." 3 minutes ago     Up 3 minutes      0.0.0.0:28001->27017/tcp            docker_mongo_db_emea_1
MacBook-Pro-de-elvadas:~ enonowog$

```







Properties

General Optional

Database: beosbank-africa

URL: jdbc:mysql://localhost:3406/beosbank-africa

User name: root

Password:

Save password

Success

Ping succeeded!

OK

Connect when the wizard completes

Connect every time the workbench is started

Test Connection

The image shows a 'Properties' dialog box for a database connection. It has two tabs: 'General' and 'Optional'. The 'General' tab is active and contains fields for 'Database' (beosbank-africa), 'URL' (jdbc:mysql://localhost:3406/beosbank-africa), 'User name' (root), and 'Password' (masked with dots). There is a checked checkbox for 'Save password'. A 'Test Connection' button is located at the bottom right of the dialog. Overlaid on top of the dialog is a smaller 'Success' dialog box with a speech bubble icon and the text 'Ping succeeded!'. This success dialog has an 'OK' button at the bottom right. At the bottom of the main dialog, there are two checkboxes: 'Connect when the wizard completes' (checked) and 'Connect every time the workbench is started' (unchecked).

Import Database via JDBC

Select Database Metadata

Press the "Next >" button to continue or the "Finish" button to finish.

Foreign Keys

- Include Incomplete FKs

Indexes

- Unique Only
- Approximations Allowed

Procedures

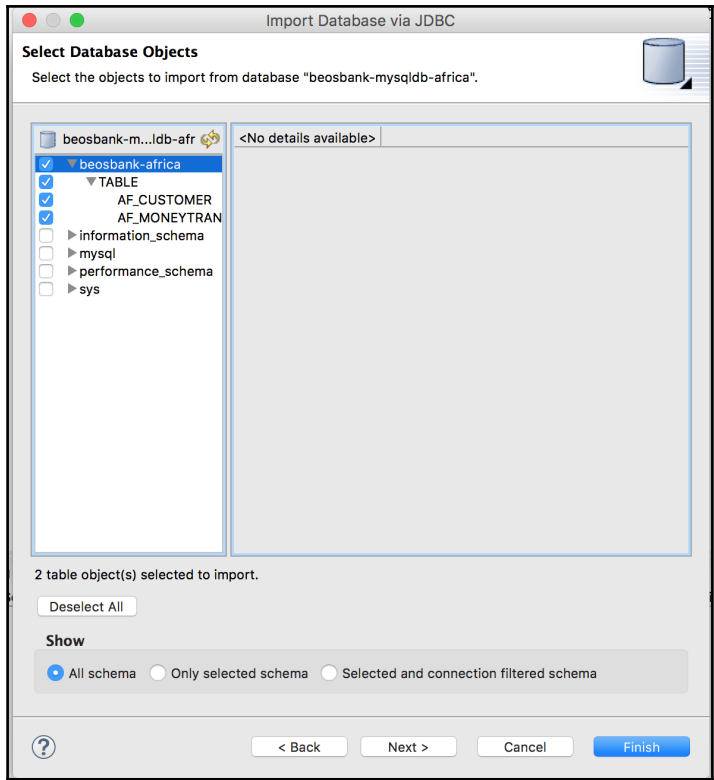
Table Types

LOCAL TEMPORARY
SYSTEM TABLE
SYSTEM VIEW
TABLE
VIEW

Select All

Deselect All

? < Back Next > Cancel Finish



Import Database via JDBC

Specify Import Options

Press the "Next >" button to continue or the "Finish" button to finish.

Model Definition | Model Object Options

Model Name: ...

Into Folder: ...

Make target a view model

Update (if existing model selected)

Include Cost Statistics (will increase time for large imports)

Include Catalog For Fully Qualified Names

JBoss Data Source Information

JNDI Name:

Auto-create Data Source

? < Back Next > Cancel Finish

Red Hat JBoss Developer Studio - Teiid Designer - beosbank-datavirt/DataSources/AF_Transactions.xml - Red Hat JBoss Developer Studio

AF_Transactions.xml

AF_CUSTOMER

- ID : long
- CITY : string(30)
- COUNTRY : string(50)
- STREET : string(30)
- POBOX : string(30)
- BIRTHDATE : date
- FIRSTNAME : string(30)
- LASTNAME : string(30)
- SURNAME : string(30)

AF_MONEYTRANSFER

- ID : long
- AMOUNT_HF_SENDER_CUR : decimal
- AMOUNT_HF_RECEIVER_CUR : decimal
- AMOUNT_TFC : decimal
- MOBILEMONEY : string(30)
- FEES : decimal
- KEYCODE : string(30)
- RECEIVER_CURRENCY : string(10)
- SENDER_CURRENCY : string(10)
- SENDING_DATE : date
- TOTAL_HT : decimal
- TOTAL_TTC : decimal
- VAT : decimal

Modeling Actions...

Action Sets

Execute selected action

Model JDBC Source

- Define Teiid Model Project >> (beosbank-datavirt)
- Create JDBC connection >> <undefined>
- Create source model for JDBC data source >> (AF_Transactions.xml)
- Preview Data >> <undefined>
- Define VDB >> <undefined>
- Edit VDB >> <undefined>
- Execute VDB >> <undefined>

Problems Error Log Servers Console SQL Results Teiid Execution Plan

Type query expression here

Status Result1

Operation	ID	CITY	COUNTRY	STREET	POBOX	BIRTHDATE	FIRSTNAME
Success	1	Douala	Cameroon	Rue King Akwa	1096	1984-05-10	Louis
Success	2	Foumban	Cameroon	Place Sultan Njoya	71	1984-04-21	Angeline
Success	3	Douala	Cameroon	Place Um Nyobe	1352	1985-11-05	Arnold
Success	4	Montreal	Canada	Avenue Trudeau	65	1984-06-12	Arthur
Success	5	Abidjan	Ivory Coast	bid Laurent Gbagbo	1350	1985-03-01	Guy
Success	6	Yaounde	Cameroon	Rue Charles Atan...	6000	2017-04-01	Association
Success	7	Dakar	Senegal	rue Cheikh Anta...	12500	1980-10-09	Alli
Success	8	Lagos	Nigeria	Olocha street	101001	1989-03-13	Yemi
Success	9	Durban	South Africa	Mandela Street	4094	1946-12-18	Steve
Success	10	Adis Abeba	Ethiopia	Menelik 2 Avenue	1000	1892-07-23	Halle

Default Server

Name: JDV63

Teiid Version: 8.12.5

Property Value

Red Hat JBoss Developer Studio - Teiid Designer - beosbank-datavirt/DataSources/EU_Transactions.xml - Red Hat JBoss Developer Studio

EU_Transactions.xml

eu_customer

- id : long
- city : string(4000)
- country : string(4000)
- street : string(4000)
- zip : string(4000)
- birthdate : date
- firstname : string(4000)
- lastname : string(4000)
- eu_customer_pkey

eu_moneytransfer

- id : long
- amount_hf_sender_cur : bigdecimal
- amount_hf_receiver_cur : bigdecimal
- amount_tfc : bigdecimal
- creditcard : string(4000)
- zip : string(4000)
- fees : bigdecimal
- keycode : string(4000)
- receiver_currency : string(4000)
- sender_currency : string(4000)
- sending_date : date
- status : string(4000)

Modeling Actions...

Action Sets

Execute selected action

Model JDBC Source

- Define Teiid Model Project >> (beosbank-datavirt)
- Create JDBC connection >> <undefined>
- Create source model for JDBC data source >> (EU_Transactions.xml)
- Preview Data >> <undefined>
- Define VDB >> <undefined>
- Edit VDB >> <undefined>
- Execute VDB >> <undefined>

Problems Error Log Servers Console SQL Results Teiid Execution Plan

Type query expression here

Status Result1

Operation	Keycode
Success	DEIT001
Success	FRCM001
Success	FRCM002
Success	BEUK001
Success	UKCM001
Success	POLML001
Success	BEIND01
Success	BEER002
Success	FRCM003

Default Server

Name: JDV63

Teiid Version: 8.12.5

Property Value

Preview Data

Custom Preview Data

Preview SQL Preview VDB XML Content

SQL Query

```
select keycode from "EU_Transactions"."eu_moneytransfer"
```

Cancel OK

Red Hat JBoss Developer Studio

BeosBankWorkspace - Telid Designer - beosbank-datavirt/DataSources/EMEA_REF.xml - Red Hat JBoss Developer Studio

Mode | Outl | Proje

AF_Transactions.xml | EU_Transactions.xml | EMEA_REF.xml

Guides

Modeling Actions...

Action Sets

Execute selected action

Model Telid Data Source

- Define Telid Model Project >> <undefined>
- Create Data Source >> <undefined>
- Create source model from Telid data source >> <undefined>
- Set Connection Profile >> <undefined>
- Preview Data >> <undefined>
- Define VDB >> <undefined>
- Execute VDB >> <undefined>

Description

Package Diagram | Table Editor

Problems | Error Log | Servers | Console | SQL Results | Telid Execution Plan

Default Server

Name: JDV63

Telid Version: 8.12.5

Status | Result1

Status	Operation	Da	countries_id	vatRate	currency	name	country_code	country_iso	area	feesRate
✓ Succ...	select * fro...	12	1	19.25	XAF	Cameroon	00237	CM	Africa	1.2
			2	20.0	EUR	FRANCE	0033	FR	Europa	1.5

New Model Wizard

Specify model name and options then create model file.

Location: beosbank-datavirt/VirtualBaseLayer

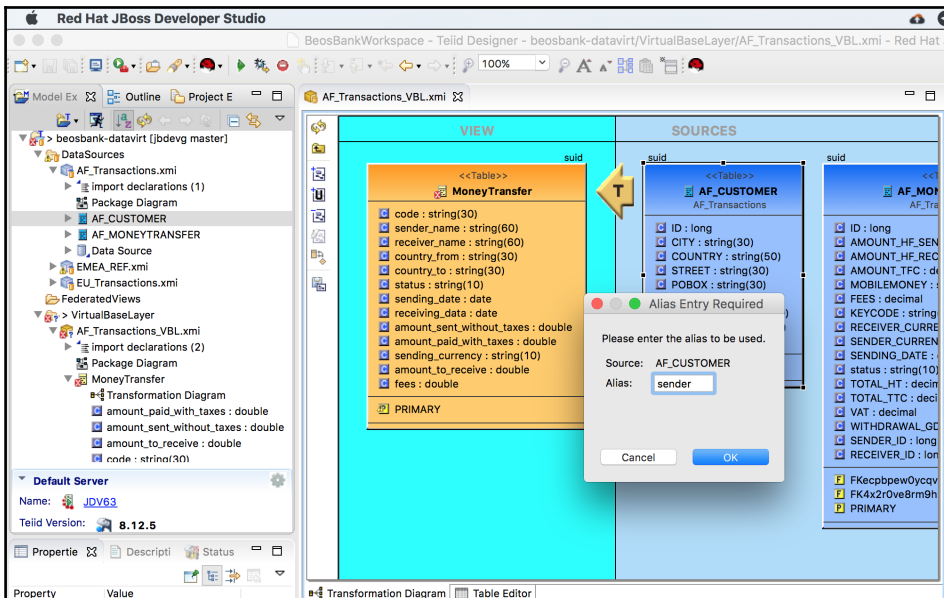
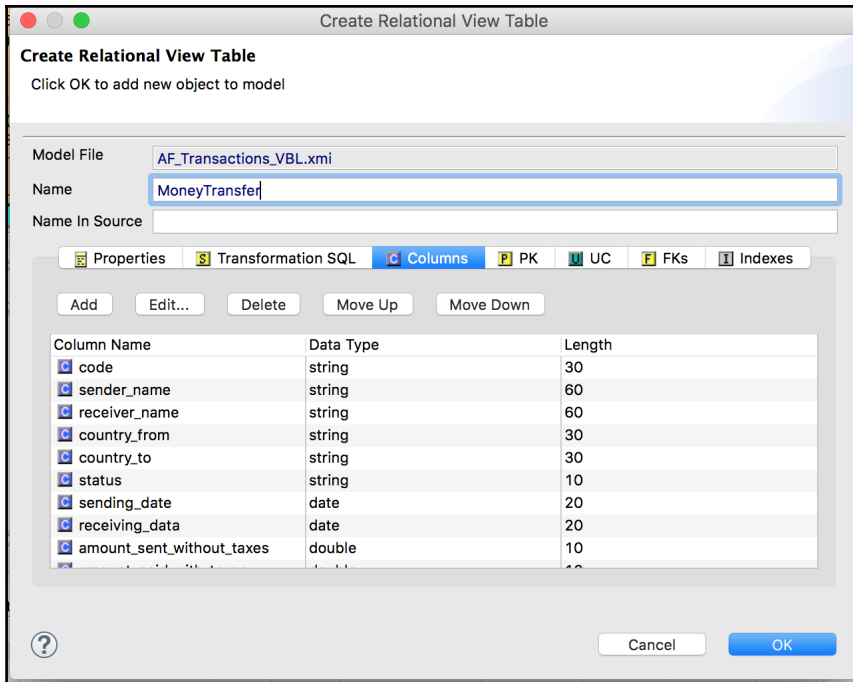
Model Name:

Model Class: Relational

Model Type: View Model

Select a model builder (optional):

- Transform from an existing model
- Copy from an existing model of the same model class



Red Hat JBoss Developer Studio - Teiid Designer - beosbank-datavirt/VirtualBaseLayer/AF_Transactions_VBL.xml - Red Hat JBoss Developer Studio

Model Ex | Outline | Project E | AF_Transactions_VBL.xml

beosbank-datavirt [bdevg master]

- DataSources
 - AF_Transactions.xml
 - EMA_REF.xml
 - EU_Transactions.xml
- FederatedViews
 - VirtualBaseLayer
 - AF_Transactions_VBL.xml
 - import declarations (2)
 - Package Diagram
 - MoneyTransfer

Default Server: JDV83, Teiid Version: 8.12.5

Modeling Actions... | Action Sets

Define Teiid Model Project | Create JDBC connection | Create source model for J | Preview Data >> <undefin | Define VDB >> <undefin | Edit VDB >> <undefin | Execute VDB >> <undefin

Trans...ditor | Cursor at (1, 1) | Supports Update

Problems | Error Log | Servers | Console | SQL Results | Teiid Execution Plan | Git Staging

Status | Result1

Status	Operation	ID	code	sender_name	receiver_name	country.to	country.from	status	amount_sent_without_taxes	sending_c
✓ Succ...	select * fro...	1	C...	Renard Louis Mbo	Angeline Wogula	Cameroon	Cameroon	DRAFT	1000.00	XAF
✓ Succ...	select * fro...	2	C...	Watal Arnold Wato	Angeline Wogula	Cameroon	Cameroon	DRAFT	1000.00	XAF
✓ Succ...	select * fro...	3	CL...	Guyso Guy Hermath	Arnold Wato	Cameroon	Ivory Coast	DRAFT	1000.00	XAF
✓ Succ...	select * fro...	4	C...	Renard Louis Mbo	Arnold Wato	Cameroon	Cameroon	DRAFT	5000.00	XAF
✓ Succ...	select * fro...	5	C...	Watal Arnold Wato	Arthur Nga	Canada	Cameroon	DRAFT	5000.00	XAF
✓ Succ...	select * fro...	6	CL...	Guyso Guy Hermath	Association URSD	Cameroon	Ivory Coast	DRAFT	2000.00	XAF
✓ Succ...	select * fro...	7	SE...	All Fall	Association URSD	Cameroon	Senegal	DRAFT	1500.00	XAF
✓ Succ...	select * fro...	8	NL...	Dhya Yemi Alade	Association URSD	Cameroon	Nigeria	DRAFT	8000.00	NGN
✓ Succ...	select * fro...	9	C...	Renard Louis Mbo	Association URSD	Cameroon	Cameroon	DRAFT	800.00	XAF
✓ Succ...	select * fro...	10	SA...	Emperor Haile Selassie	Steve Biko	South A...	Ethiopia	DRAFT	1500.00	ZAR

Model Ex | Outline | Project E | EU_Transactions_VBL.xml

beosbank-datavirt [bdevg master]

- DataSources
- FederatedViews
 - VirtualBaseLayer
 - AF_Transactions_VBL.xml
 - EU_Transactions_VBL.xml
 - import declarations (3)
 - Package Diagram
 - MoneyTransfer
 - Transformation Diagram
 - amount_paid_with_taxes: decimal
 - amount_sent_without_taxes: decimal
 - amount_to_receive: decimal
 - code: string(30)
 - country_from: string(30)
 - country_to: string(30)
 - fees: decimal
 - receiver_name: string(60)
 - receiving_currency: string(5)
 - receiving_date: date
 - sender_name: string(60)

Default Server: JDV83, Teiid Version: 8.12.5

Modeling Actions... | Action Sets

Define Teiid Model Project | Create JDBC connection | Create source model for J | Preview Data >> <undefin | Define VDB >> <undefin | Edit VDB >> <undefin | Execute VDB >> <undefin

Trans...ditor | Cursor at (1, 1) | Supports Update

Problems | Error Log | Servers | Console | SQL Results | Teiid Execution Plan

Status | Result1

Status	Ope	ID	code	sender_name	receiver_name	country.from	country.to	status	amount_sent	receiving_currency	sendin
✓ Succ...	sele	1	DE...	Yanick Modjo	Mirabeau Luc	Germany	Italy	DRA...	200.00	EUR	2017-
✓ Succ...	sele	2	FR...	Noe Nono	Nathan Brice	France	Cameroon	DRA...	500.00	EUR	2016-
✓ Succ...	sele	3	FR...	Landry Kou...	Ghislain Ka...	France	Cameroon	DRA...	200.00	EUR	2017-
✓ Succ...	sele	4	BE...	Yohan Pieter	John Doe	Belgium	UK	DRA...	150.00	EUR	2015-
✓ Succ...	sele	5	UK...	John Doe	Ghislain Ka...	UK	Cameroon	DRA...	110.00	GBP	Total 9 r
✓ Succ...	sele	6	PO...	Souleyman...	Mohamed Di...	Pologne	Mali	DRA...	230.00	PLN	2017-
✓ Succ...	sele	7	BE...	Yohan Pieter	Anusha Man...	Belgium	India	DRA...	100.00	EUR	2017-
✓ Succ...	sele	8	BE...	Yohan Pieter	Adriana Pinto	Belgium	Brasil	DRA...	100.00	EUR	2017-
✓ Succ...	sele	9	FR...	Noe Nono	Nathan Brice	France	Cameroon	DRA...	400.00	EUR	2017-

Transactions.xml

<<Table>>

MoneyTransfer

- code : string(30)
- sender_name : string(60)
- receiver_name : string(60)
- country_to : string(30)
- country_from : string(30)
- status : string(10)
- amount_sent_without_taxes : decimal
- sending_currency : string(5)
- sending_date : date

<<Table>>

MoneyTransfer

AF_Transactions_VBL

- code : string(30)
- sender_name : string(60)
- receiver_name : string(60)
- country_to : string(30)
- country_from : string(30)
- status : string(10)
- amount_sent_without_taxes : decimal
- sending_currency : string(5)

<<Table>>

MoneyTransfer

EU_Transactions_VBL

- code : string(30)
- sender_name : string(60)
- receiver_name : string(60)
- country_to : string(30)
- country_from : string(30)
- status : string(10)
- amount_sent_without_taxes : decimal
- sending_currency : string(5)

Transformation Editor

```

SELECT
FROM
AF_Transactions_VBL.MoneyTransfer
UNION ALL
SELECT

```

Default Server: JDV83

SQL Results

Status	Operation	code	sender_name	receiver_name	country_to	country_from	status	amount_sent_without_taxes	sending_currency	sending_date	amount_to_re
✓ Succ...	select * fr...	CL...	Guyso Gu...	Association...	Cameroun	Ivory Coast	DRA...	2000.00	XAF	2017-04-13	NULL
✓ Succ...	select * fr...	SE...	All Fall	Association...	Cameroun	Senegal	DRA...	1500.00	XAF	2017-04-14	NULL
✓ Succ...	select * fr...	NI...	Divya Yemi...	Association...	Cameroun	Nigeria	DRA...	9000.00	NGN	2017-04-15	NULL
✓ Succ...	select * fr...	SA...	Emperor H...	Steve Biko	South A...	Ethiopia	DRA...	1500.00	ZAR	2017-04-16	NULL
✓ Succ...	select * fr...	CL...	Guyso Gu...	Arnold Wato	Cameroun	Ivory Coast	DRA...	1000.00	XAF	2017-05-09	NULL
✓ Succ...	select * fr...	C...	Watal Arn...	Angeline Wo...	Cameroun	Cameroun	DRA...	1000.00	XAF	2017-05-10	NULL
✓ Succ...	select * fr...	C...	Renard Lo...	Arnold Wato	Cameroun	Cameroun	DRA...	8000.00	XAF	2017-05-10	NULL
✓ Succ...	select * fr...	C...	Renard Lo...	Association...	Cameroun	Cameroun	DRA...	800.00	XAF	2017-05-10	NULL
1	DE...	Yanick Modjo	Mirabeau Luc	Germany	Italy	Italy	DRA...	200.00	EUR	2017-03-01	NULL
2	FR...	Noe Nono	Nathan Brice	France	Cameroun	Cameroun	DRA...	500.00	EUR	2016-12-12	NULL
3	FR...	Landry Kou...	Ghislain Ka...	France	Cameroun	Cameroun	DRA...	200.00	EUR	2017-05-01	NULL
4	BE...	Yohan Pieter	John Doe	Belgium	UK	UK	DRA...	150.00	EUR	2015-07-03	NULL
5	UK...	John Doe	Ghislain Ka...	UK	Cameroun	Cameroun	DRA...	110.00	GBP	2017-04-15	NULL
6	PL...	Souleyman...	Mohamed Di...	Pologne	Mail	Mail	DRA...	230.00	PLN	2017-04-16	NULL
7	BE...	Yohan Pieter	Arusha Man...	Belgium	India	India	DRA...	100.00	EUR	2017-05-08	NULL
8	BE...	Yohan Pieter	Adriana Pinto	Belgium	Brasil	Brasil	DRA...	100.00	EUR	2017-05-10	NULL
9	ED	Mina Khou...	Mina Khou...	France	France	France	DRA...	200.00	EUR	2017-05-10	NULL

Total 19 records shown

New VDB

Press the "Finish" button to finish.

In Folder: beosbank-datavirt

VDB Name: beosbank

Description

Beosbank Money Transfer Virtual DB

Selected Models

Add Transactions.xml

Cancel Finish

Connection profile

Type: Telid_7.7+ Name: beosbank - localhost - Telid Connector Database: beosbar Status: C

```

1 // 1) Enter valid SQL query (i.e. SELECT * FROM F00)
2 // 2) Highlight query and right-click select "Execute Selected Text"
3
4 SELECT * FROM Transactions.MoneyTransfer where code in ('BEUK001','FRCM001')

```

Status	Operation	code	sender_name	receiver_name	country_to	country_from	status	amount_sent_without_taxes	sending_curre
✓ Succ...	SELECT * 1	FRCM001	Noe Nono	Nathan Brice	France	Cameroon	DRA...	500.00	EUR
✓ Succ...	SELECT * 2	BEUK001	Yohan Pieter	John Doe	Belgium	UK	DRA...	150.00	EUR

Create Relational View Procedure

Click OK to add new object to model

Model File:

Name:

Name In Source:

Properties Parameters Transformation SQL Result Set Description

Add Delete Edit... Move Up Move Down

Parameter Name	Data Type	Length	Direction
amountToSend	bigdecimal	8	IN
countryFrom	string	30	IN

Cancel OK

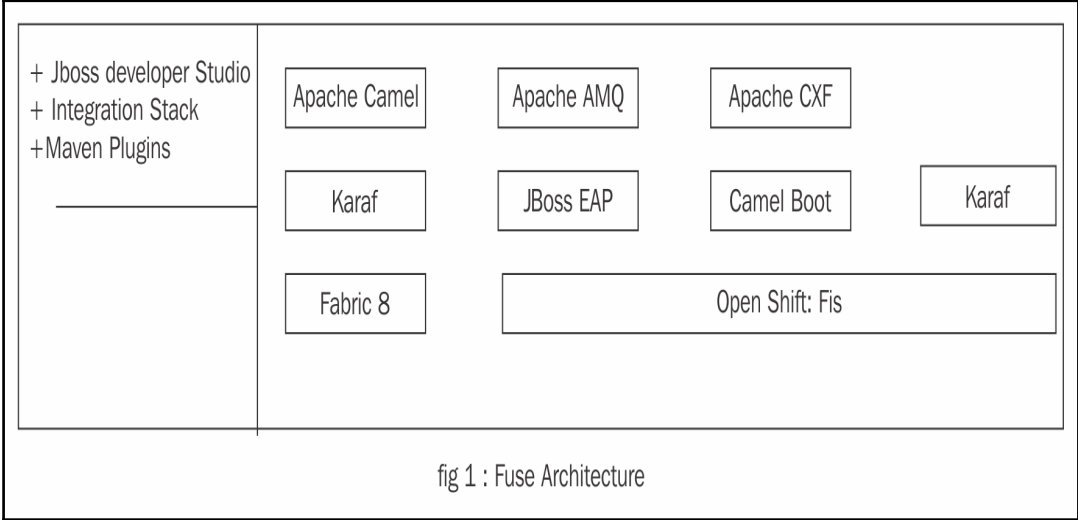
The screenshot shows an IDE interface with several components:

- Left Panel (Project Explorer):** Displays a project structure for 'beosbank-datavirt'. It includes folders for 'DataSources', 'FederatedViews', 'VirtualBaseLayer', and 'Package Diagram'. Under 'Package Diagram', there is a 'getTransferFees' package containing a 'Transformation Diagram' and a 'Table Editor'. The 'Transformation Diagram' contains 'amountToSend : bigdecimal' and 'countryFrom : string(30)'. The 'Table Editor' contains 'feesToPay : decimal(1)'. Other files include 'EU_Transactions_VBL.xml', 'beosbank.vdb', and 'SQLScrapbook0.sql'.
- Top Panel (Transformation Diagram):** Shows a transformation diagram with two nodes:
 - Left Node (Procedure):** A yellow box labeled '<<Procedure>>' with the name 'getTransferFees'. It contains two input parameters: 'amountToSend : bigdecimal' and 'countryFrom : string(30)'. Below it is a 'Procedure Result Set' box labeled 'Fees' with one output parameter: 'feesToPay : decimal'.
 - Right Node (Table):** A yellow box labeled '<<Table>>' with the name 'countries'. It contains several columns: 'countries_id : object', 'vatRate : double', 'currency : string', 'name : string', 'country_code : string', and 'country_iso : string'.
 - Transformation Arrow:** A yellow arrow with a 'T' symbol points from the 'Fees' result set to the 'countries' table.
- Transformation Editor:** Contains the following SQL code:


```
BEGIN
SELECT ((EMEA_REF_VBL.countries.feesRate * EMEA_REF_VBL.getTransferFees.amountToSend) / 100.00) AS feesToPay FROM EMEA_REF_VBL.countries WHERE
EMEA_REF_VBL.countries.name = EMEA_REF_VBL.getTransferFees.countryFrom]
END
```
- Bottom Panel (SQL Results):** Shows a table with the following data:

Status	Operati	feesToPay
✓ Succ...	EXEC E	1 0.750000000000000000
✓ Succ...	EXEC E	
✓ Succ...	EXEC E	
✓ Succ...	EXEC E	

Chapter 6: Integrating Applications with JBoss Fuse



```
MacBook-Pro-de-elvadas:jboss-fuse-6.3.0.redhat-187 enonowog$ ./bin/fuse
Please wait while JBoss Fuse is loading...
100% [=====]

  _____
 |           | |
 |    _____    |
 |   <<< <<< <<< <<< <<< <<< <<< <<< |
 |  <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< <<< |
 |   >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> >>> |
 |           | |
 |_____|_____|

JBoss Fuse (6.3.0.redhat-187)
http://www.redhat.com/products/jbossenterprisemiddlewae/fuse/

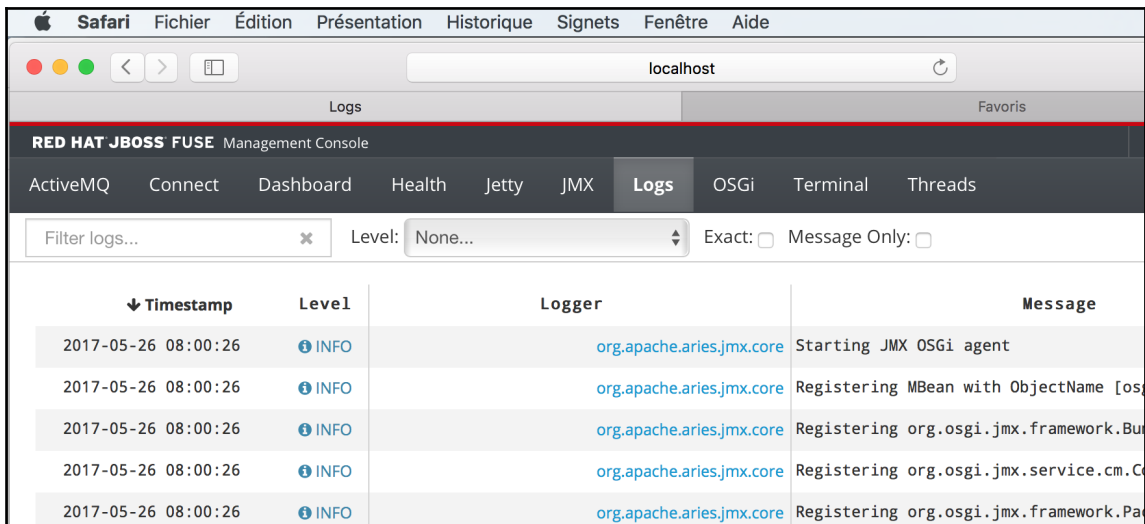
Hit '<tab>' for a list of available commands
and '[cmd] --help' for help on a specific command.

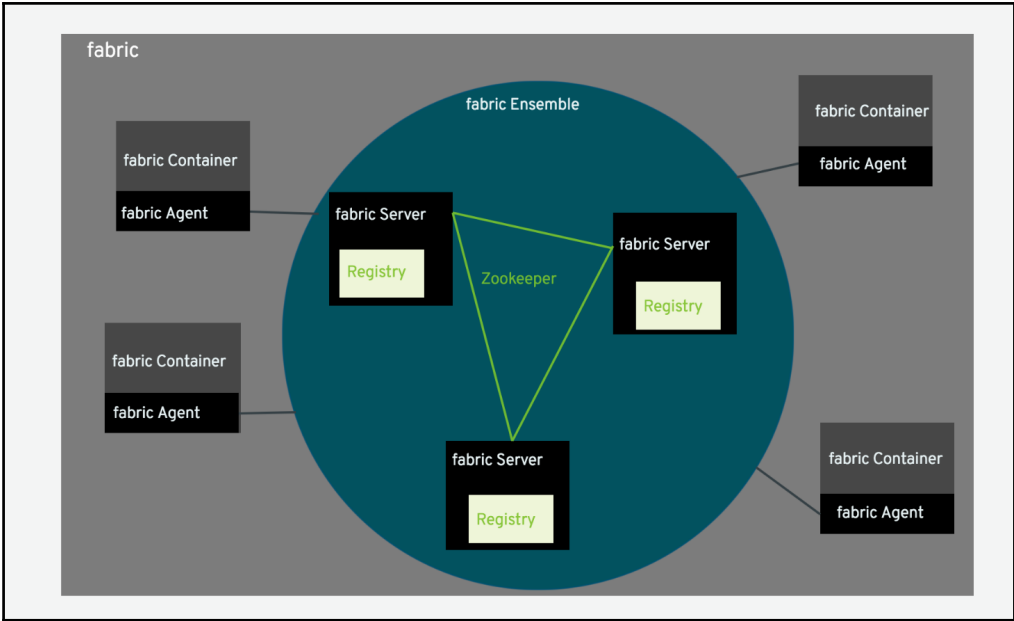
Open a browser to http://localhost:8181 to access the management console

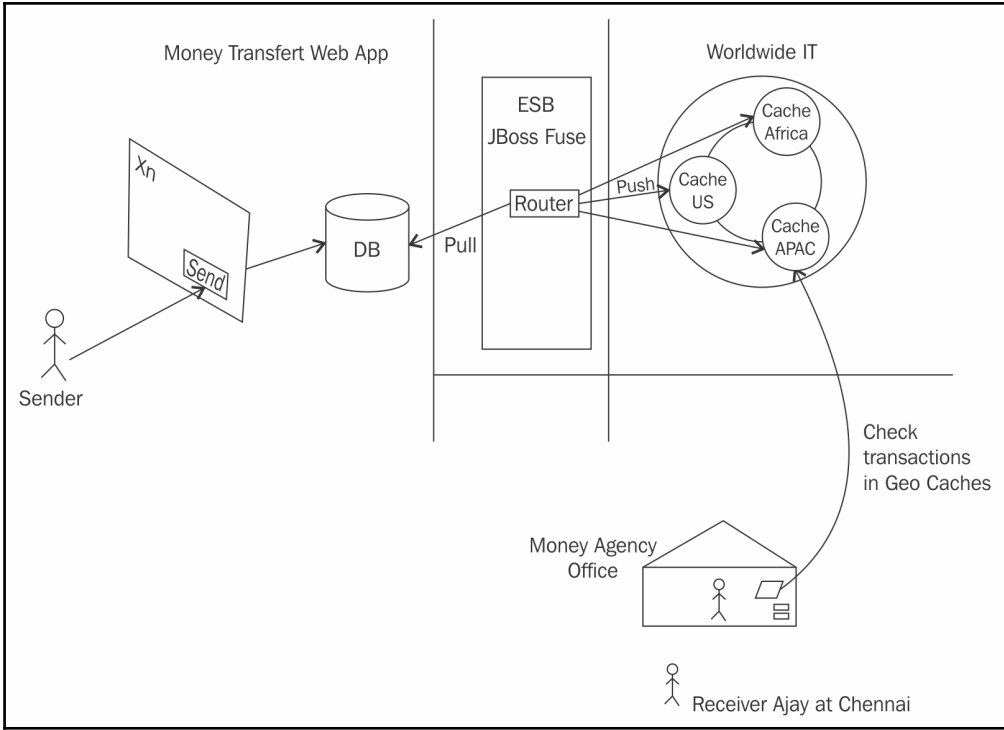
Create a new Fabric via 'fabric:create'
or join an existing Fabric via 'fabric:join [someURLs]'

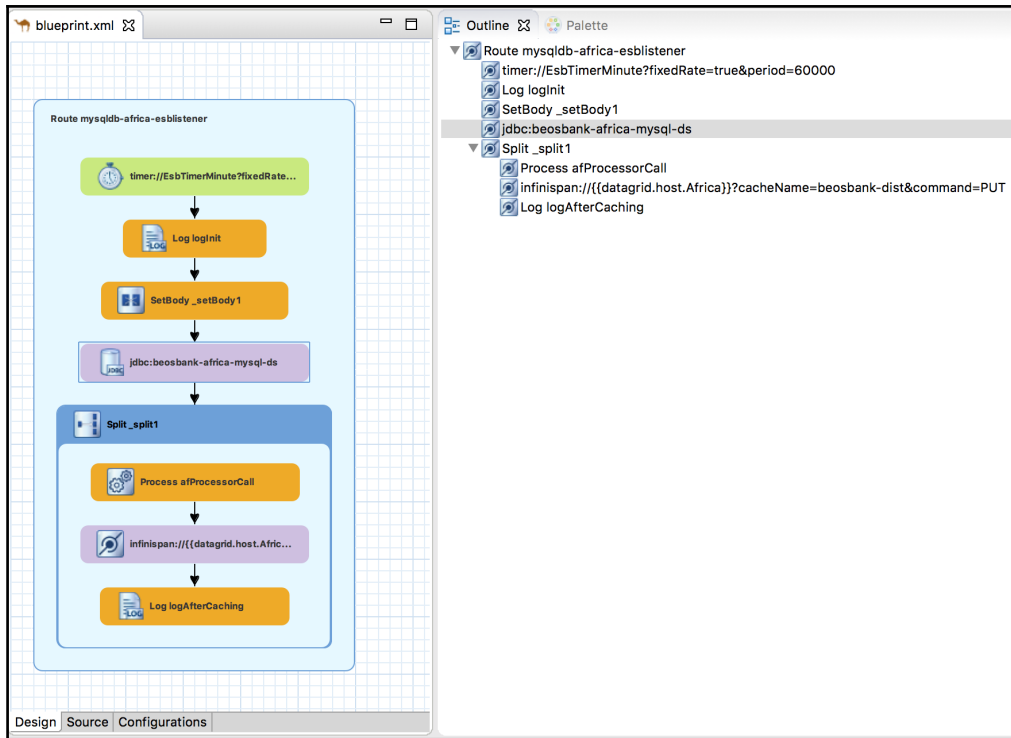
Hit '<ctrl-d>' or 'osgi:shutdown' to shutdown JBoss Fuse.

JBossFuse:karaf@root> █
```



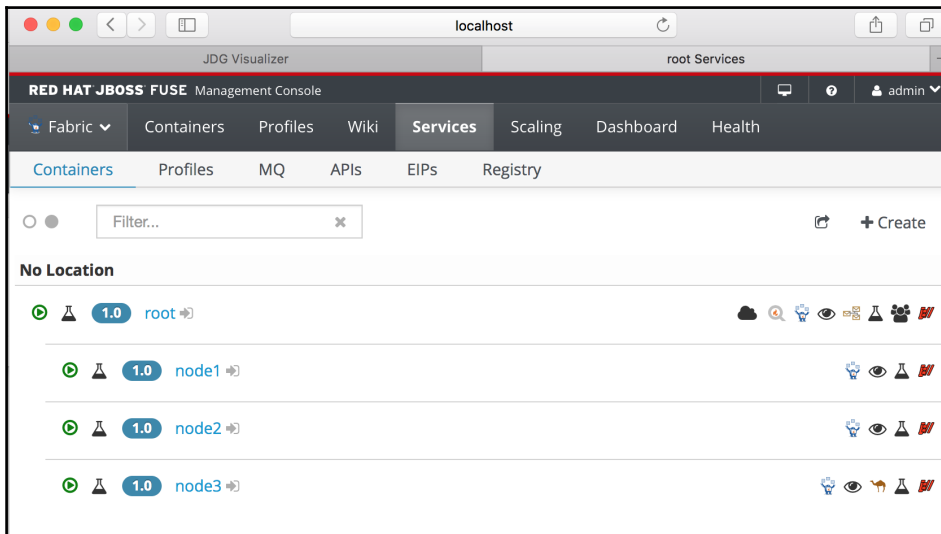
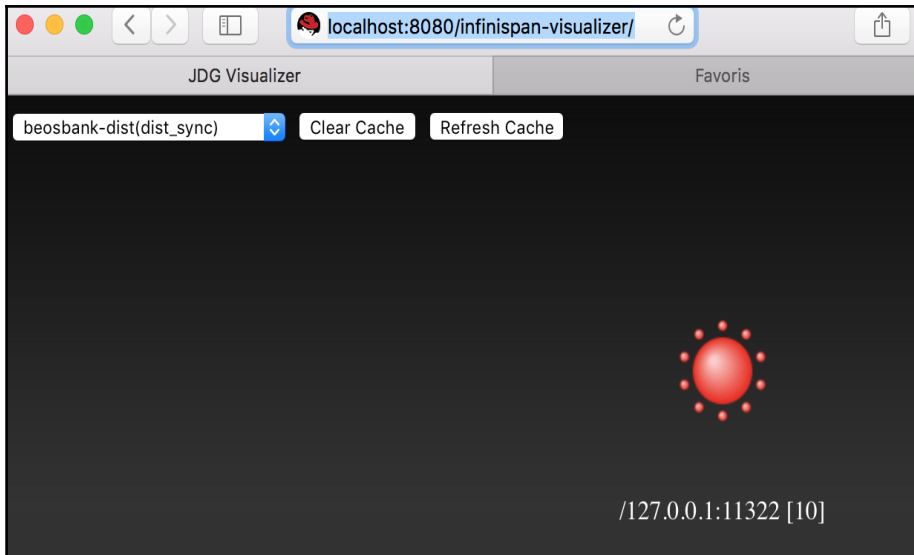




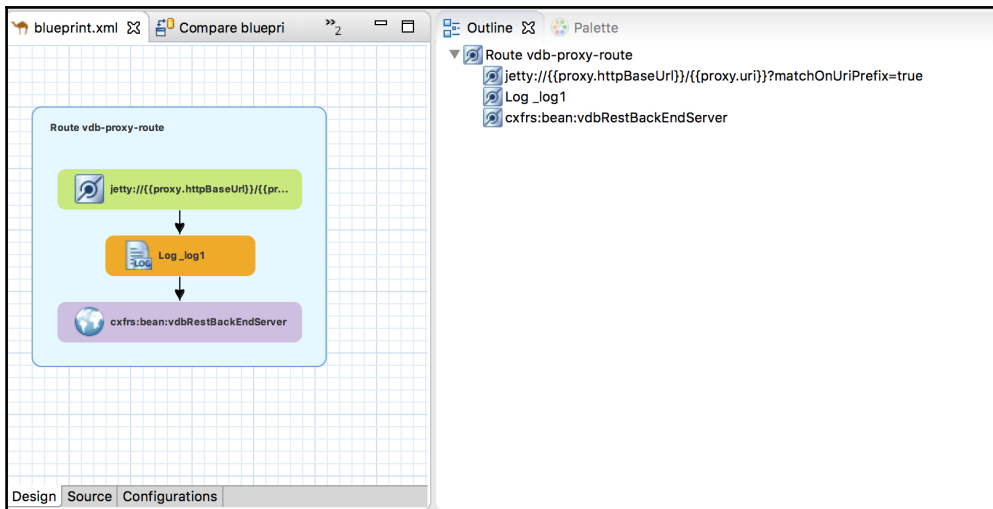


```

MacBook-Pro-de-elvadas:~ enonowog$ docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED        STATUS        PORTS                               NAMES
dd61e5f76826      docker_posgres_db_europa    "docker-entrypoint..." 9 hours ago   Up 9 hours   0.0.0.0:6432->5432/tcp              docker_posgres_db_europa_1
a2ad2eed90fe      mongo:3.4.4          "docker-entrypoint..." 9 hours ago   Up 9 hours   0.0.0.0:28001->27017/tcp            docker_mongo_db_emed_1
704364b467e6      docker_mysql_db_africa     "docker-entrypoint..." 9 hours ago   Up 9 hours   0.0.0.0:3406->3306/tcp              docker_mysql_db_africa_1
MacBook-Pro-de-elvadas:~ enonowog$
  
```



JDG Visualizer		root Services		pid:2368 Logs	
RED HAT JBOSS FUSE Management Console					
Container	Camel	Dashboard	Jetty	JMX	Logs
Filter logs...		Level: None...		Exact: <input type="checkbox"/> Message Only: <input type="checkbox"/>	
2017-05-31 00:53:54	INFO	mysql	mysql	mysql	New Cache Entry: MoneyTransfer [id=2;CMRCAN001;5000.00;...
2017-05-31 00:53:54	INFO	mysql	mysql	mysql	New Cache Entry: MoneyTransfer [id=3;CIVCMR001;2000.00;...
2017-05-31 00:53:54	INFO	mysql	mysql	mysql	New Cache Entry: MoneyTransfer [id=4;SENCMR001;1500.00;...
2017-05-31 00:53:54	INFO	mysql	mysql	mysql	New Cache Entry: MoneyTransfer [id=5;NIGCMR001;9000.00;...
2017-05-31 00:53:54	INFO	mysql	mysql	mysql	New Cache Entry: MoneyTransfer [id=6;SAFETH001;1500.00;...
2017-05-31 00:53:54	INFO	mysql	mysql	mysql	New Cache Entry: MoneyTransfer [id=7;CIVCMR002;1000.00;...
2017-05-31 00:53:54	INFO	mysql	mysql	mysql	New Cache Entry: MoneyTransfer [id=8;CMRCMR002;1000.00;...
2017-05-31 00:53:54	INFO	mysql	mysql	mysql	New Cache Entry: MoneyTransfer [id=9;CMRCMR003;5000.00;...
2017-05-31 00:53:54	INFO	mysql	mysql	mysql	New Cache Entry: MoneyTransfer [id=10;CMRCMR004;800.00;...
2017-05-31 00:54:54	INFO	mysql	mysql	mysql	Checking new Transactions



```
MacBook-Pro-de-elvadas:~ enonowog$ http http://127.0.0.1:8186/vdbproxy/Transactions.MoneyTransfer?format=json
HTTP/1.1 200 OK
Format: json
Accept: */*
Accept-Encoding: gzip, deflate
Content-Type: application/json;charset=utf-8
DataServiceVersion: 2.0
Expires: Thu, 01 Jan 1970 01:00:00 CET
Server: Apache-Coyote/1.1
Transfer-Encoding: chunked
User-Agent: HTTPie/0.9.8
breadcrumbId: ID-MacBook-Pro-de-elvadas-local-50391-1496445378787-0-12
```

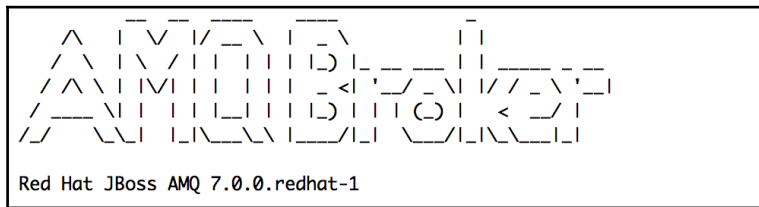
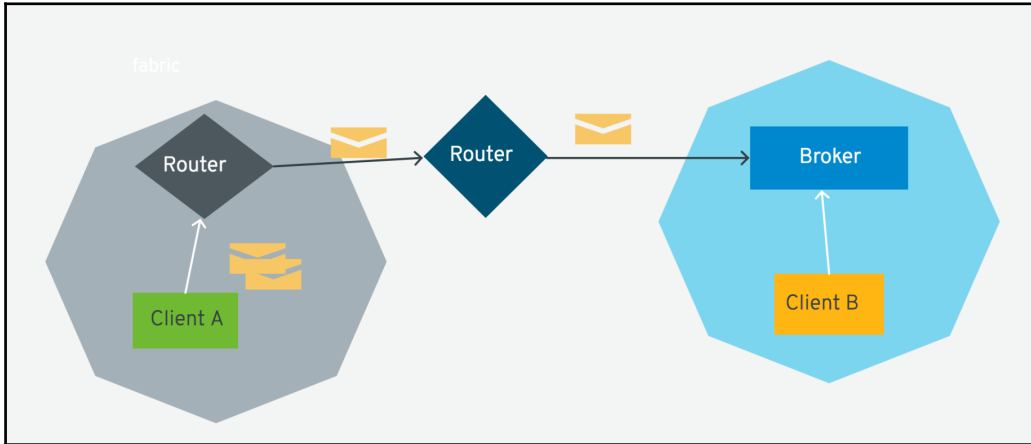
```
{
  "d": {
    "results": [
      {
        "__metadata": {
          "type": "Transactions.MoneyTransfer",
          "uri": "http://localhost:8080/odata/beosbank.1/Transactions.MoneyTransfer('BEBR002')",
        },
        "amount_paid_with_taxes": null,
        "amount_sent_without_taxes": "100.00",
        "amount_to_receive": null,
        "code": "BEBR002",
        "country_from": "Brasil",
        "country_to": "Belgium",
        "fees": null,
        "receiver_name": "Adriana Pinto",
        "receiving_currency": "BRL",
        "receiving_date": null,
        "sender_name": "Yohan Pieter",
        "sending_currency": "EUR",
        "sending_date": "/Date(1494374400000)/",
        "status": "DRAFT",
        "vat": null
      }
    ]
  }
}
```

The screenshot shows the Red Hat JBoss Fuse Management Console interface. The top navigation bar includes 'ActiveMQ', 'Connect', 'Jetty', 'JMX', 'Logs', 'OSGi', 'Terminal', and 'Threads'. The main content area is titled 'ID:MacBook-Pro-de-elvadas.local-60156-1496746730881-1:1:1:1'. On the left, a tree view shows the 'root' directory containing a 'Queue' (QUEUE.VAT.USA) and several other components like 'clientConnectors', 'dynamicProducer', 'Health', and 'PersistenceAdapter'. The 'Queue' is expanded to show '12 / 12' messages. The selected message is displayed in a text view, showing its headers and properties. The body of the message is shown as a hex dump (bytes) and a text representation (XML).

```
1 bytes:
2 3c 3f 78 6d 6c 20 76 65 72 73 69 6f 6e 3d 22 31 2e 30 22 20 65 6e 63 6f 64 69 6e 67 3d
3 22 55 54 46 2d 38 22 20 3f 3e 0a 3c 4d 6f 6e 65 79 54 72 61 6e 73 66 65 72 3e 0a 20 20 20 3c 61 6d 6f 75
4 61 6d 3e 0a 3c 6d 6f 6e 65 79 74 72 61 6e 73 66 65 72 3e 0a 20 20 20 3c 61 6d 6f 75 6e 74 45 78
5 6e 74 45 78 63 6c 75 64 69 6e 67 46 65 65 65 73 3e 0a 20 20 3c 61 6d 6f 75 6e 74 45 78 63 6c 75 64 69
6 63 6c 75 64 69 6e 67 46 65 65 73 3e 0a 20 20 3c 61 6d 6f 75 6e 74 45 78 63 6c 75 64 69
7 6e 67 46 65 65 73 49 6e 52 65 63 65 69 76 65 72 43 75 72 72 65 6e 63 79 22 3e 0a 20 20
8 3c 61 6d 6f 75 6e 74 49 6e 63 6c 75 64 69 6e 67 46 65 65 73 2f 3e 0a 20 20 3c 63 72 65
9 64 69 74 43 61 72 64 4e 75 6d 62 65 72 3e 31 31 31 2d 32 32 32 2d 33 33 33 33 2d
10 32 32 32 32 3c 2f 63 72 65 64 69 74 43 61 72 64 4e 75 6d 62 65 72 3e
11
```

```
3
4 text:
5 <?xml version="1.0" encoding="UTF-8" ?>
6 <MoneyTransferStream>
7 <moneytransfer>
8 <amountExcludingFees>200</amountExcludingFees>
9 <amountExcludingFeesInReceiverCurrency/>
10 <amountIncludingFees/>
11 <creditCardNumber>1111-2222-3333-2222</creditCardNumber>
```

Chapter 7: Delivers Information Safely and Connects lo T



RED HAT JBOSS AMQ 7 Management Console

Artemis Connect Dashboard Dispatch Router JMX Threads Wiki

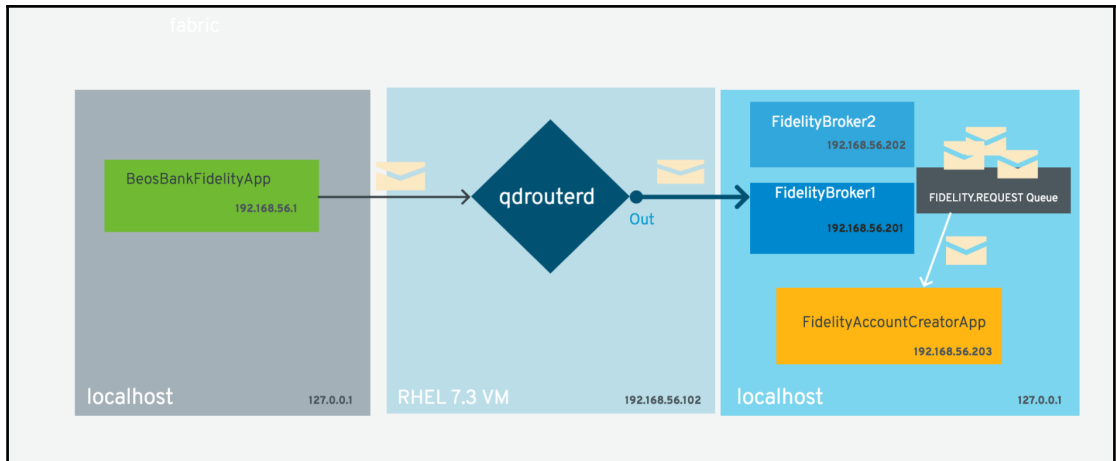
Attributes Operations Chart Diagram

Filter...

Property	Value
Address	DLQ
Address size	0
Binding names	DLQ
Message count	0
Number of bytes per page	10485760

broker1

- acceptors
 - amqp
 - artemis
 - hornetq
 - mqtt
 - stomp
- addresses
 - DLQ
 - ExpiryQueue



RED HAT JBOSS AMQ 7 Management Console

Artemis Connect Dashboard Dispatch Router JMX Threads Wiki

- ✓ FidelityBroker1
 - > acceptors
 - ✓ addresses
 - > DLQ
 - > ExpiryQueue
 - ✓ FIDELITY.REQUEST
 - ✓ queues
 - ✓ "anycast"
 - ⚙ FIDELITY.REQUEST

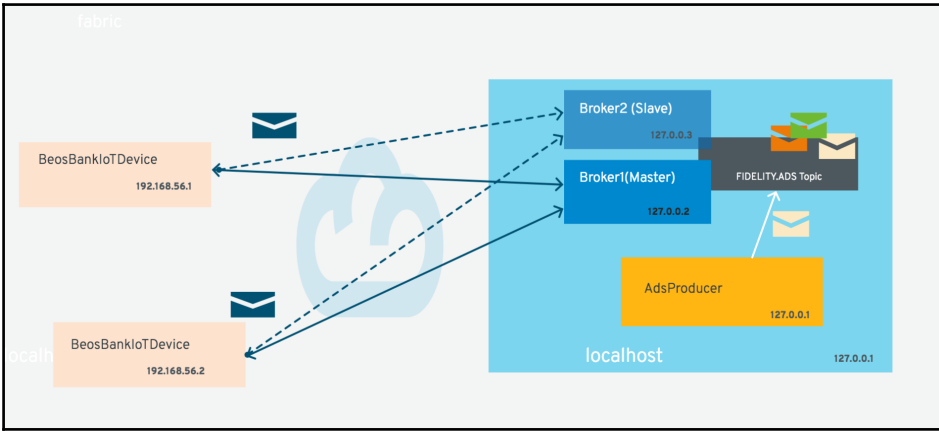
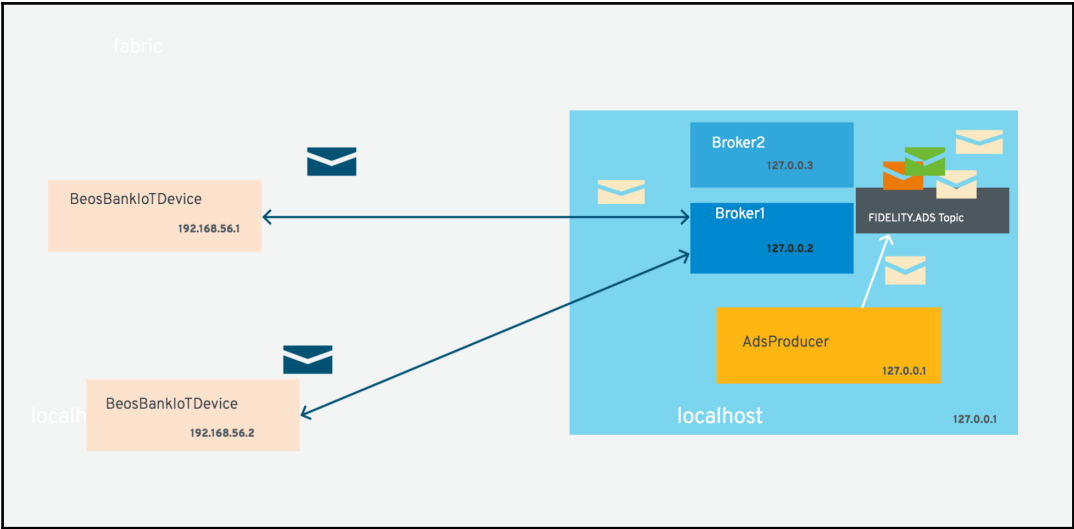
Filter

1 / 3

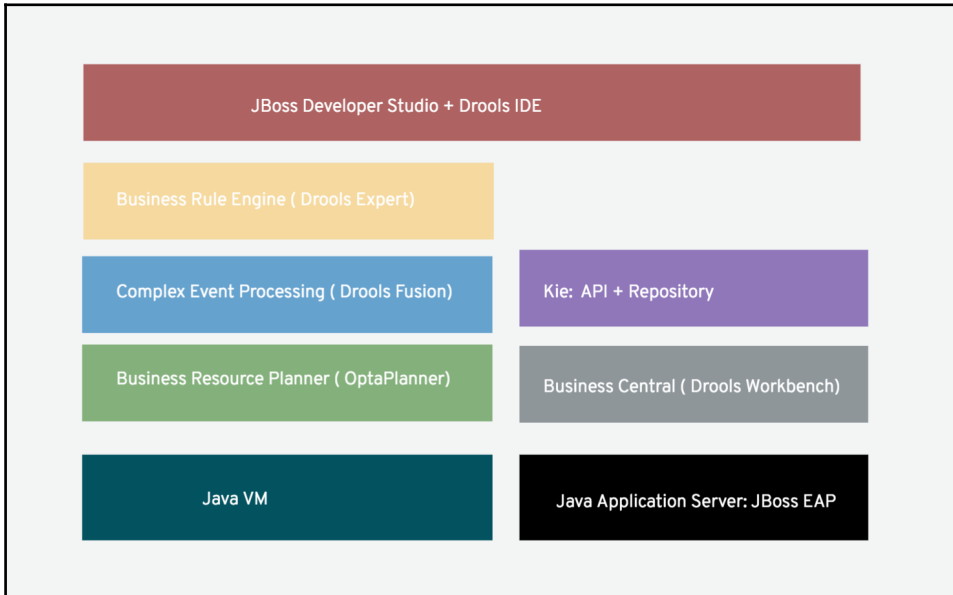
▶ Headers & Properties

Displaying body as text (41 chars)

1	CREATE;10000;JBoss;Doctor;TRX001;4.99;EUR
---	---



Chapter 8: Making Better Decisions in Your Application S



RED HAT JBOSS BRMS

Home ▾ Authoring ▾ Deploy ▾ Tasks Extensions ▾

Welcome to Red Hat JBoss BRMS 6

The Red Hat platform for building Real-Time Business Rules.
One place to model, deploy, and execute Rules.

Model
Create Projects and Model Business Assets.

Analyze
Test and Analyze Business Rules

Deploy
Create and Manage Deployments.

Design Business Assets:

- Business Processes
- Data Models
- User Forms
- Business Rules
- Simulations

We provide an all-in-one framework for organizing and deploying projects:

Organizations
Organize workspaces by group or department. Setting up groups in BPM Suite enables broad-level access management.

Repositories
All projects and assets are stored in Git repositories (every Organizational Unit needs to have at least one repository).

Projects
A project is a collection of all the assets and information needed to build a complete functional system.

Packages
All business assets are stored in package folders. Assets that work

An example project structure:

Retail Banking

- Loan Processing
 - New Mortgages
 - Mortgage Approval

Add New Organizational Unit ✕

Organizational Unit Information

Name *

Default Group ID * ⓘ

Owner

New Repository

Basic Settings

Repository Name *

In Organizational Unit *

Managed Repository

< Previous Next > Cancel **Finish**

Clone Repository

Repository Information

Repository Name *

Organizational Unit *

Git URL *

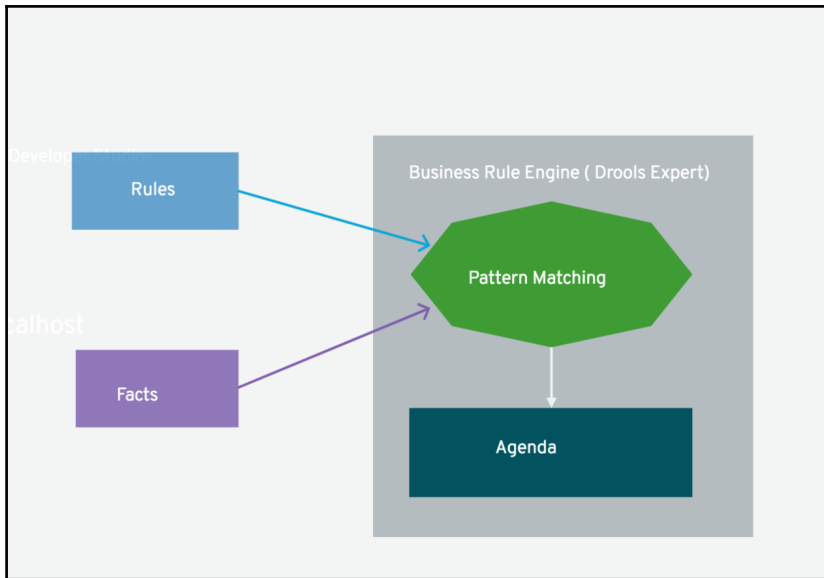
User Name

Password

Is managed repository

Cancel **Clone**

git://localhost:9418/BeosBankRepository Available protocol(s): git



RED HAT JBOSS BRMS

Home ▾ Authoring ▾ Deploy ▾ Tasks Extensions ▾

Explore ▾ New Item ▾ Repository ▾

Project Explorer

- Project
- Business Process
- Data Object
- Decision Table (Spreadsheet)
- DRL file
- DSL definition
- Enumeration
- Global Variable(s)
- Guided Decision Table
- Guided Decision Tree
- Guided Rule
- Guided Rule Template
- Guided Score Card
- Package
- Score Card (Spreadsheet)
- Test Scenario
- Uploaded file
- Work Item definition

BeosBank ▾

<default> com

apply-discount

DATA OBJECT

MoneyTransfer

Promotion

PromotionFeesItem

TEST SCENARIOS ▾

MoneyTransfert.java - Data Objects ▾ Save Delete

Editor Overview Source

```

9
10 static final long serialVersionUID = 1L;
11
12 @org.kie.api.definition.type.Label("MoneyTransfert Reference")
13 private java.lang.String reference;
14 @org.kie.api.definition.type.Label("Fees Amount Without Taxes")
15 private java.math.BigDecimal amountWithoutTaxes;
16 @org.kie.api.definition.type.Label("Discount Code")
17 private java.lang.String discountCode;
18 @org.kie.api.definition.type.Label("Amount after applying discounts")
19 private java.math.BigDecimal amountWithDiscount;
20 @org.kie.api.definition.type.Label("discount Applied")
21 private java.math.BigDecimal discountRate;
22 @org.kie.api.definition.type.Label("Sender Name")
23 private java.lang.String sender;
24 @org.kie.api.definition.type.Label("Receiver Name")
25 private java.lang.String receiver;
26 @org.kie.api.definition.type.Label("Sender Country")
27 private java.lang.String countryFrom;
28 @org.kie.api.definition.type.Label("Receiver Country")
29 private java.lang.String countryTo;
30 @org.kie.api.definition.type.Label("Transaction Date")
31 private java.util.Date trxDate;
32
33 public MoneyTransfert()
34 {
35

```

Reporting

RED HAT JBOSS BRMS

Home ▾ Authoring ▾ Deploy ▾ Tasks Extensions ▾

Explore ▾ New Item ▾ Repository ▾

Project Explorer Open Project Editor Promotion.java - Data Objects ▾ Save Delete Rename Copy Validate

BeosBank ▾ CRM ▾ beosbank-brms-discour

<default> ▾ com ▾ beosbank ▾ jbdevg ▾ brms

DRL ▾

apply-discount-codes

DATA OBJECTS ▾

MoneyTransfert

Promotion

PromotionFeesItem

Promotion.java - Data Objects ▾ Editor Overview Source

Promotion + add field

Identifier	Label	Type	
beginDate	Start date	Date	Delete
code	Promotion ...	String	Delete
description	Promotion ...	String	Delete
endDate	End Date	Date	Delete
promold	Promotion ...	Long	Delete
rate	Promotion ...	BigDecimal	Delete

'Promotion'- general properties

Identifier: Promotion

Label:

Description:

Package: com.beosbank.jbdevg.brms

Superclass: java.lang.Object

RED HAT JBOSS BRMS

Home ▾ Authoring ▾ Deploy ▾ Tasks Extensions ▾ Search

Explore ▾ New Item ▾ Repository ▾

Project Explorer Open Project Editor PromotionApplicationTest.scenario - Test Scenarios ▾ Save Delete Rename Copy Run scenario Run all scenarios

BeosBank ▾ CRM ▾ beosbank-brms-discour

<default> ▾ com ▾ beosbank ▾ jbdevg ▾ brms

DRL ▾

apply-discount-codes

DATA OBJECTS ▾

MoneyTransfert

Promotion

PromotionFeesItem

TEST SCENARIOS ▾

PromotionApplicationTest.scenario - Test Scenarios ▾ Editor Overview Data Objects

Knowledge base: defaultKieBase Knowledge session: defaultKieSession

GIVEN

Insert 'MoneyTransfert'[mt0]

- amountWithoutTaxes: 50
- reference: FRCM10001
- discountCode: MERRY CHRISTMAS
- trxDate: 19-Dec-2017

Insert 'Promotion'[p0]

- beginDate: 01-Nov-2017
- code: MERRY CHRISTMAS
- endDate: 31-Jan-2018
- description: Get 25% reduction on yc
- rate: 0.25

CALL METHOD

Add input data and expectations here.

Reporting

RED HAT JBOSS BRMS

Home | Authoring | Deploy | Tasks | Extensions

Search

Explore | New Item | Repository | Messages | Asset Search

Project Explorer: Beosbank > CRM > beosbank-brms-discour

Filter by Tag: none

MoneyTransferTest

PromotionApplicationTest.scenario - Test Scenarios

CALL METHOD

EXPECT

Use real date and time

Expect rules

Apply Discount Codes: fired at least once

MoneyTransfer 'mt0' has values:

- amountWithDiscount: equals 37.5
- discountRate: equals 0.25

A fact of type 'PromotionFeesItem' has values:

- amountGranted: equals 12.50
- promotionCode: equals MERRY CHRISTMAS
- trxReference: equals FRCM10001

More... (configuration) (globals)

All rules may fire

Messages

Level | Text | File | Column | Line

Reporting

Success
1 test(s) ran in 0 minutes 0 seconds.

CALL METHOD

EXPECT

Use real date and time

Expect rules

Apply Discount Codes: fired at least once

MoneyTransfer 'mt0' has values:

- amountWithDiscount: equals 37.5
- discountRate: equals 0.25

A fact of type 'PromotionFeesItem' has values:

- amountGranted: equals 12.5055 (Actual: 12.50)
- promotionCode: equals MERRY CHRISTMAS
- trxReference: equals FRCM10001

More... (configuration) (globals)

All rules may fire

Reporting

There were test failures

NAME	CONDITION	CONDITION	CONDITION	ACTION	ACTION
	countryFrom.equalsIgnoreCase("S param")	countryTo.equalsIgnoreCase("S param")	feesComputed == false, amountToSend >= \$1, amountToSend < \$2	\$\$.setFeesAmount(\$param);	\$\$.setFeesAmount(\$\$.getFeesAmount()+\$param*\$\$.getAmountToSend()); \$.setFeesComputed(true); update(\$); System.out.println("Trx From "+\$.getCountryFrom()+": To: "+\$.getCountryTo()+ " Amount="+\$.getAmountToSend()+ " Fees="+\$.getFeesAmount());
BeosBankPrices rules	Sender Country	Destination Country	Min,Max	Fixed Price Fees	Variable Fees Amount Percentage
France_To_Cameroon_Part1	France	Cameroon	0.0,100.0	4.99	0.0
France_To_Cameroon_Part2	France	Cameroon	100.00,500.0	7.99	0.0
France_To_Cameroon_Part3	France	Cameroon	500.00,15000	0	0.02
France_To_US	France	USA	0.0,10000	0	0.03
France_To_India	France	India	0.0,25000	3.50	0.01

RED HAT JBOSS BRMS

Home | Authoring | Deploy | Tasks | Extensions

Explore | New Item | Repository

Project Explorer: `com > beosbank > jbddevg > brms`

getFeesTestScenario.scenario - Test Scenarios

Editor | Overview | Data Objects

Knowledge base: defaultKieBase | Knowledge session: defaultKieSession

GIVEN

Insert 'FeesRequest'[fr]

- amountToSend: 150
- countryFrom: FRANCE
- countryTo: Cameroon
- feesComputed: false

CALL METHOD

Add input data and expectations here.

1 rules fired in 17ms. :Rules fired: France_To_Cameroon_Part2 [1]

EXPECT

Use real date and time

A fact of type 'FeesRequest' has values:

- feesComputed: equals true
- feesAmount: equals 7.99

(configuration) All rules may fire

Success

1 test(s) ran in 0 minutes 0 seconds.

getFeesTestScenario.scenario - Test Scenarios

Save Delete Rename Copy Run scenario Run all scenarios Latest

Editor Overview Data Objects

Knowledge base defaultKieBase Knowledge session defaultKieSession

+ GIVEN

Insert 'FeesRequest'[fr]

amountToSend: 150

countryFrom: FRANCE

countryTo: India

feesComputed: false

+ CALL METHOD

Add input data and expectations here.

1 rules fired in 16ms: Show rules fired

+ EXPECT

Use real date and time

A fact of type 'FeesRequest' has values:

feesComputed: equals true

feesAmount: equals 7.99 (Actual: 5.0)

More... (configuration) (globals)

Reporting

All rules may fire

There were test failures

1 test(s) ran in 0 minutes 0 seconds.

RED HAT JBOSS BRMS

Home Authoring Deploy Tasks Extensions

Project Explorer

BeosBank > CRM > beosbank-brms-pricing

DATA OBJECTS

TEST SCENARIOS

XLS DECISION TABLES

Project: [beosbank-brms-pricing:com.beosbank.jbdevg.brms:1.0.1]

Project Settings: Project General Settings

Project General Settings

Project Name: beosbank-brms-pricing

Project Description: Business Rule to compute MoneyTransfert Transaction Fees By Country

Group artifact version

Group ID: com.beosbank.jbdevg.brms
Example: com.myorganization.myprojects


Artifact ID: beosbank-brms-pricing
Example: MyProject

Version: 1.0.1

Messages

RED HAT JBOSS BRMS

Home ▾ Authoring ▾ Deploy ▾

SERVER TEMPLATES 

+ New Server Template

default-kieserver

Capabilities:

- Rule
- Process
- Planning

KIE CONTAINERS

+ Add Container

REMOTE SERVERS

default-kieserver@localhost:8080

New Container x

Container

Name:

Group Name:

Artifact Id:

Version:


Search

GAV	Select
com.beosbank.jbdevg.brms:beosbank-brms-pricing:1.0.0	Select
com.beosbank.jbdevg.brms:beosbank-brms-pricing:1.0.1	Select
com.beosbank.jbdevg.brms:beosbank-brms-pricing:1.0.1	Select
org.guvnor.guvnor-asset-mgmt-project:6.5.0.Final-redhat-2	Select
org.guvnor.guvnor-asset-mgmt-project:6.5.0.Final-redhat-2	Select


1-10 of 10

RED HAT JBOSS BRMS

Home ▾ Authoring ▾ Deploy ▾ Tasks Extensions ▾

SERVER TEMPLATES 

+ New Server Template

default-kieserver 

Capabilities:

- Rule
- Process
- Planning

KIE CONTAINERS

+ Add Container

beosbank-brms-pricing-container


REMOTE SERVERS

default-kieserver@localhost:8080

beosbank-brms-pricing-container Group Id:com.beosbank.jbdevg.brms | Artifact Id:beosbank-brms-pricing

Status Version Configuration Process Configuration

default-kieserver@localhost:8080



<http://localhost:8080/kie-server/services/rest/server/containers/beosbank-brms-pricing-container>

v1.0.1

Response Headers

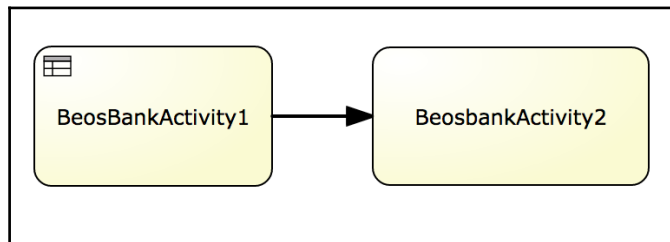
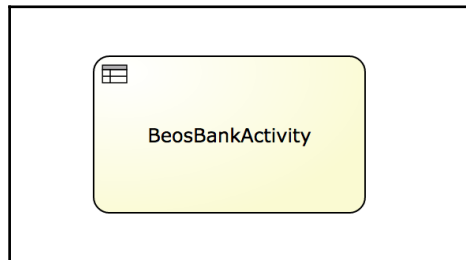
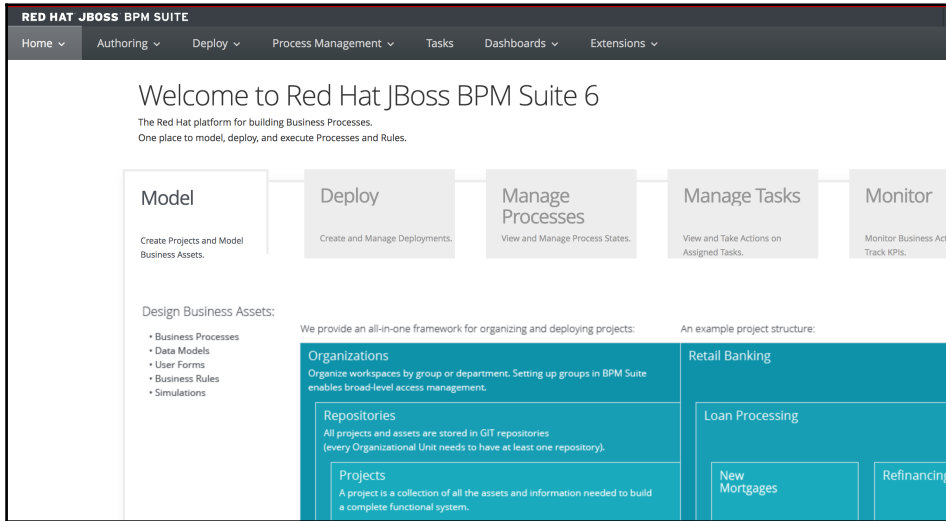
Response Body (Raw)

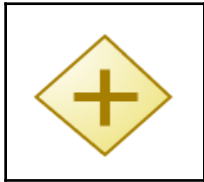
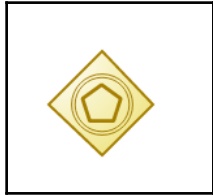
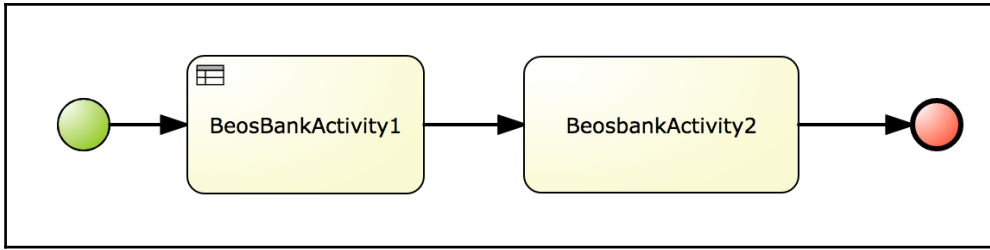
Response Body (Highlight)

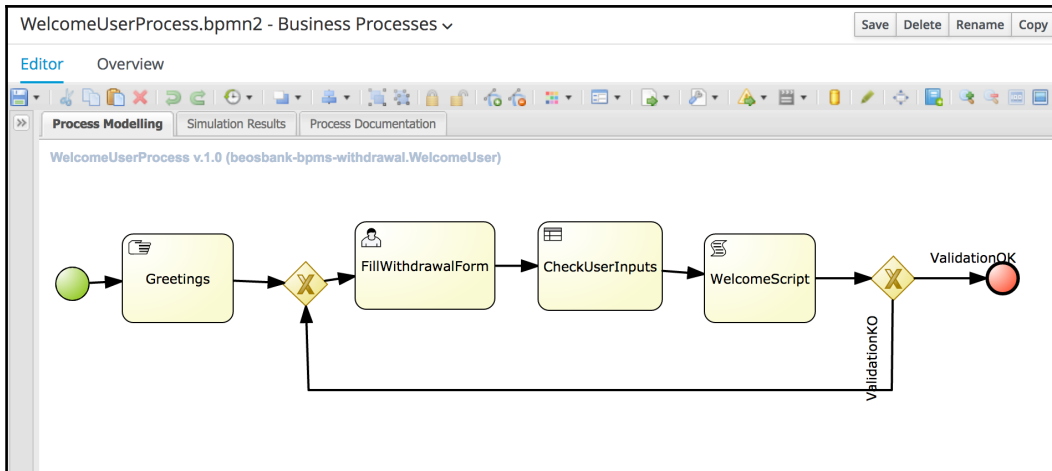
Response Body (Preview)

```
- <org.kie.server.api.model.ServiceResponse>
  <type>SUCCESS</type>
  - <msg>
    Container beosbank-brms-pricing-container successfully called.
  </msg>
  - <result class="execution-results">
    - <result identifier="feeRequest01">
      - <com.beosbank.jbdevg.brms.FeesRequest>
        <countryFrom>FRANCE</countryFrom>
        <countryTo>CAMEROON</countryTo>
        <amountToSend>150.0</amountToSend>
        <feesAmount>7.99</feesAmount>
        <feesComputed>true</feesComputed>
        <requestId>1000</requestId>
      </com.beosbank.jbdevg.brms.FeesRequest>
    </result>
    - <result identifier="feeRequest02">
      - <com.beosbank.jbdevg.brms.FeesRequest>
        <countryFrom>FRANCE</countryFrom>
        <countryTo>INDIA</countryTo>
        <amountToSend>5000.0</amountToSend>
        <feesAmount>53.5</feesAmount>
        <feesComputed>true</feesComputed>
        <requestId>1001</requestId>
      </com.beosbank.jbdevg.brms.FeesRequest>
    </result>
    <fact-handle identifier="feeRequest01" external-form="0:1:1917852545:1917852545:3:DEFAULT:NON_TRAIT:com.beosbank.jbdevg.brms.FeesRequest"/>
    <fact-handle identifier="feeRequest02" external-form="0:2:212249373:212249373:4:DEFAULT:NON_TRAIT:com.beosbank.jbdevg.brms.FeesRequest"/>
  </result>
</org.kie.server.api.model.ServiceResponse>
```

Chapter 9: Developing Workflows







WelcomeUserProcess v.1.0 (beosbank-bpms-withdrawal>WelcomeUser)

Process Modelling Simulation Results Process Documentation

Properties (BPMN-Diagram)

Name	Value
Core Properties	
AdHoc	false
Executable	true
Global	
id	beosbank-bpms-withdrawal>WelcomeUser
import	
package	org.bpm
process Inst...	
process Name	WelcomeUserProcess
variable Defi...	userRequest:com.beosbank.jpdevg.bpms.Withdr...
version	1.0
Extra Properties	
documentati...	
target Name...	http://www.omg.org/bpmn20
typeLanguage	http://www.java.com/javaTypes
Simulation Properties	
base Currency	
Base time unit	minutes

Editor for Variable Definitions

Add Variable	Name	Defined Types	Custom Type	KPI
1	userRequest	com.beosbank.jpdevg.bpms.WithdrawalRequest		false

OK Cancel

Greetings Data I/O

Data Inputs and Assignments + Add

Name	Data Type	Source	
input	WithdrawalReque	userRequest	✖

Data Outputs and Assignments + Add

Cancel Save

Messages Asset Search

Save Delete Rename Copy Latest Version

Properties (Manual)

Core Properties

Assignments 1 data input, 0 data outputs

Name Greetings

Task Type Manual

Extra Properties

Documentation

Is Async false

Multiple Instance false

On Entry Actions System.out.println("GreetingsTask OnEntry ");

On Exit Actions System.out.println("Greetings Task onExit ");

Script Language java

Work Item handlers	Name	Identifier	Resolver type	Parameters	R
	Log	new org.jbpm.process.instance.impl.demo.SystemOutWorkitemHandler()	mvel	Parameters(0)	
	Service Task	new org.jbpm.process.workitem.bpmn2.ServiceTaskHandler(ksession, classLoader)	mvel	Parameters(0)	
	WebService	new org.jbpm.process.workitem.webservice.WebServiceWorkitemHandler(ksession, classLoader)	mvel	Parameters(0)	
	Rest	new org.jbpm.process.workitem.rest.RESTWorkitemHandler(classLoader)	mvel	Parameters(0)	
	Manual Task	new org.jbpm.process.instance.impl.demo.SystemOutWorkitemHandler()	mvel	Parameters(0)	

+ Add

FillWithdrawalForm Data I/O

Data Inputs and Assignments

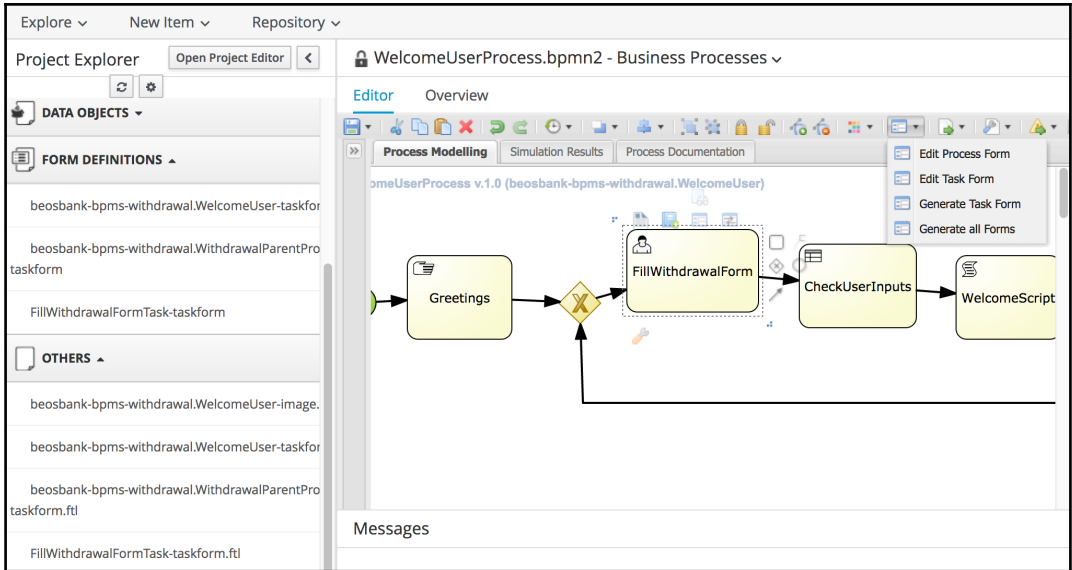
Name	Data Type	Source
form	WithdrawalReque	userRequest

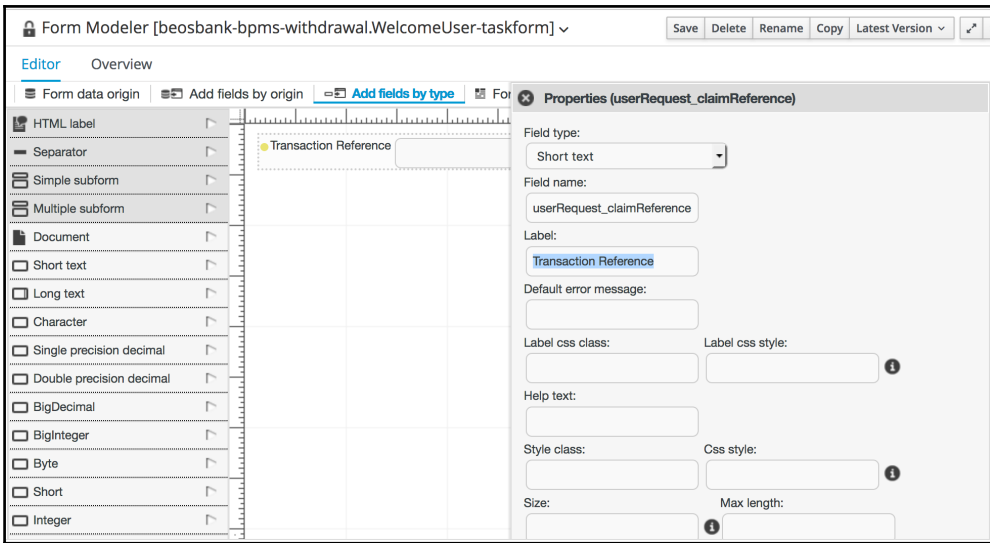
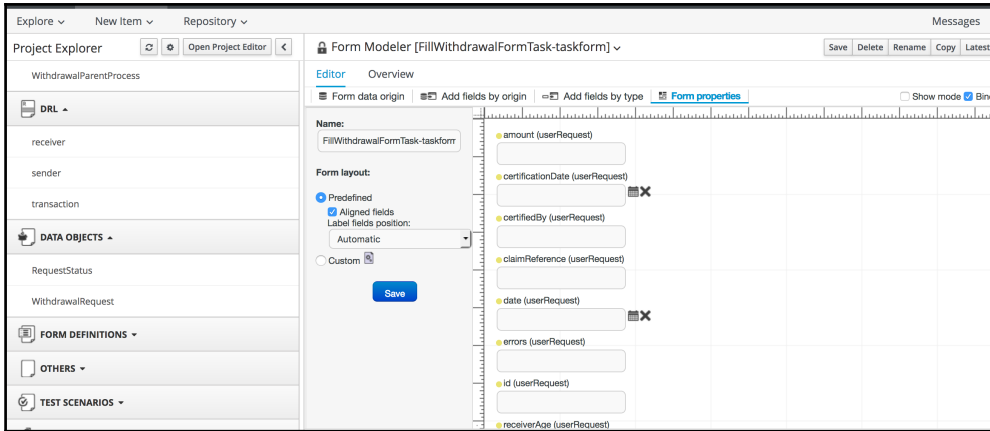
Data Outputs and Assignments

Name	Data Type	Target
form	WithdrawalReque	userRequest

Properties (User)

Name	Value
Actors	bpmsAdmin
Assignments	1 data input, 1 data output
Groups	
Name	FillWithdrawalForm
Task Name	FillWithdrawalFormTask
Task Type	User





Form Modeler [FillWithdrawalFormTask-taskform] v

Editor Overview

Form data origin Add fields by origin Add fields by type Form properties

HTML label	
Separator	
Simple subform	Receiver First Name
Multiple subform	Receiver Last Name
Document	Receiver Age
Short text	Transaction Reference
Long text	Transaction Amount
Character	Sender Country
Single precision decimal	Sender First Name
Double precision decimal	Sender Last Name
BigDecimal	status (userRequest)
BigInteger	errors (userRequest)
Byte	
Short	
Integer	

CheckUserInputs Data I/O

Data Inputs and Assignments

Name	Data Type	Source
w	WithdrawalReque	userRequest

Data Outputs and Assignments

Cancel Save

RED HAT JBOS BPM SUITE

Home | Authoring | **Deploy** | Process Management | Tasks | Dashboards | Extensions

Deployed Units

- Process Deployments
- Execution Servers
- Jobs

Deployment	Runtime strategy	Status	Actions
org.guvnor:guvnor-asset-mgmt-project:6.5.0.Final-redhat-2	SINGLETON	Active	Deactivate Undeploy
com.beosbank.jbdevg.bpm:beosbank-bpms-withdrawal:1.0.0	SINGLETON	Active	Deactivate Undeploy

Home | Authoring | Deploy | **Process Management** | Tasks | Dashboards | Extensions

Process Definitions

Name	Version	Project	Actions
ConfigureRepository	1.0	org.guvnor:guvnor-asset-mgmt-project:6.5.0.Final-redhat-2	Start
ValidateWithdrawalRequest	1.0	com.beosbank.jbdevg.bpm:beosbank-bpms-withdrawal:1.0.0	Start
WelcomeUserProcess	1.0	com.beosbank.jbdevg.bpm:beosbank-bpms-withdrawal:1.0.0	Start
ExecuteOperation	1.0	org.guvnor:guvnor-asset-mgmt-project:6.5.0.Final-redhat-2	Start

5 Items | 6-9 of 9

WelcomeUserProcess

Correlation key

Form

Transaction Reference: AFCM10000

Submit

com.beosbank.jbdevg.bp... | New Instance | Options

Id: beosbank-bpms-withdrawal>WelcomeUser

Name: WelcomeUserProcess

Project: com.beosbank.jbdevg.bpm:beosbank-bpms-withdrawal:1.0.0

Tasks: FillWithdrawalForm

Human Task Count: 1

User and Groups: 'bpmsAdmin' - FillWithdrawalForm

Sub Processes: No subprocesses required by this process

Process Variables: userRequest - com.beosbank.jbdevg.bpm.WithdrawalRequest

Services: Greetings - Manual Task

RED HAT JBOSB BPM SUITE

Home | Authoring | Deploy | **Process Management** | Tasks | Dashboards | Extensions

Process Instances New Process Instance

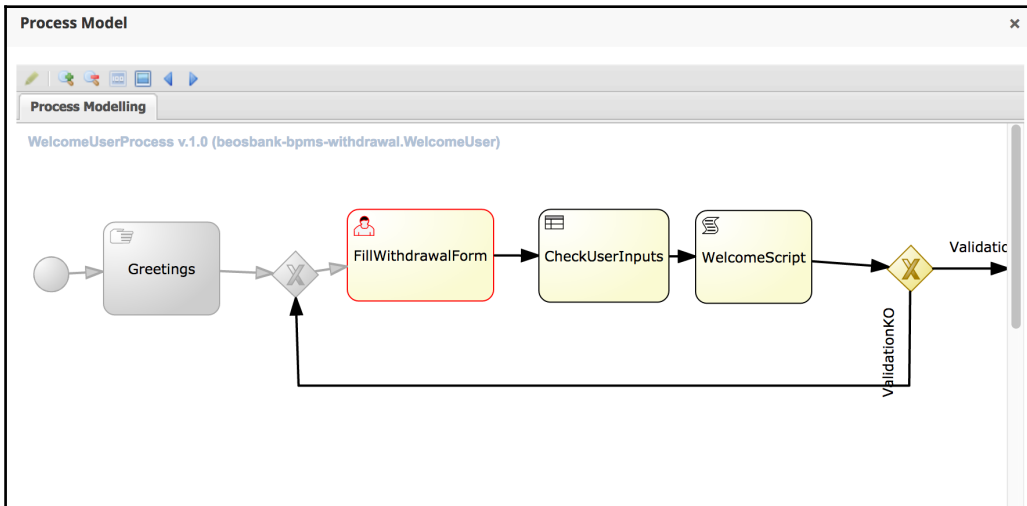
Filter Active Bulk Actions

Select	Id	Name	Description	Version	Actions
<input checked="" type="checkbox"/>	1	WelcomeUserProcess	WelcomeUserProcess	1.0	Signal Abort

1 - WelcomeUserProcess

Instance Details | Process Variables | Documents | Logs

- Definition Id: beosbank-bpms-withdrawal.WelcomeUser
- Instance State: Active
- Deployment: com.beosbank.jpdevg.bpms:beosbank-bpms-withdrawal:1.0.0
- Definition Version: 1.0
- Correlation key:
- Parent Process Instance: No Parent Process Instance
- Active user tasks: FillWithdrawalForm (Reserved) owner: bpmAdmin
- Current Activities: 31/Jul/17 14:06:54; 3 - FillWithdrawalForm (HumanTaskNode)



RED HAT JBOSS BPM SUITE

Home | Authoring | Deploy | Process Management | **Tasks** | Dashboards | Extensions

Tasks List: 1 - FillWithdrawalForm

Active | Personal | Group | All | Admin

Filter All

Task	Description	Actions
FillWithdrawalForm		Release

10 Items

1 of 1

Work | Details | Process Context | Assignments | Comments | Logs

Receiver First Name:

Receiver Last Name:

Receiver Age:

Transaction Reference: AFCM10000

Transaction Amount:

Sender Country:

Sender First Name:

Sender Last Name:

status (userRequest):

errors (userRequest):

Release Start

RED HAT JBOSS BPM SUITE

Home | Authoring | Deploy | Process Management | **Tasks** | Dashboards | Extensions

Tasks List: 2 - FillWithdrawalForm

Active | **Personal** | Group | All | Admin

Filter Personal

Task	Description	Actions
FillWithdrawalForm		Release

10 Items

1 of 1

Work | Details | Process Context | Assignments | Comments

Receiver First Name: Aditi

Receiver Last Name: GOUR

Receiver Age:

Transaction Reference: AFCM10000

Transaction Amount: 500

Sender Country:

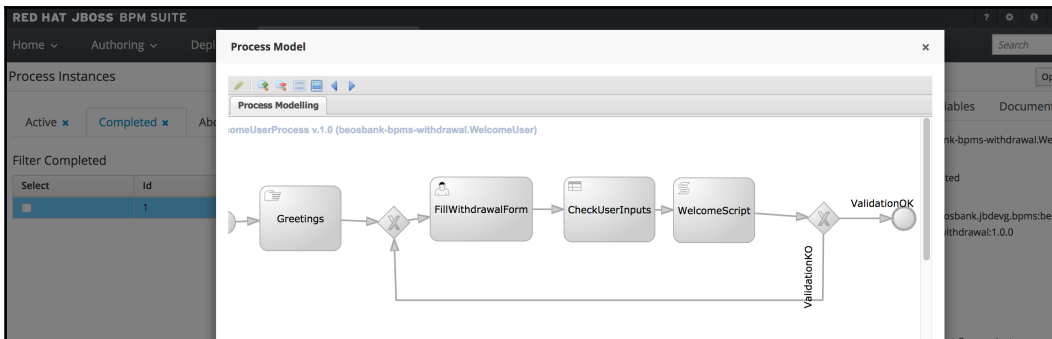
Sender First Name: Larissa

Sender Last Name: PINTO

status (userRequest): 1

errors (userRequest): Sender Names and country are mandatory
Receiver Names are

Release Start



WithdrawalParentProcess.bpmn2 - Business Processes

Editor Overview

Process Modelling Simulation Results Process Documentation

WithdrawalParentProcess v.1.0 (beosbank-bpms-withdrawal.WithdrawalParentProcess)

```

    graph LR
      Start(( )) --> WelcomeSubProcess[WelcomeSubProcess]
      WelcomeSubProcess --> LogResults[LogResults]
      LogResults --> End((( )))
  
```

Properties (Reusable)

Name	Value
Core Properties	
ActivityType	Sub-Process
Assignments	1 data input, 1 data output
Called Element	beosbank-bpms-withdrawal.WelcomeUser
Independent	true
Name	WelcomeSubProcess
On Entry Act...	
On Exit Act...	
Script Langu...	java
Wait for com...	true
Extra Properties	
Documentati...	
Is Async	false

WelcomeSubProcess Data I/O

Data Inputs and Assignments + Add

Name	Data Type	Source	
userRequest	WithdrawalReque	withdrawalForm	

Data Outputs and Assignments + Add

Name	Data Type	Target	
userRequest	WithdrawalReque	withdrawalForm	

Cancel Save

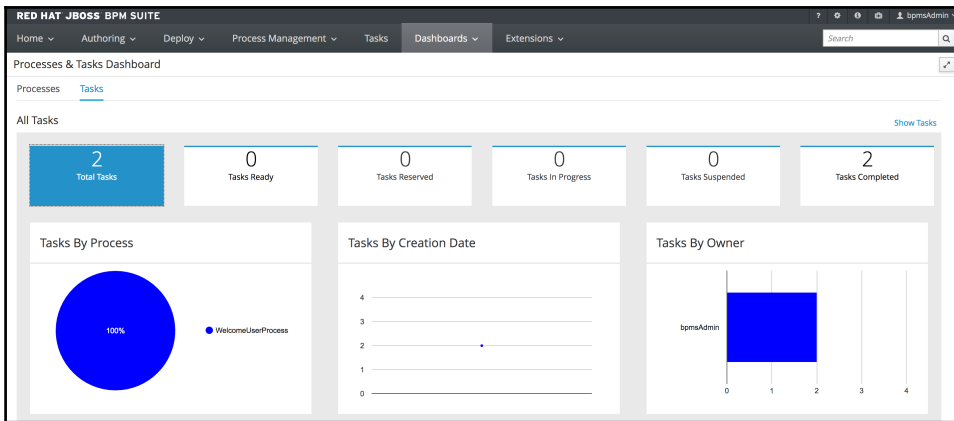
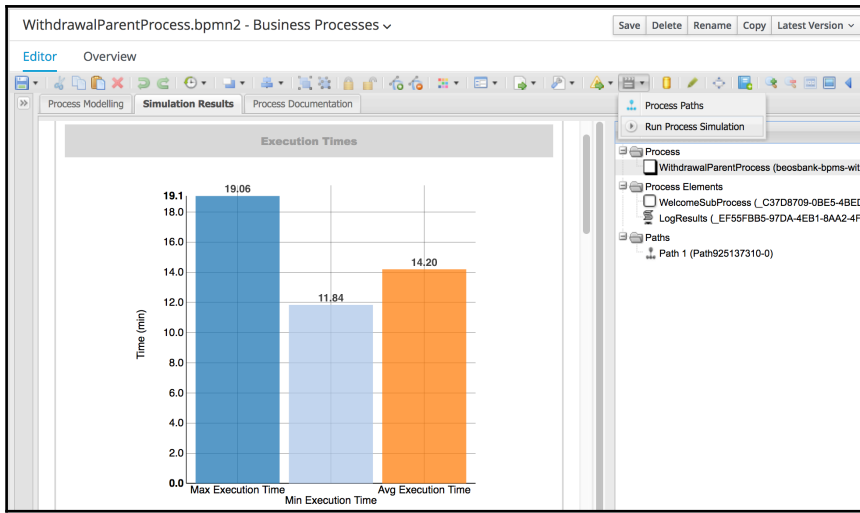


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