SOA Build Composite

Demo

Heba Owis

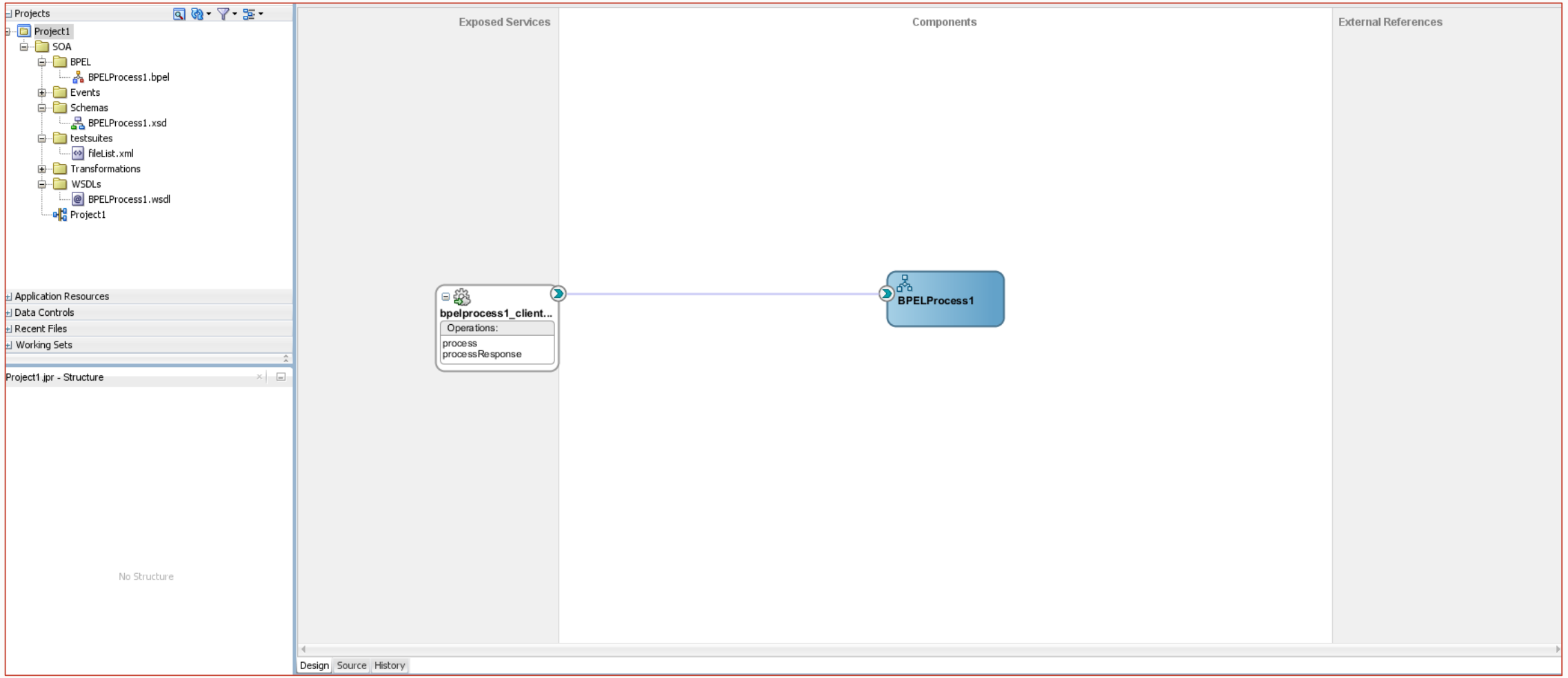
26 May 2024

Agenda

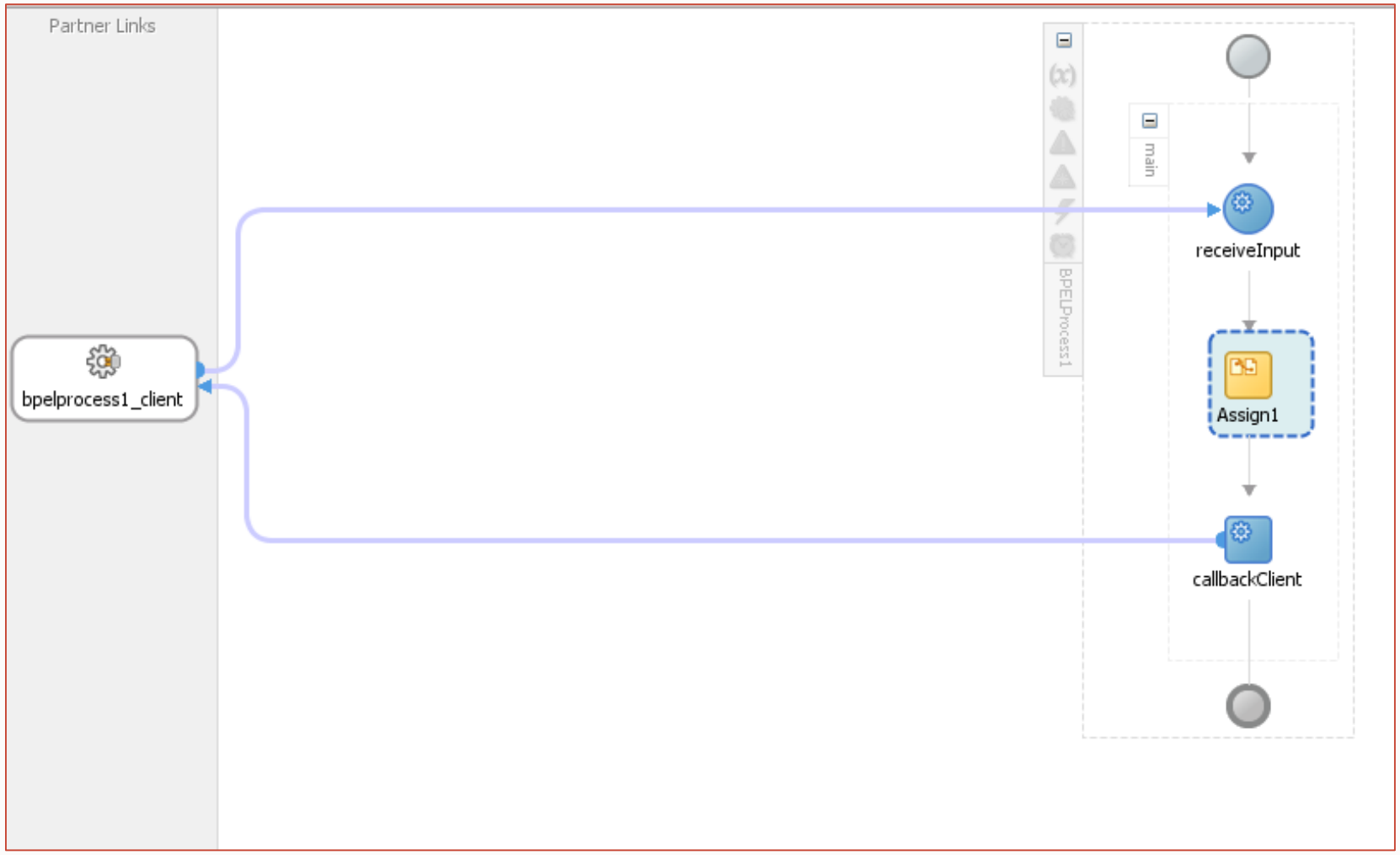
1. Development of “Hello World” SOA Composite
2. Deployment of SOA Composite

Development of “Hello World” SOA Composite (live demo)

HelloWorld Composite Application

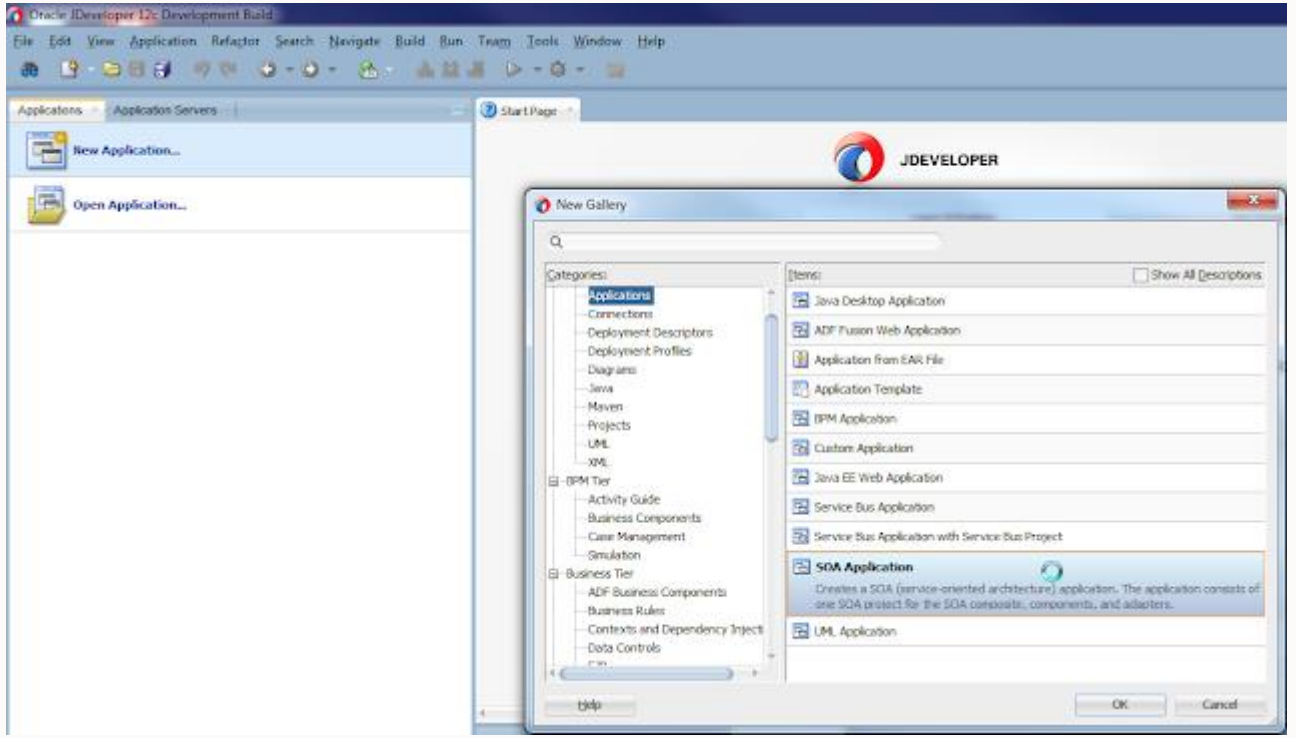


HelloWorld Composite Application

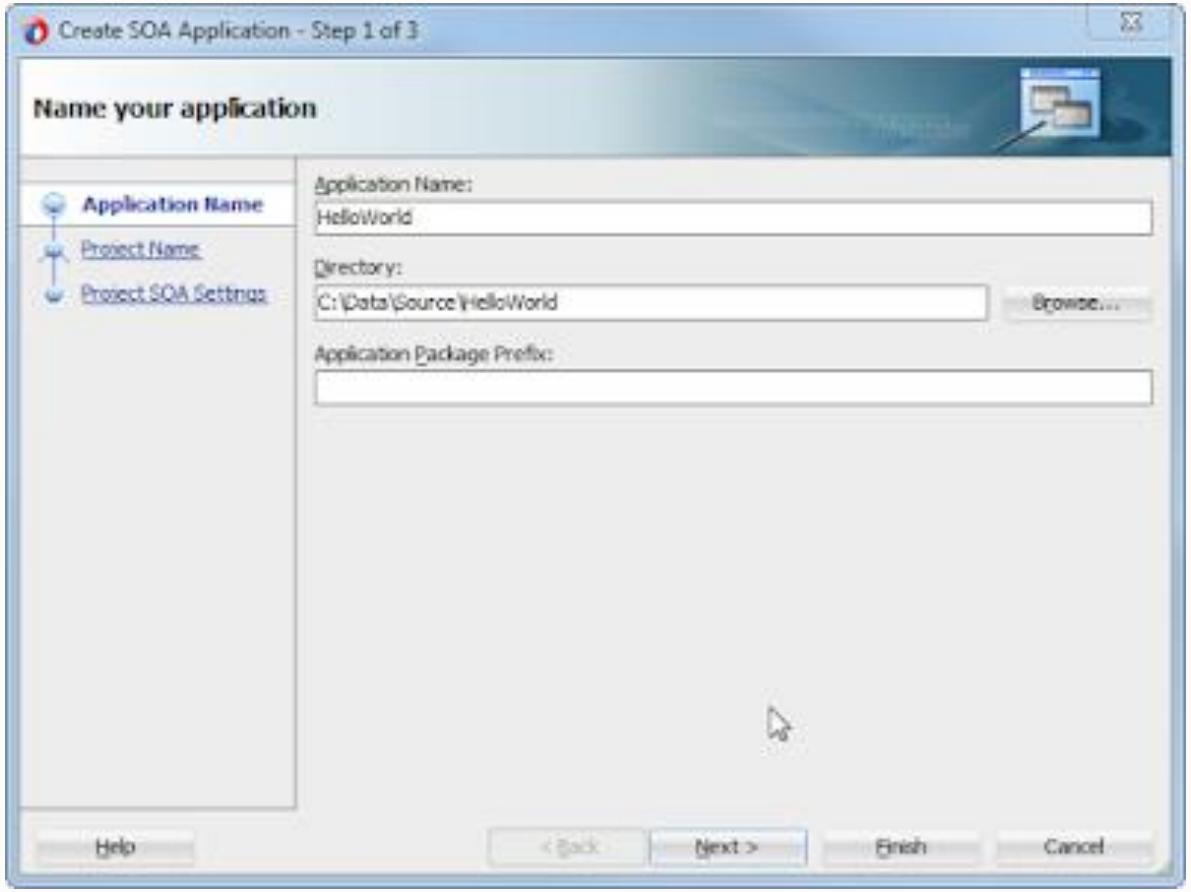


Create SOA Application

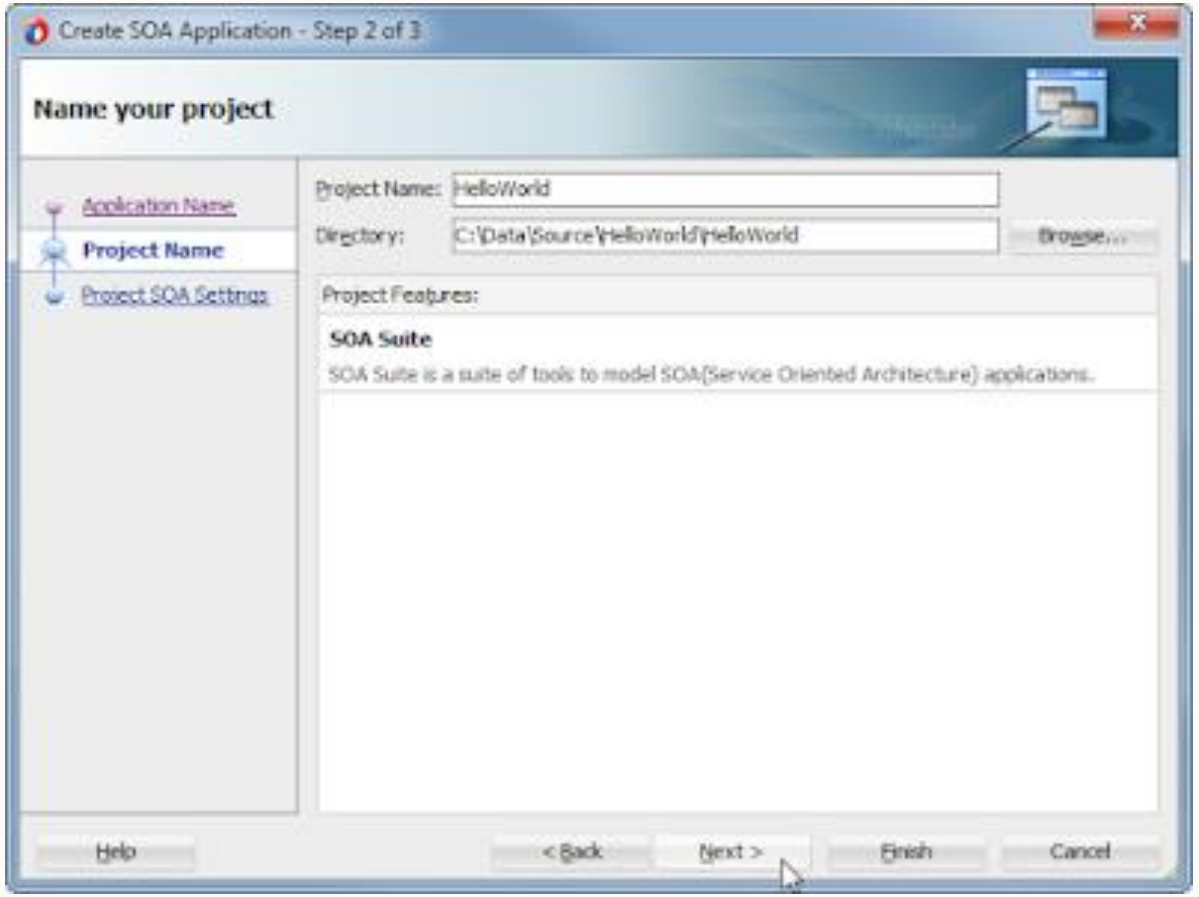
After having JDeveloper started, click on the 'New Application' link, top right. You can also use the New icon (**+**) or the File->New menu, option Application



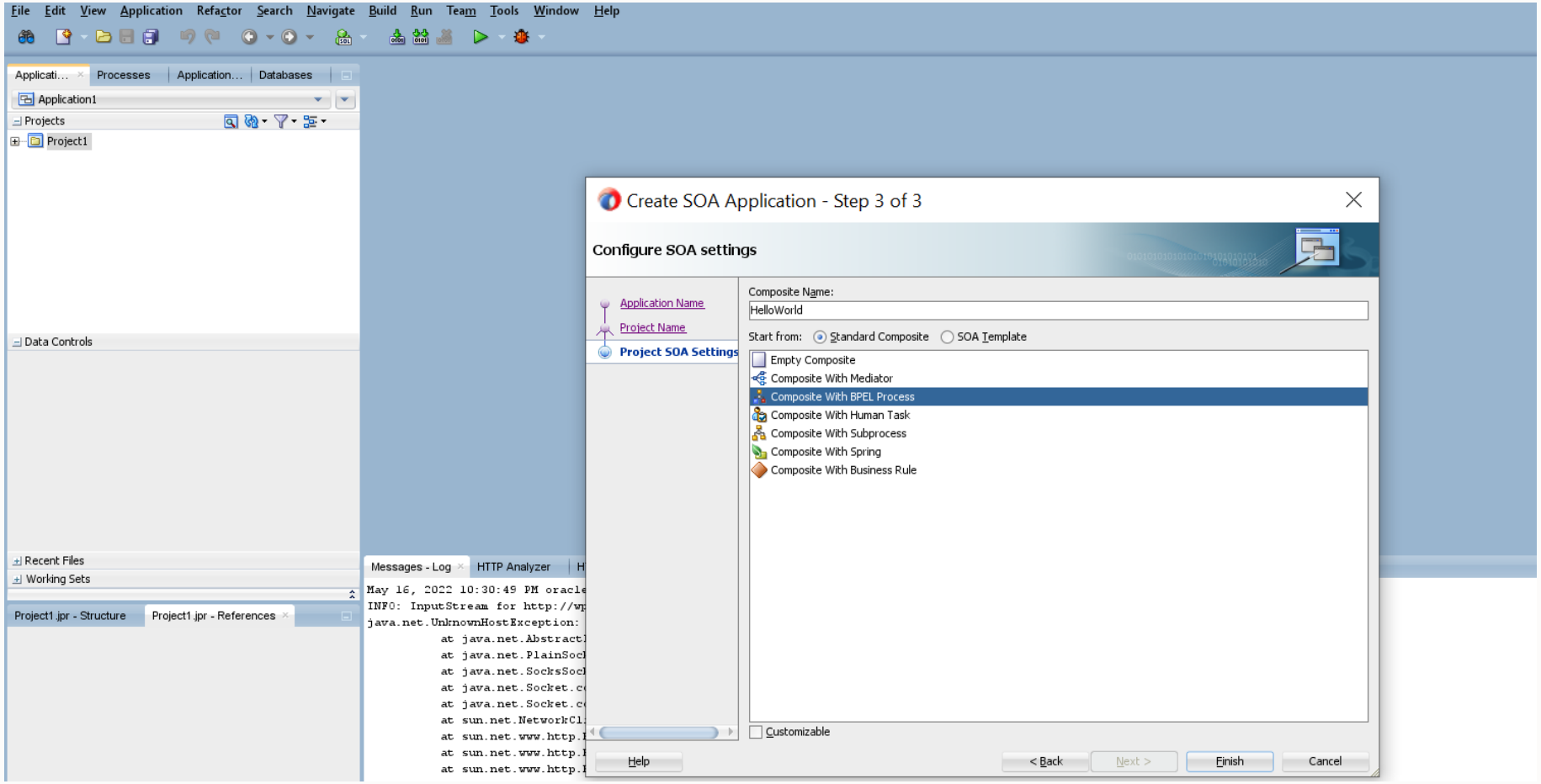
SOA Application



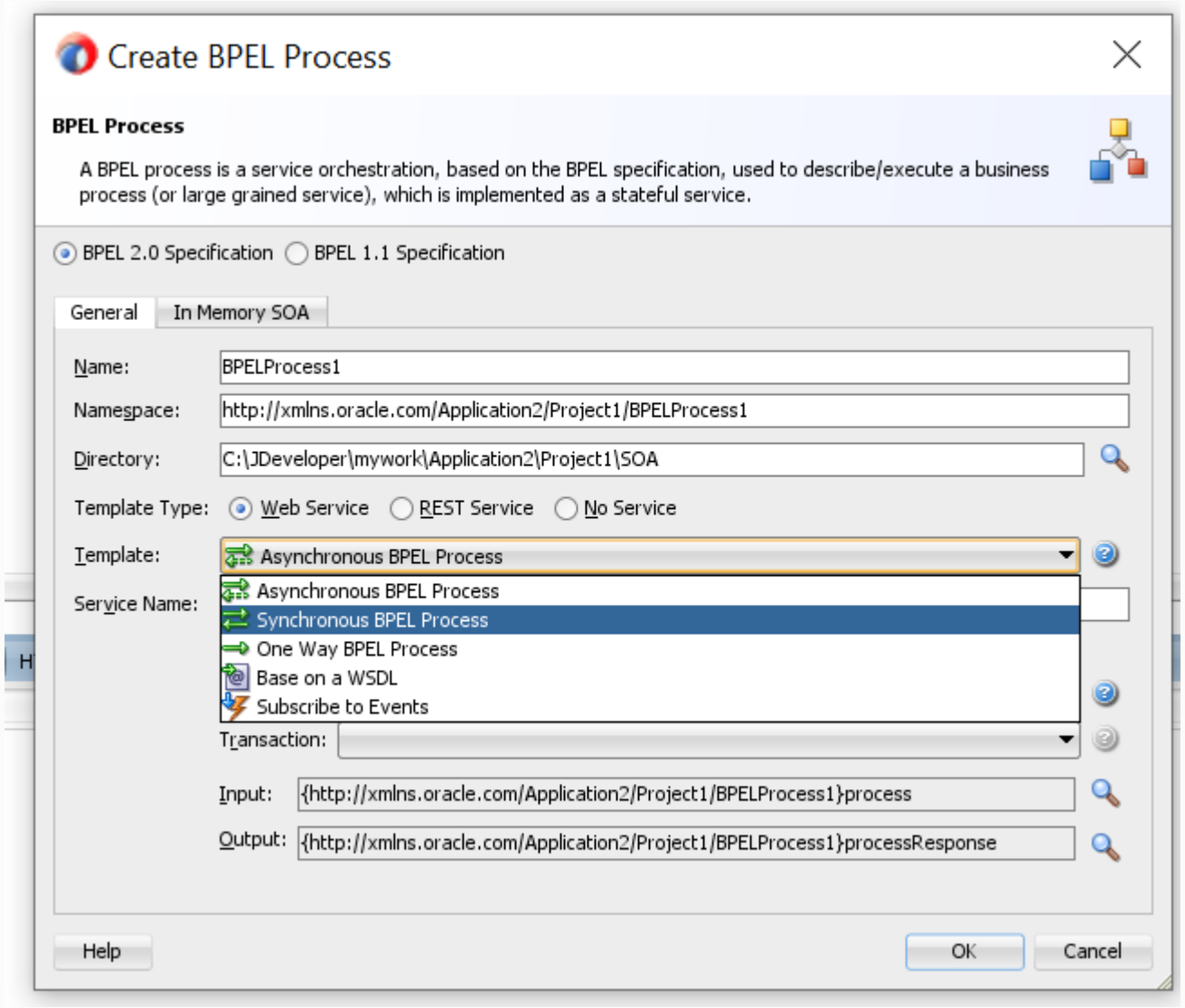
SOA Project


Create SOA Application - Step 2 of 3
Name your project
Application Name
Project Name
Project SOA Settings
Project Name: HelloWorld
Directory: C:\Data\Source\HelloWorld\HelloWorld
Browse...
Project Features:
SOA Suite
SOA Suite is a suite of tools to model SOA(Service Oriented Architecture) applications.
Help
< Back
Next >
Finish
Cancel

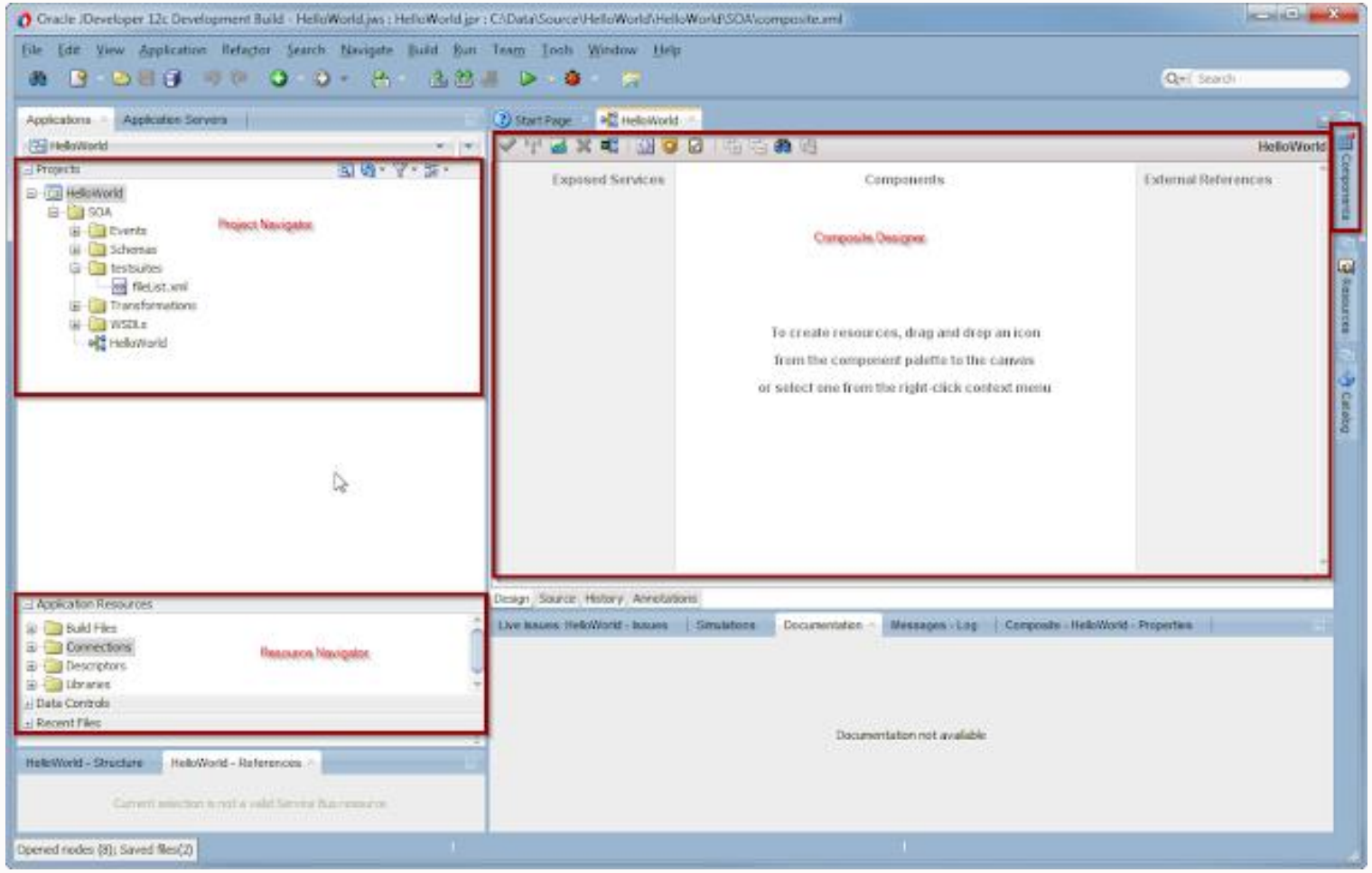
BPEL Process



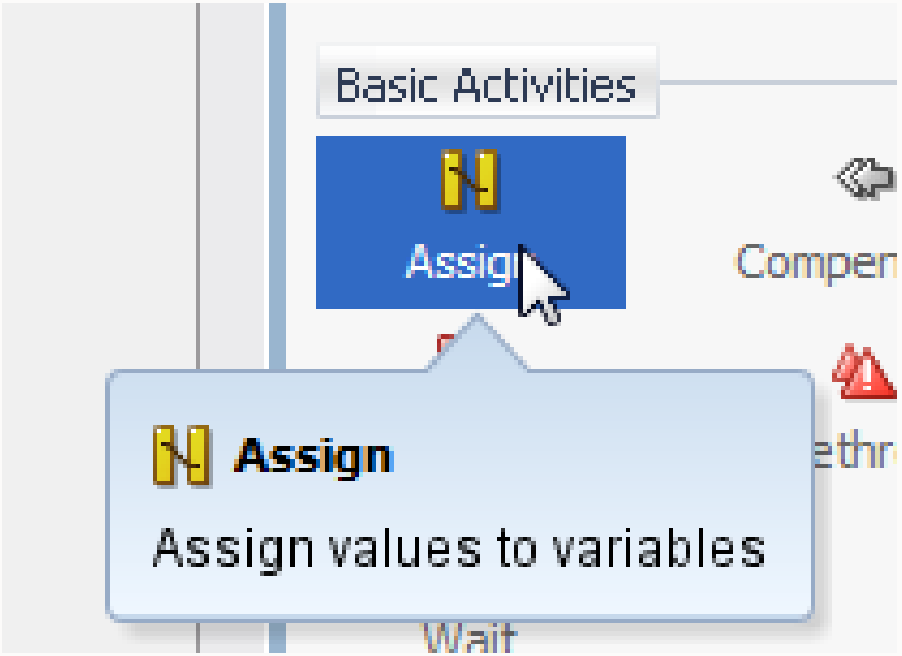
Create BPEL


Create BPEL Process
BPEL Process
A BPEL process is a service orchestration, based on the BPEL specification, used to describe/execute a business process (or large grained service), which is implemented as a stateful service.
BPEL 2.0 Specification
BPEL 1.1 Specification
General
In Memory SOA
Name:
BPELProcess1
Namespace:
http://xmlns.oracle.com/Application2/Project1/BPELProcess1
Directory:
C:\JDeveloper\mywork\Application2\Project1\SOA
Template Type:
Web Service
REST Service
No Service
Template:
Asynchronous BPEL Process
Service Name:
Asynchronous BPEL Process
Synchronous BPEL Process
One Way BPEL Process
Base on a WSDL
Subscribe to Events
Transaction:
Input:
{http://xmlns.oracle.com/Application2/Project1/BPELProcess1}process
Output:
{http://xmlns.oracle.com/Application2/Project1/BPELProcess1}processResponse
Help
OK
Cancel

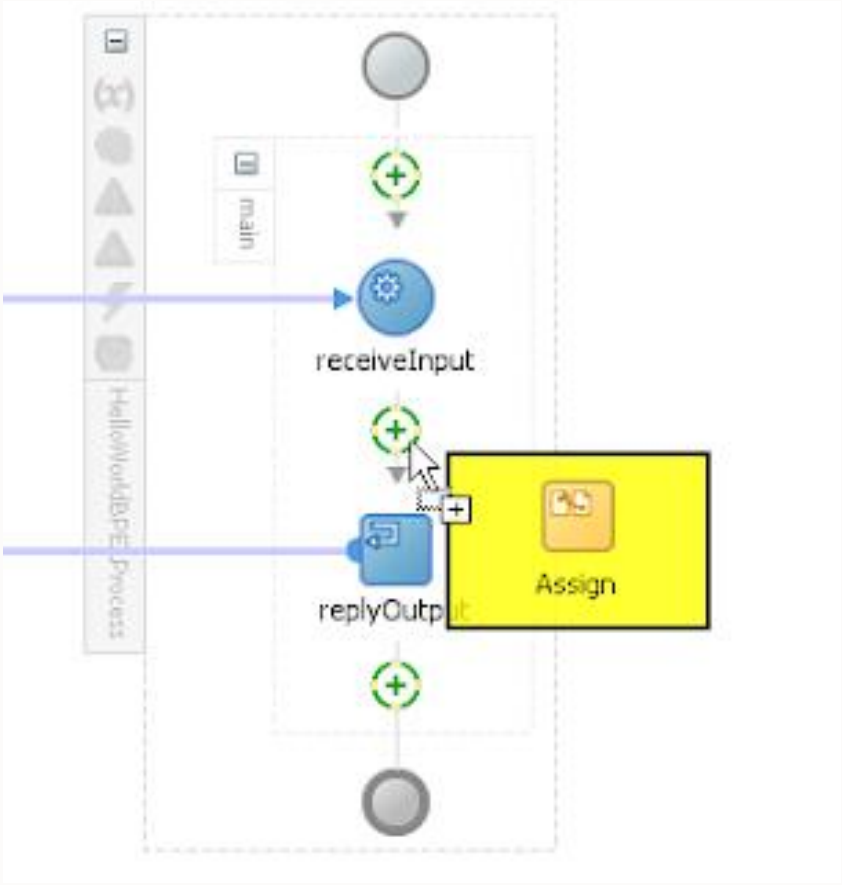
JDeveloper Environment



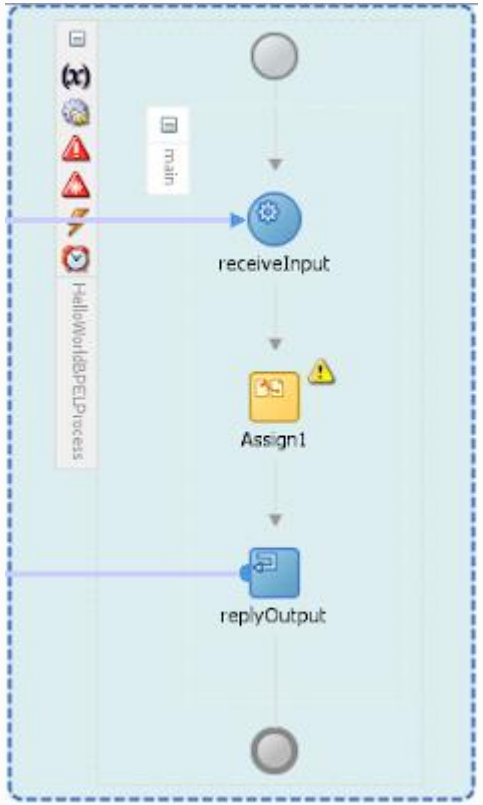
Select Assign Activity



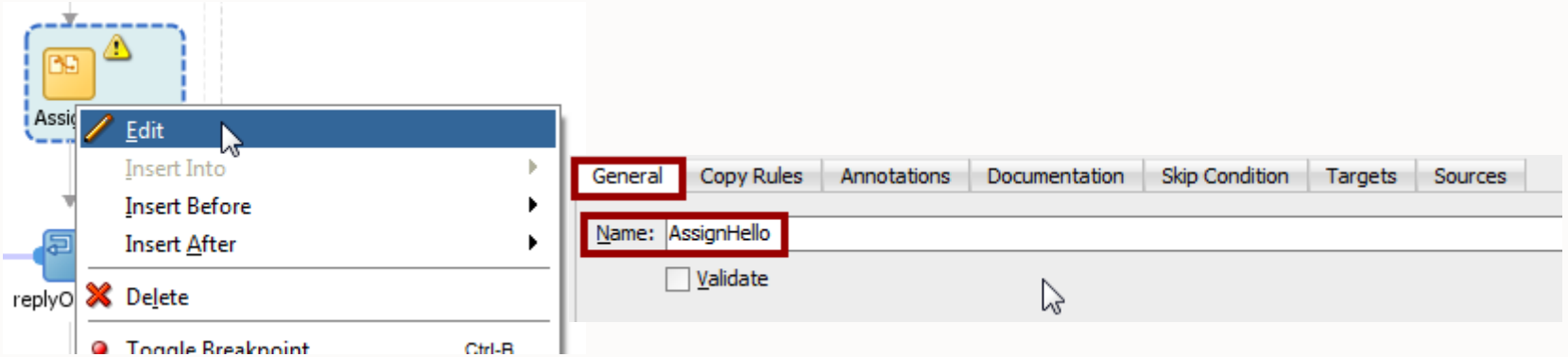
Drag Assign Activity



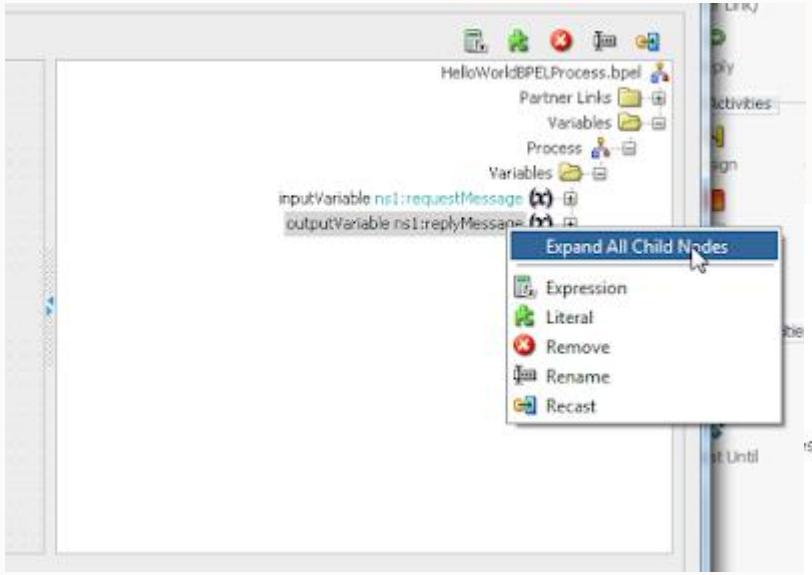
Drop Assign



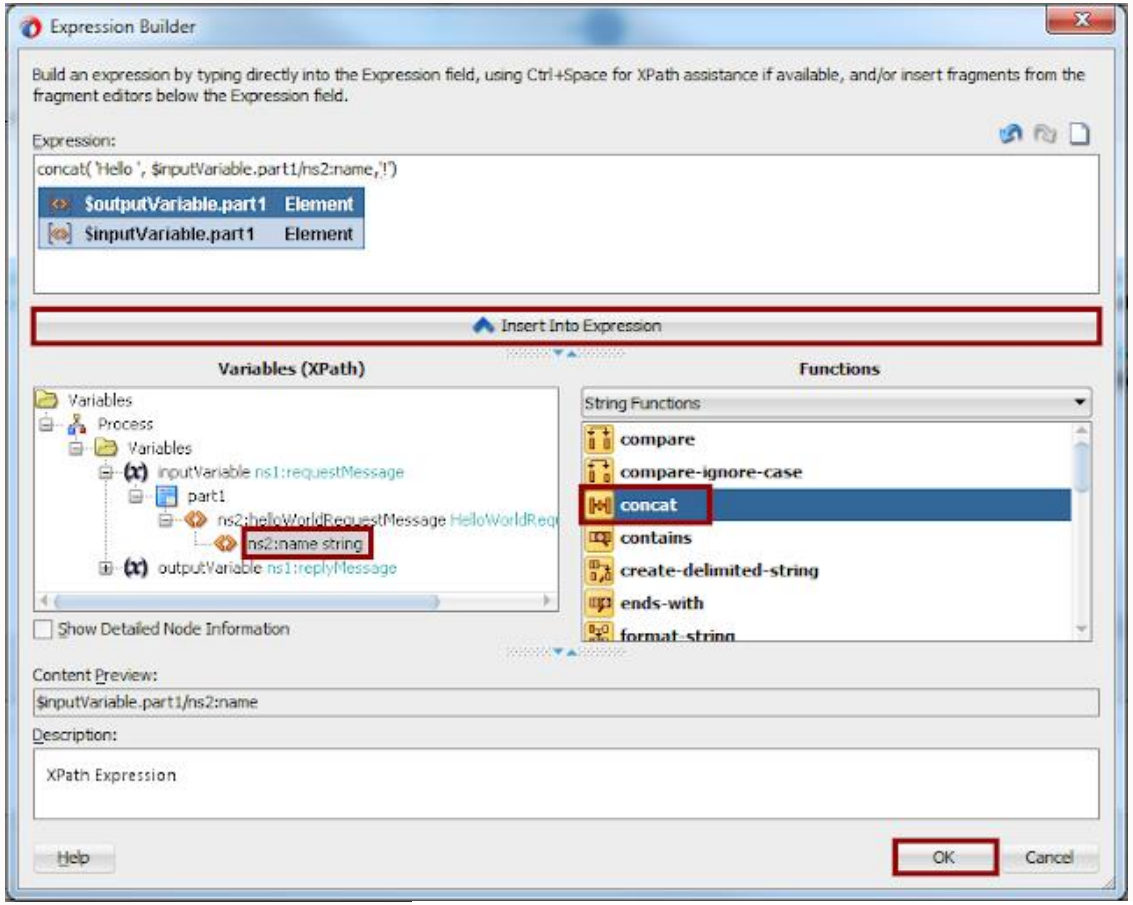
Edit Assign


Edit
Insert Into
Insert Before
Insert After
Delete
Toggle Breakpoint
Ctrl-B
General
Copy Rules
Annotations
Documentation
Skip Condition
Targets
Sources
Name:
AssignHello
Validate

Expand All Child

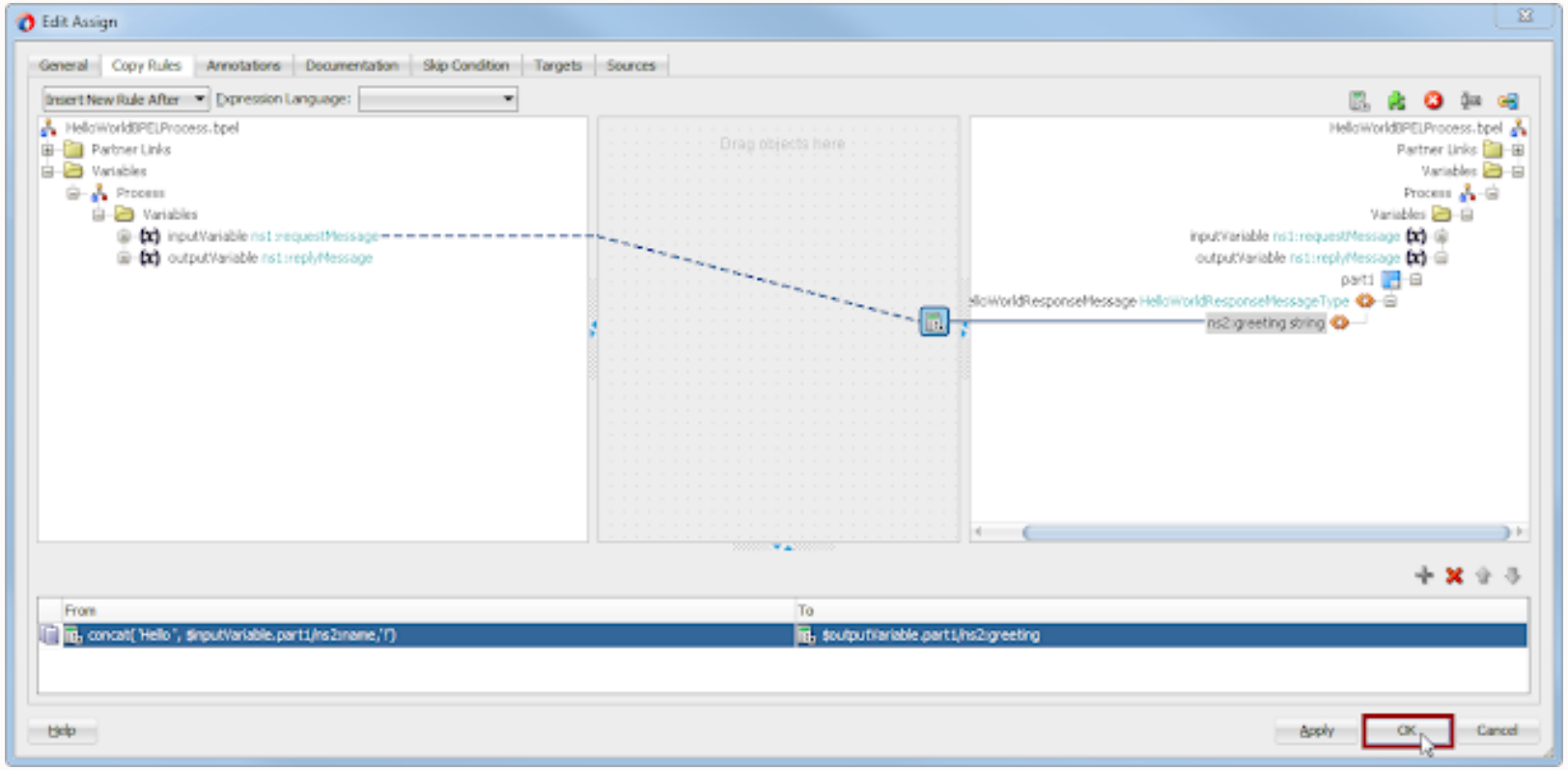


Xpath Expression

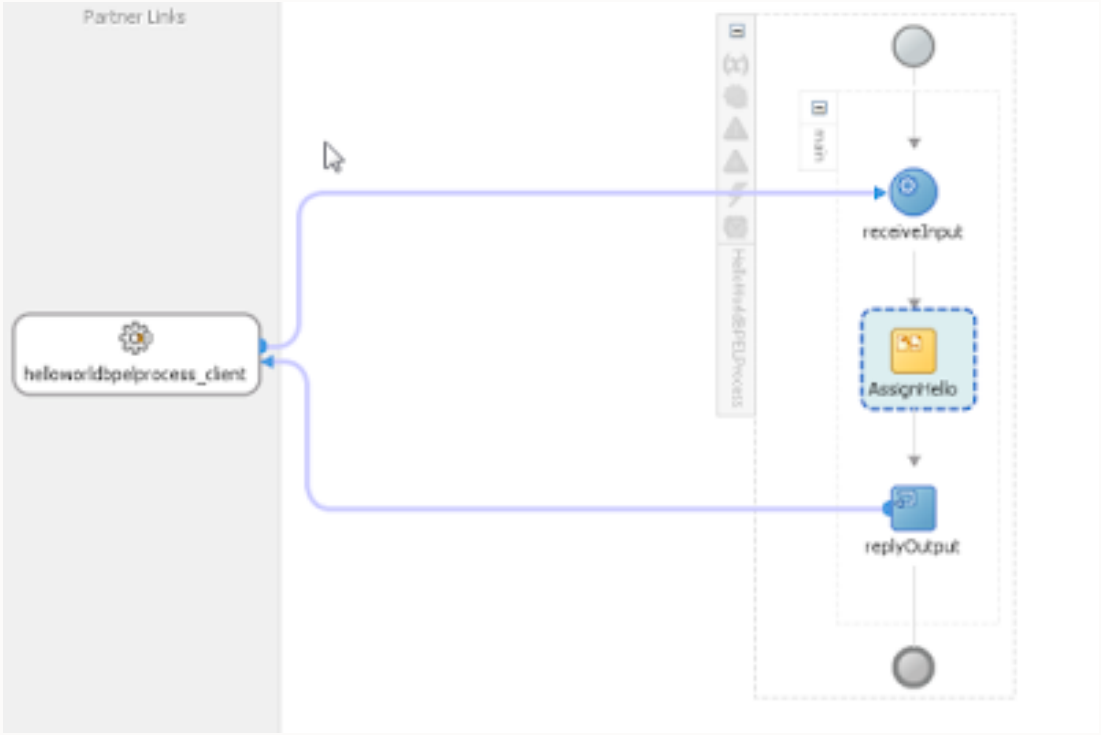



```
1 | concat( 'Hello ', $inputVariable.part1/ns2:name,'!')
```

Assign Result

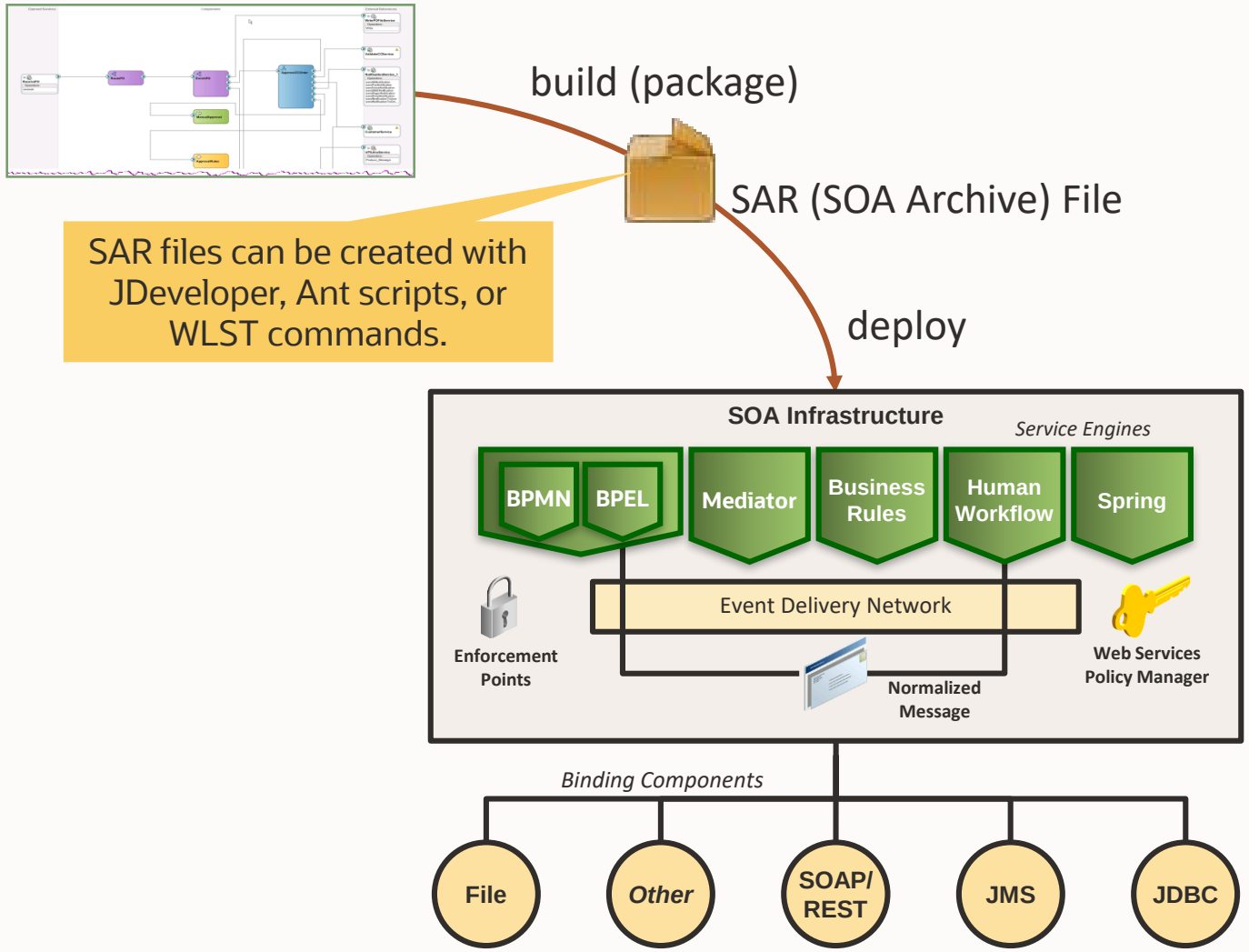


BPEL Process result

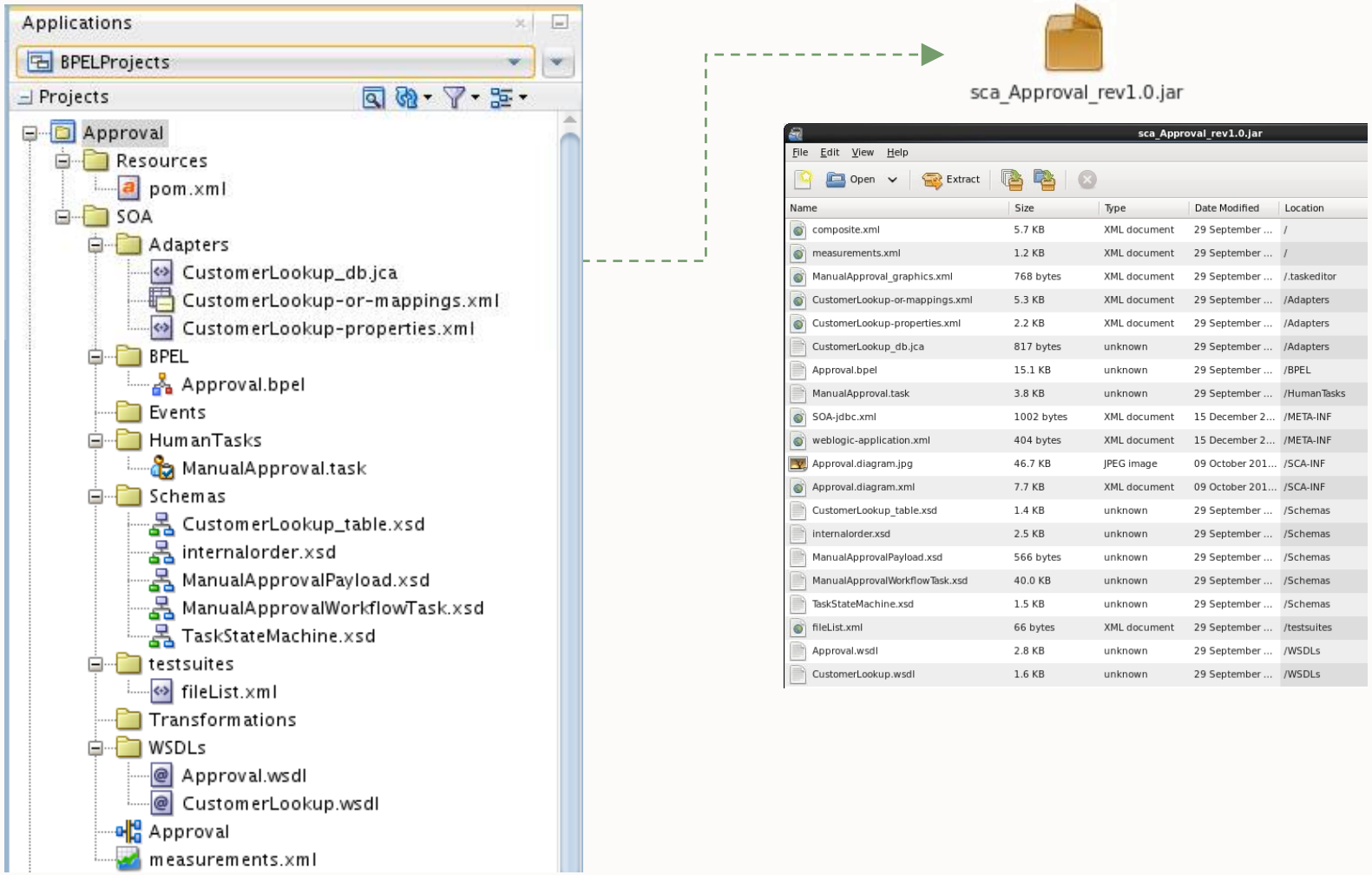


Deployment

Packaging and Deploying a Composite Application

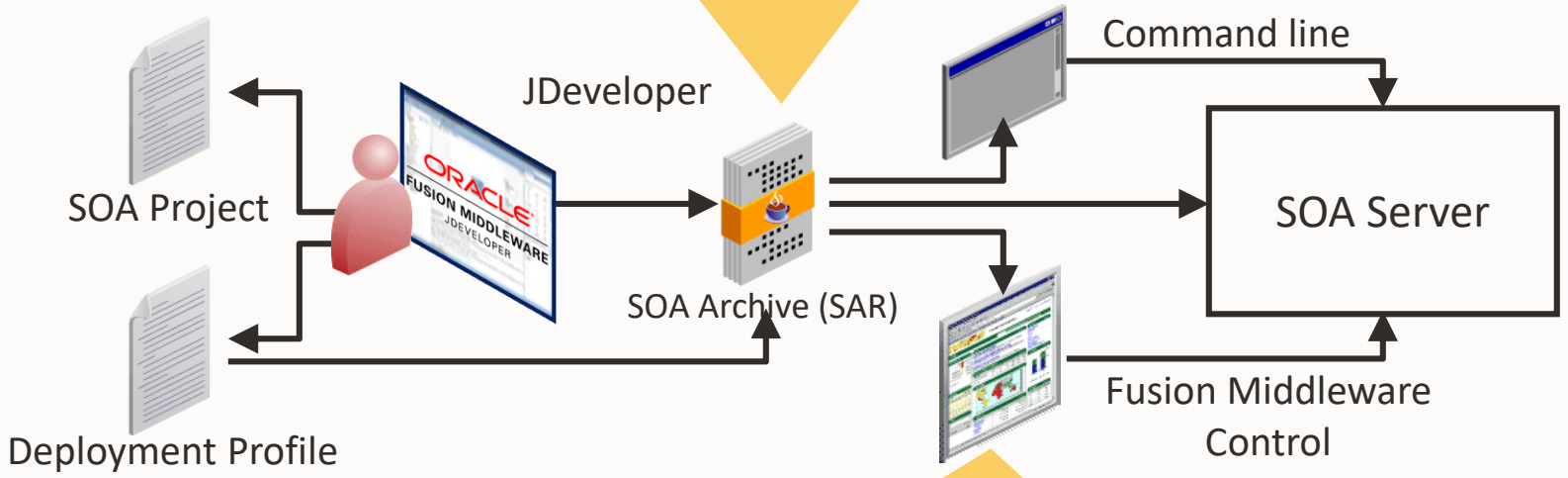


Building a Service Archive



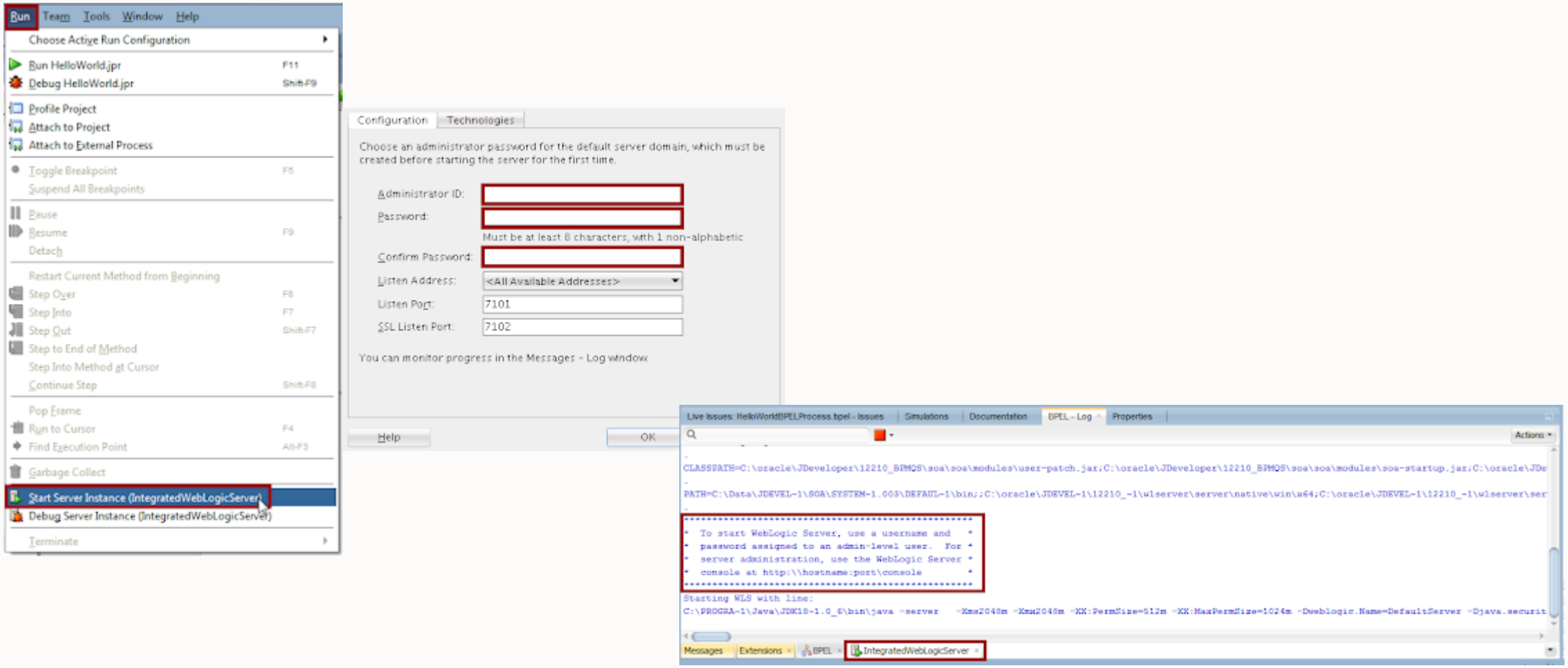
Deploying a Composite Application

The application is deployed as a SOA Archive (SAR file) that includes all service components in a single application package.

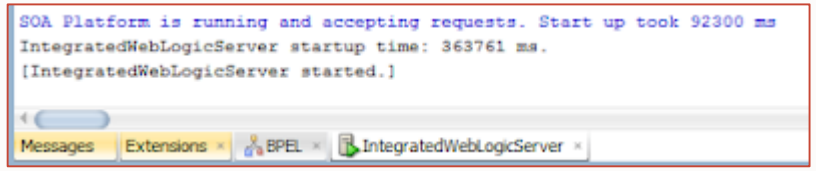


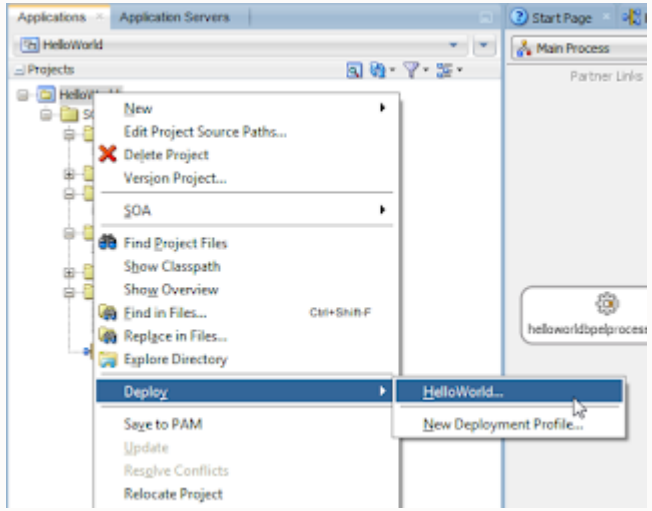
The application can be deployed by using JDeveloper, Enterprise Manager, or command-line tools such as Ant and WLST.

Start Local Server

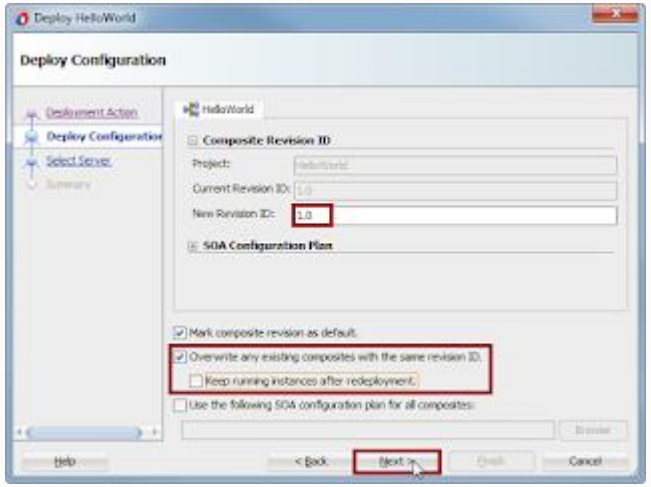


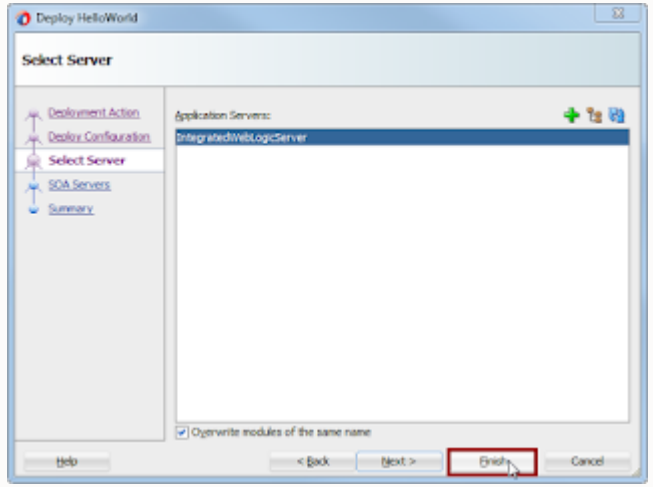
Deploy to Server

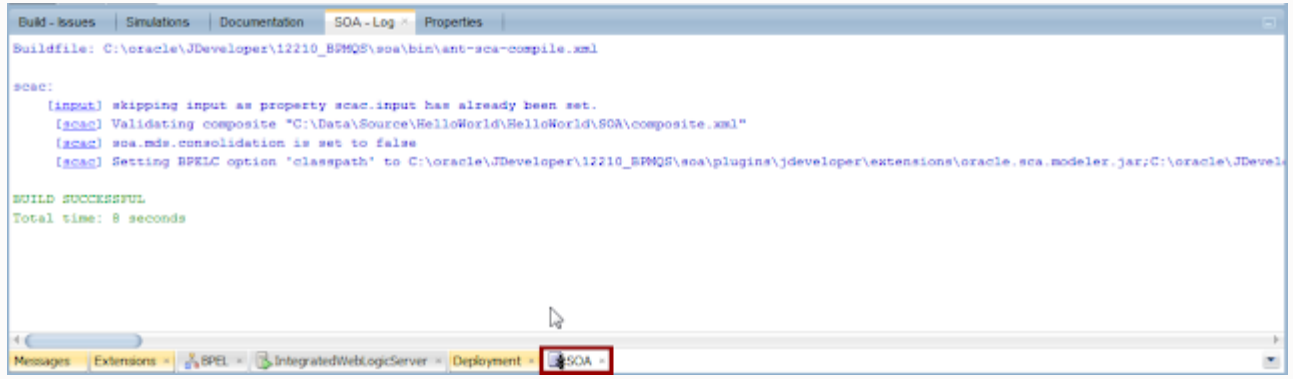




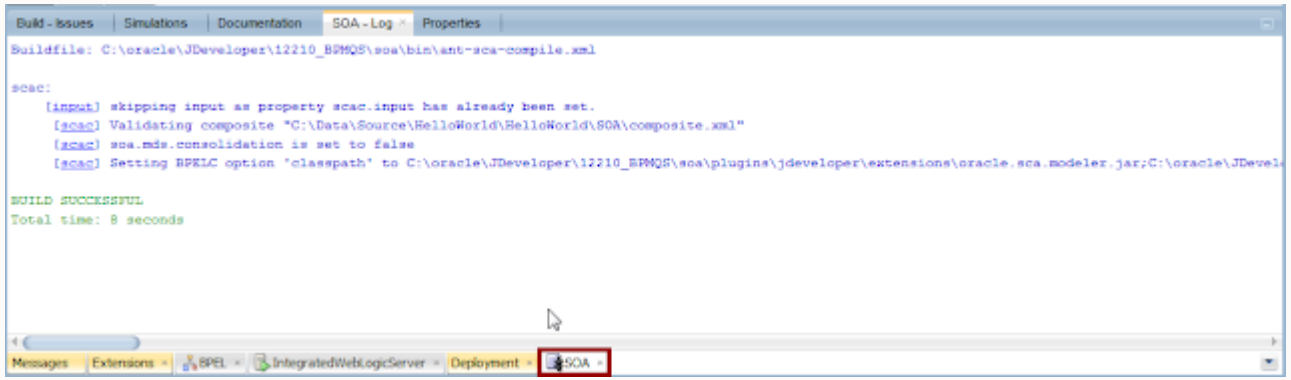
Deploy to Integrated Server

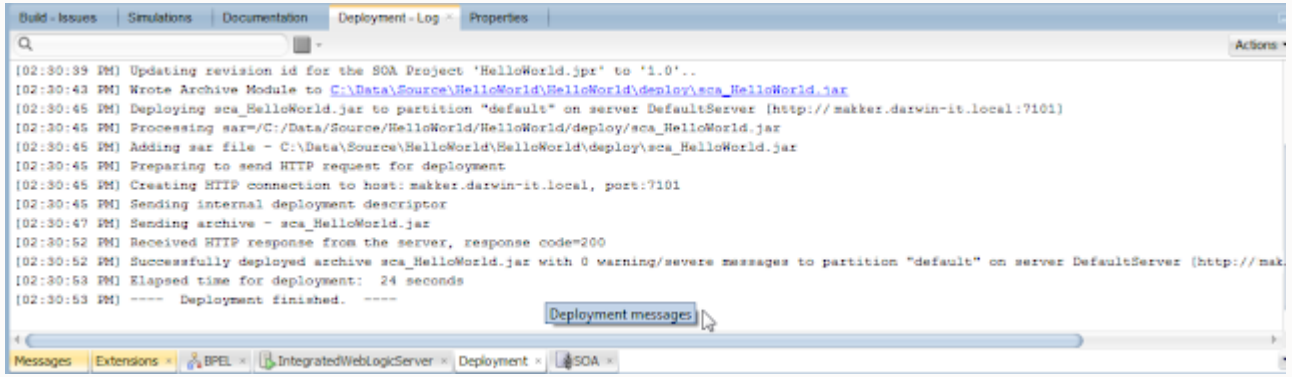




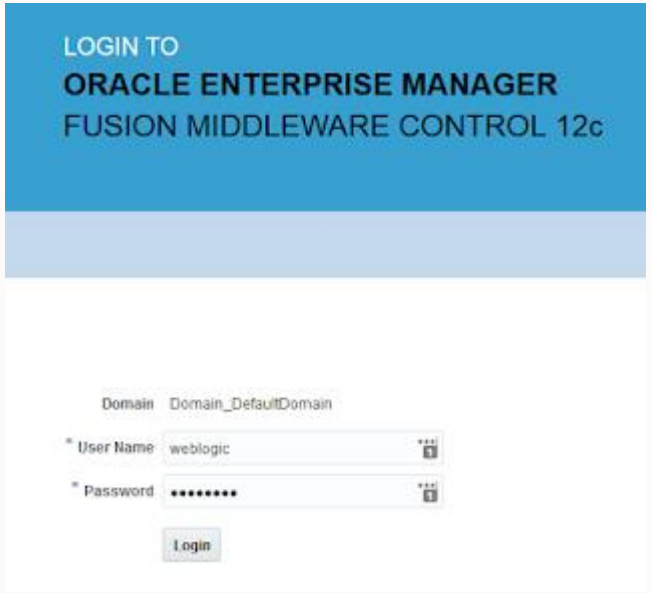


Verify Deployment

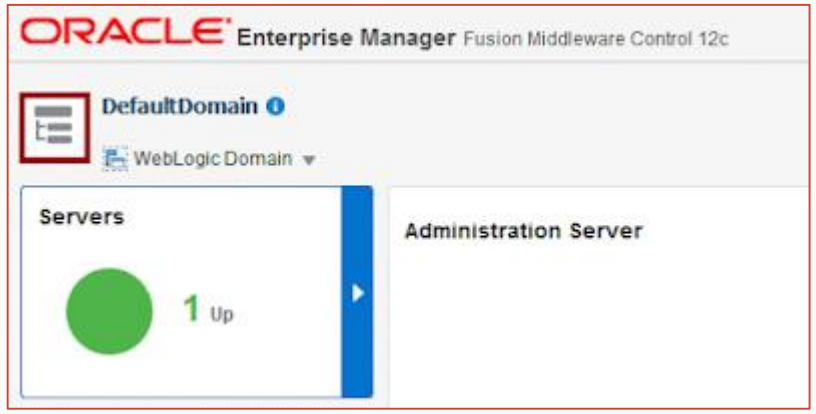


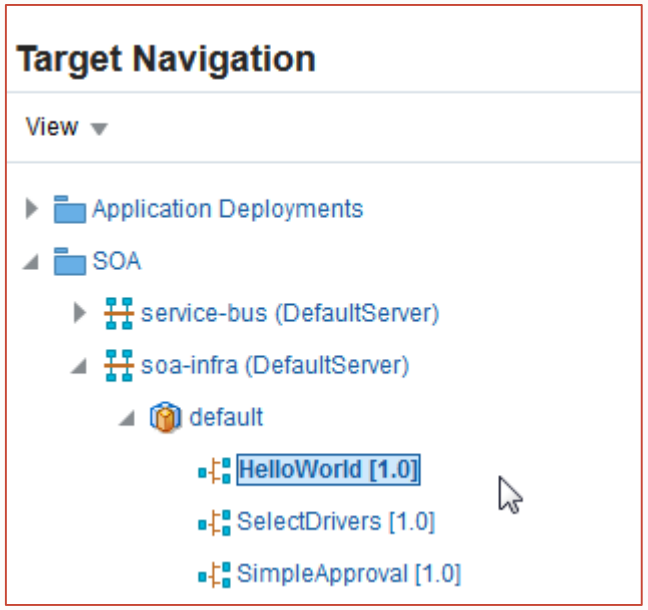


EM

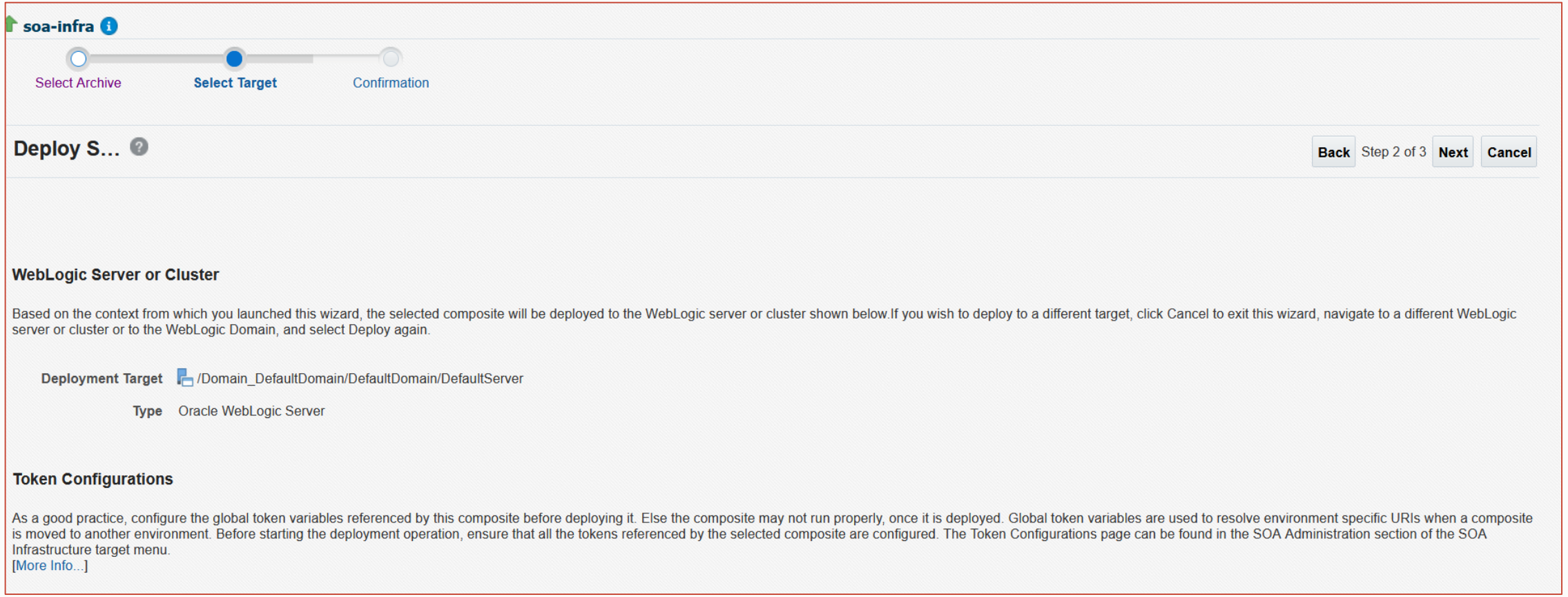

LOGIN TO
ORACLE ENTERPRISE MANAGER
FUSION MIDDLEWARE CONTROL 12c
Domain
Domain_DefaultDomain
* User Name
weblogic
* Password
Login

Navigation

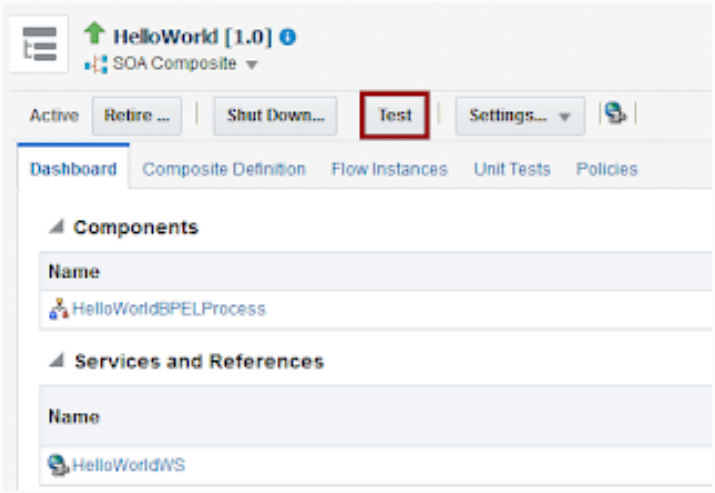

ORACLE Enterprise Manager Fusion Middleware Control 12c
DefaultDomain
WebLogic Domain
Servers
1 Up
Administration Server

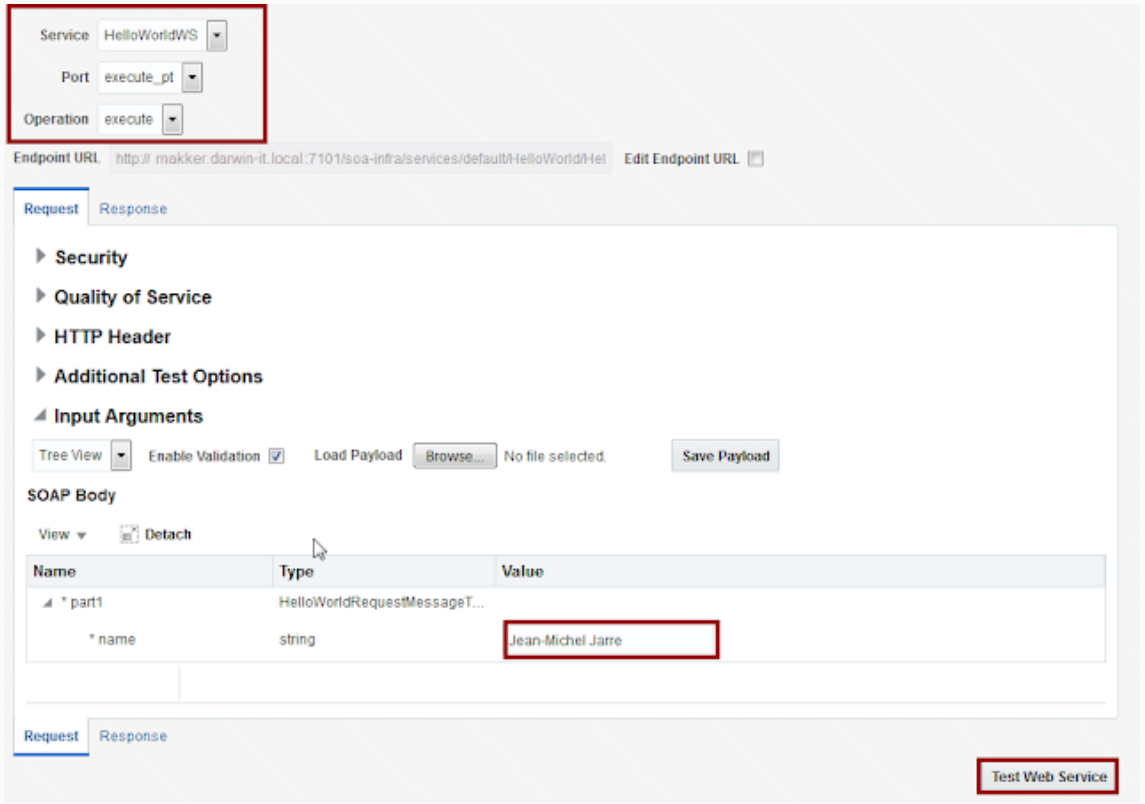

Target Navigation
View
Application Deployments
SOA
service-bus (DefaultServer)
soa-infra (DefaultServer)
default
HelloWorld [1.0]
SelectDrivers [1.0]
SimpleApproval [1.0]

Deploy SAR from EM

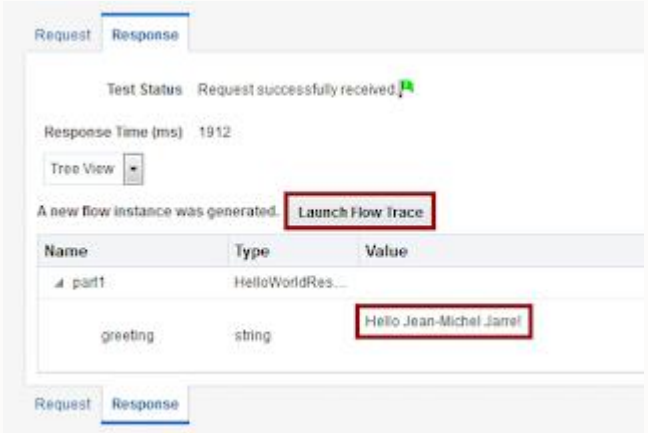


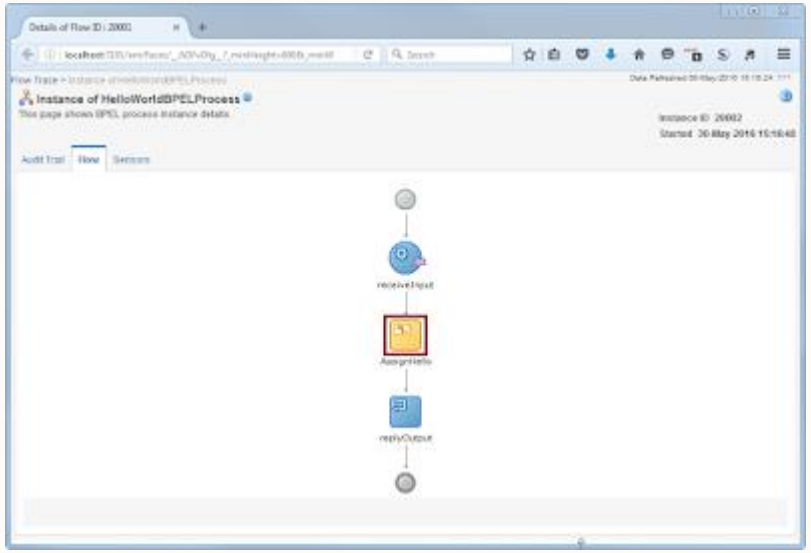
Test

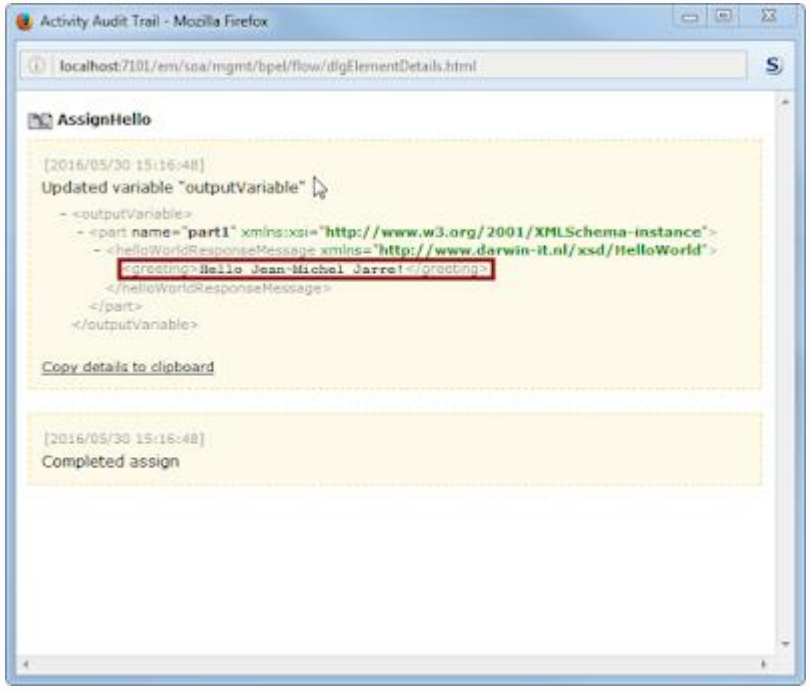

HelloWorld [1.0]
SOA Composite
Active
Retire ...
Shut Down...
Test
Settings...
Dashboard
Composite Definition
Flow Instances
Unit Tests
Policies
Components
Name
HelloWorldBPELProcess
Services and References
Name
HelloWorldWS


Service HelloWorldWS
Port execute_pt
Operation execute
Endpoint URL
Edit Endpoint URL
Request
Response
Security
Quality of Service
HTTP Header
Additional Test Options
Input Arguments
Tree View
Enable Validation
Load Payload
Browse...
No file selected.
Save Payload
SOAP Body
View
Detach
Name
Type
Value
* part1
HelloWorldRequestMessageT...
* name
string
Jean-Michel Jarre
Request
Response
Test Web Service

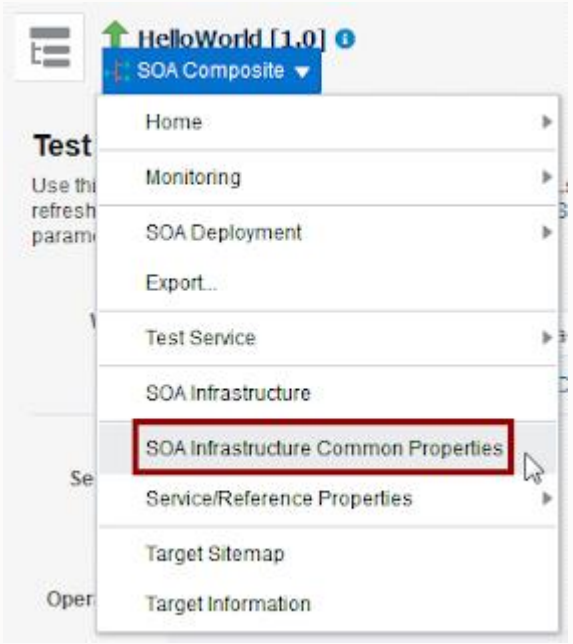
Result

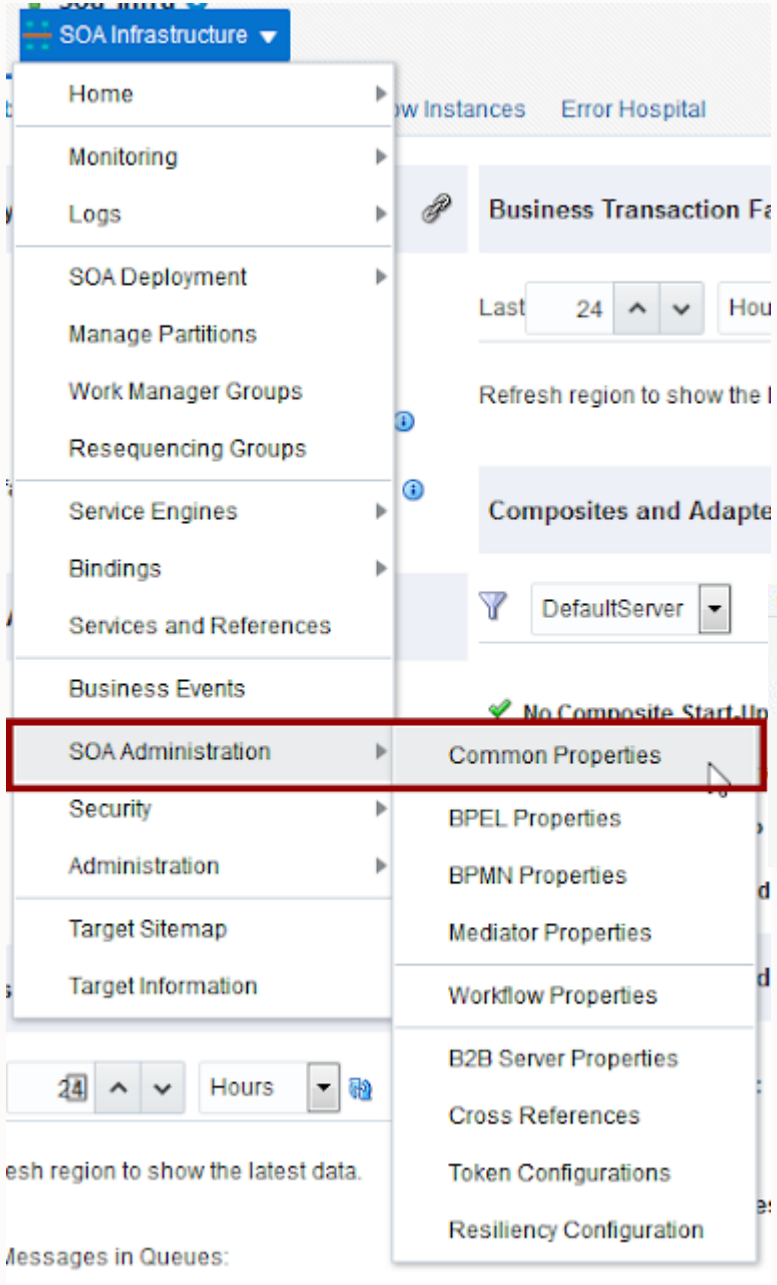

Request
Response
Test Status
Request successfully received.
Response Time (ms)
1912
Tree View
A new flow instance was generated.
Launch Flow Trace
Name
Type
Value
part1
HelloWorldRes...
greeting
string
Hello Jean-Michel Jarre!
Request
Response


Instance of HelloWorldBPELProcess


Activity Audit Trail - Mozilla Firefox
localhost:7101/em/soa/mgmt/bpel/flow/dlgElementDetails.html
AssignHello
[2016/05/30 15:16:48]
Updated variable "outputVariable"
<outputVariable>
<part name="part1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<helloWorldResponseMessage xmlns="http://www.darwin-it.nl/xsd/HelloWorld">
<greeting>Hello Jean-Michel Jarre!</greeting>
</helloWorldResponseMessage>
</part>
</outputVariable>
Copy details to clipboard
[2016/05/30 15:16:48]
Completed assign

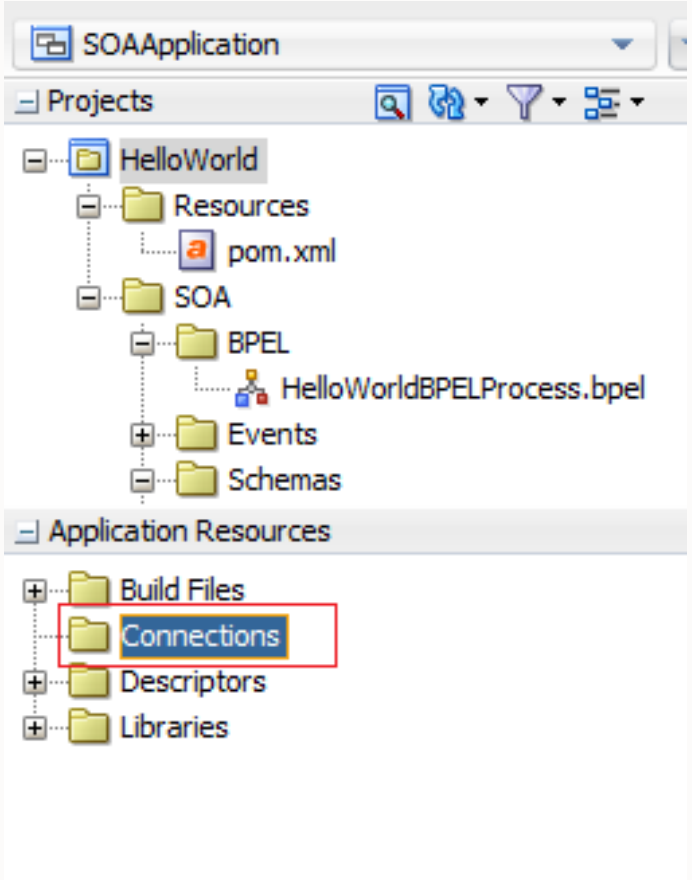
Auditing


HelloWorld [1.0]
SOA Composite
Home
Monitoring
SOA Deployment
Export...
Test Service
SOA Infrastructure
SOA Infrastructure Common Properties
Service/Reference Properties
Target Sitemap
Target Information

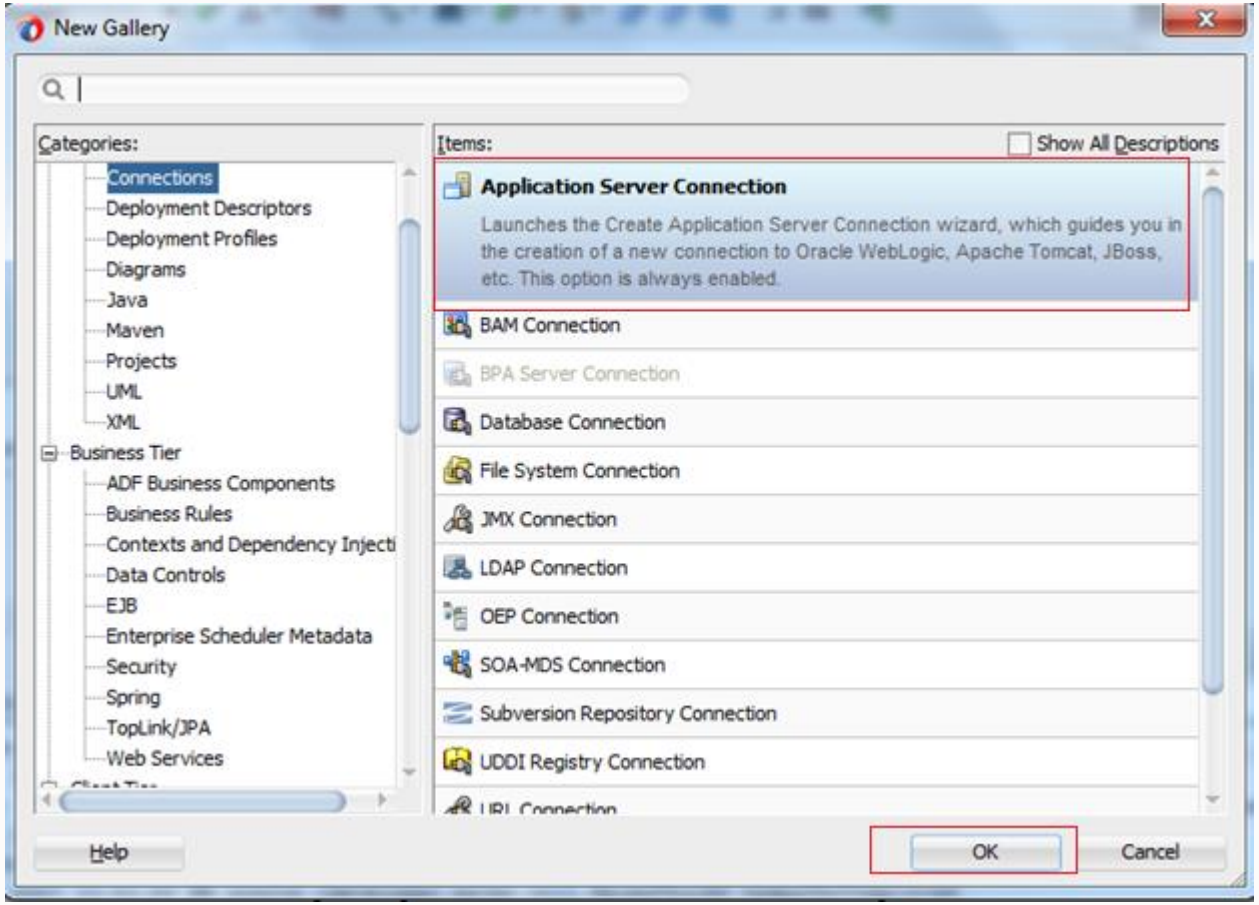

SOA Infrastructure
Home
Monitoring
Logs
SOA Deployment
Manage Partitions
Work Manager Groups
Resequencing Groups
Service Engines
Bindings
Services and References
Business Events
SOA Administration
Security
Administration
Target Sitemap
Target Information
Common Properties
BPEL Properties
BPMN Properties
Mediator Properties
Workflow Properties
B2B Server Properties
Cross References
Token Configurations
Resiliency Configuration
Error Hospital
Business Transaction
Refresh region to show the
Composites and Adapte
DefaultServer
Hours
esh region to show the latest data.
Messages in Queues:

ORACLE Enterprise Manager Fusion Middleware Control 12c
SOA Infrastructure Common Properties
Related Links
Apply
Revert
Profile
BPM BASIC
Change Profile
Audit Level
Development
Payload Validation
Default Query Duration
hours

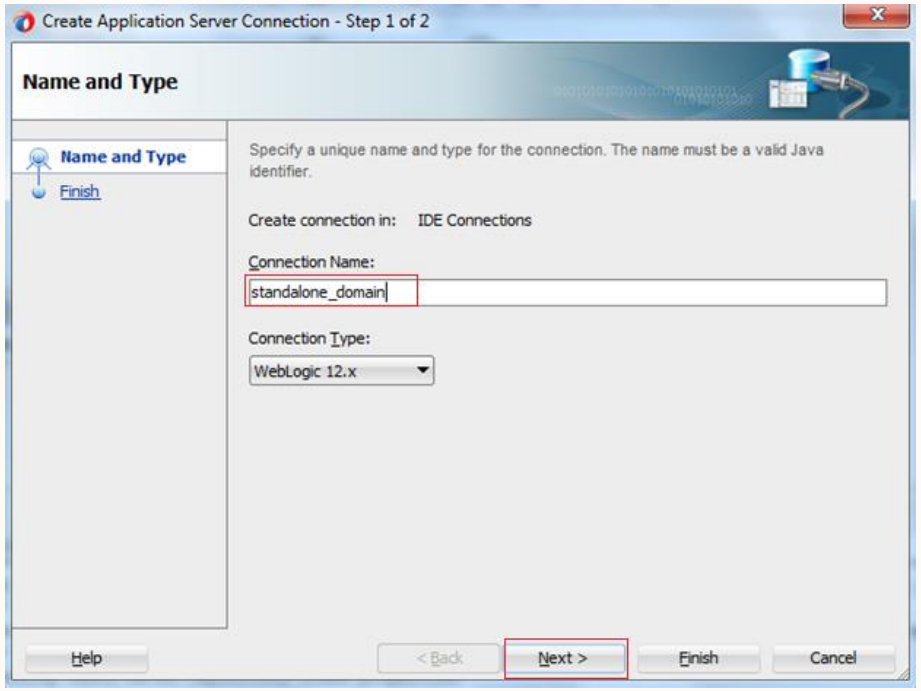
Create the “Application Server” connection

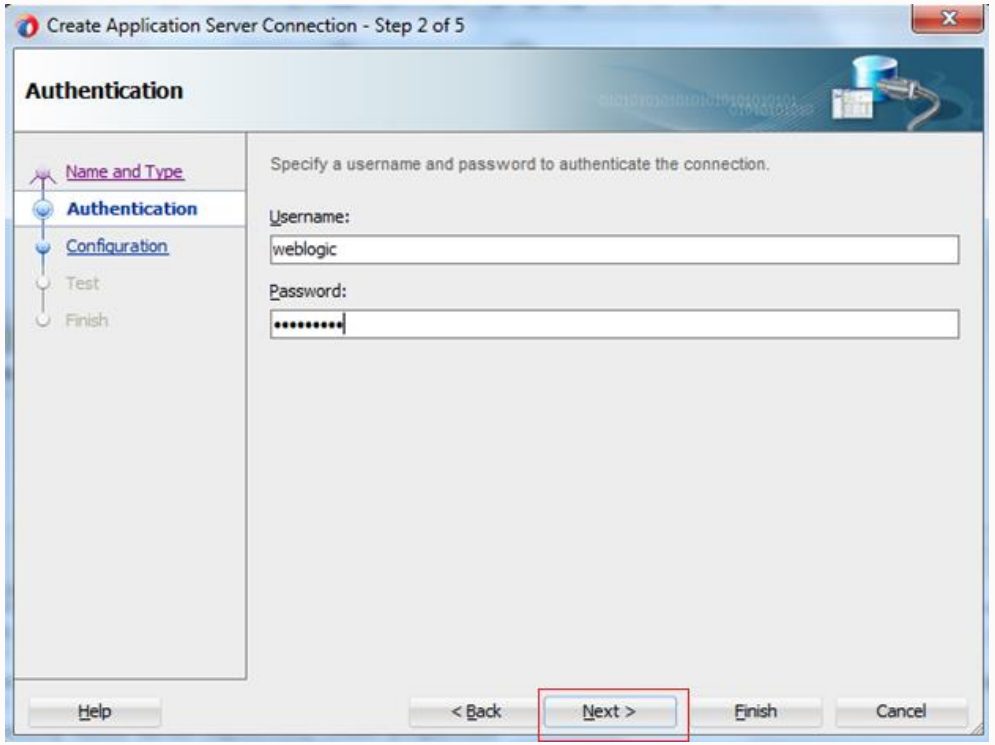


Application Server Connection

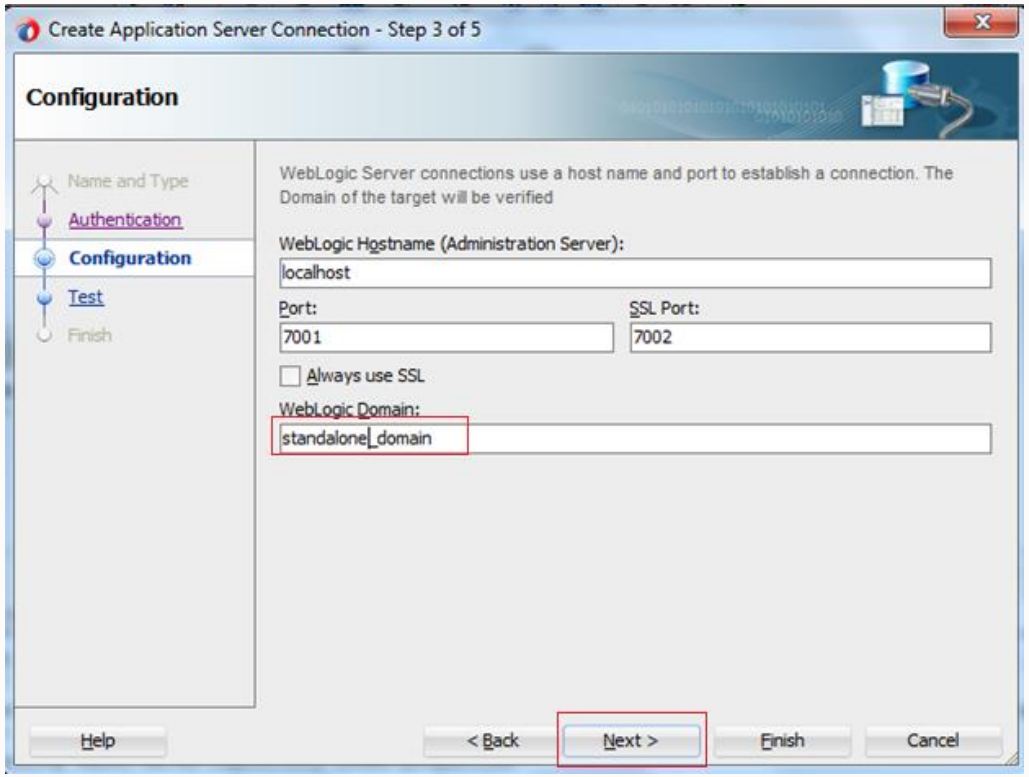


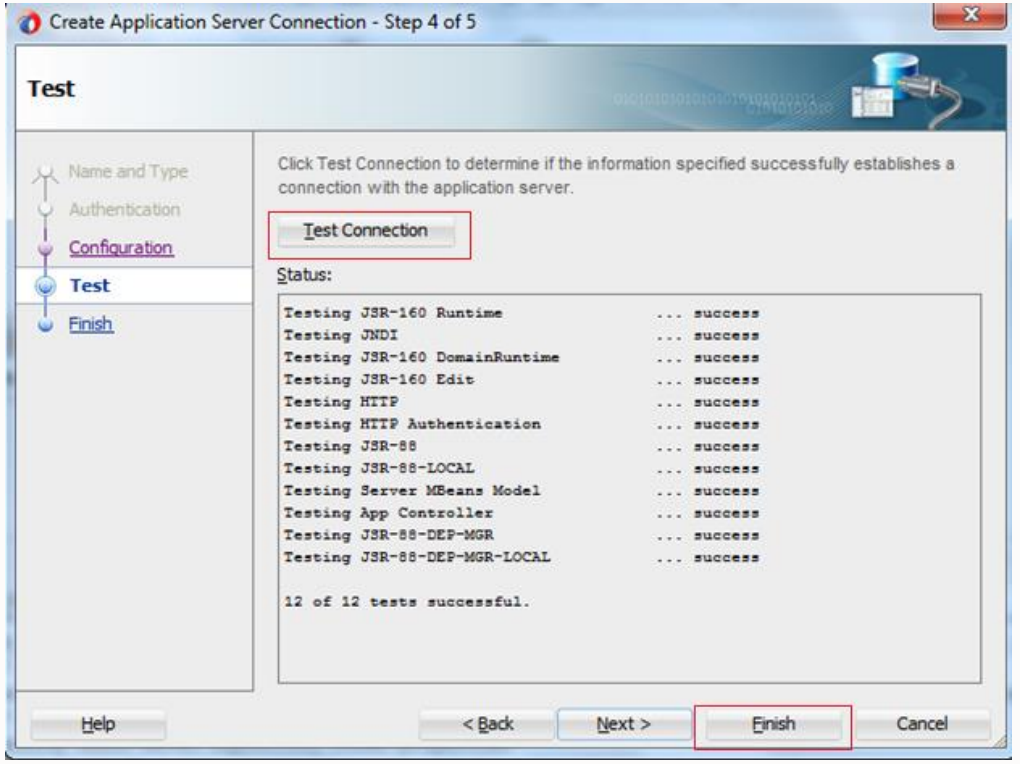
Standalone Domain



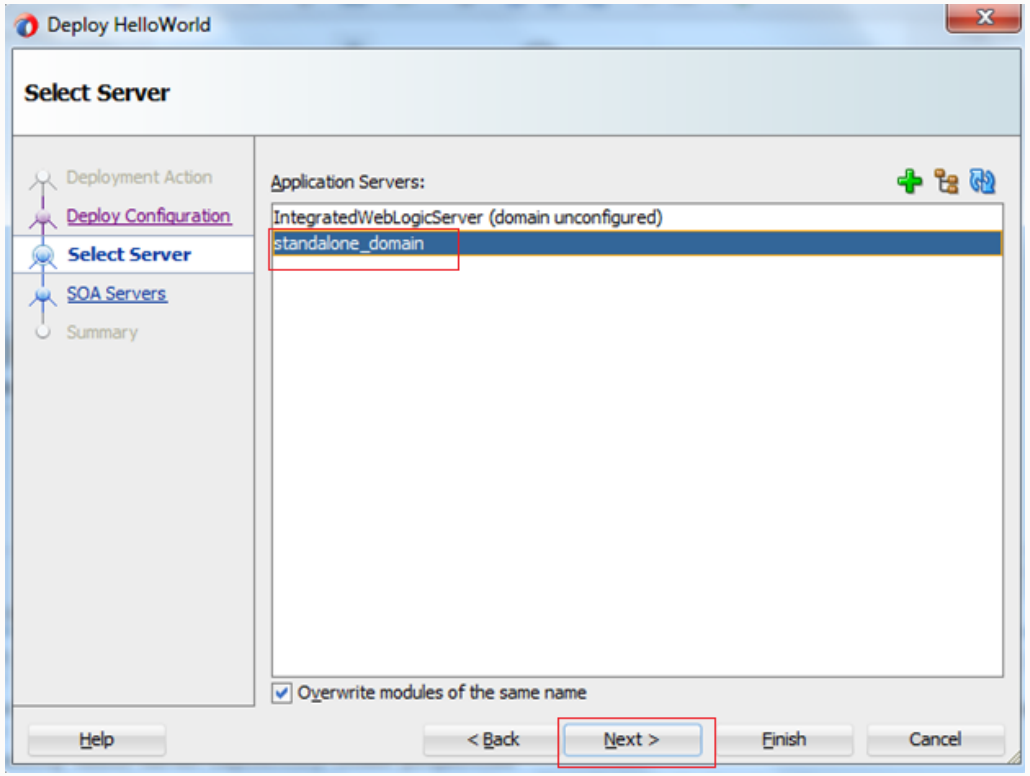


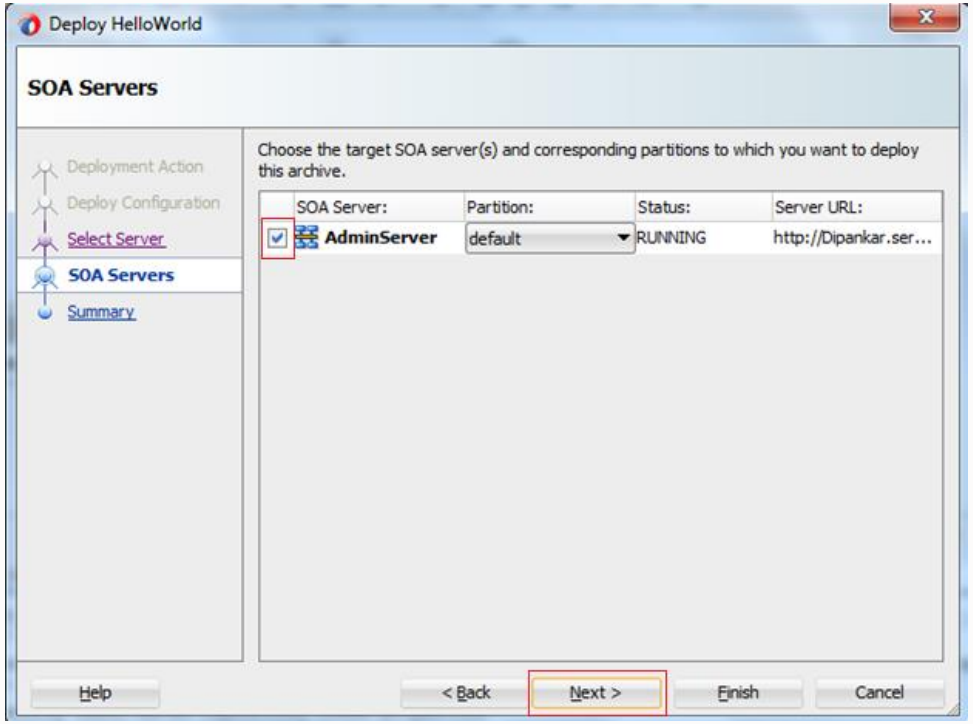
Standalone Domain





Deploy to Standalone





Q&A