Exercise 10

Using a Registry to publish endpoint metadata and retrieving that endpoint data
Looking at wider Registry Governance issues

Prior Knowledge
Using the ESB, creating services, deploying services
WSDL

Objectives
Deploy a governance registry, connect the services server to the governance registry, publish services into it. Find those services from the ESB.

Software Requirements

- Previous installations of ESB and AS from Exercises 8 and 9
- Java Development Kit 7
- WSO2 Governance Registry 4.5.2

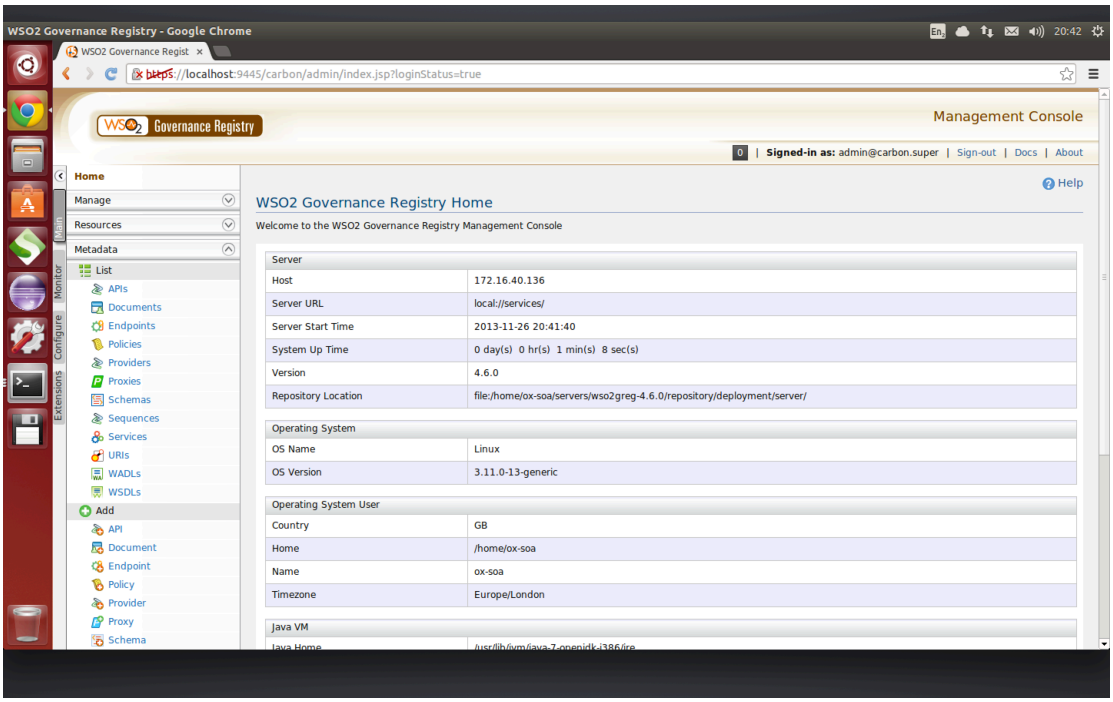
1. Start the Governance Registry

```
cd ~/servers/wso2greg-4.6.0
bin/wso2server.sh
```

2. Go to the administrators console: https://localhost:9445/

3. Login with admin/admin

4. You should see a screen like this:



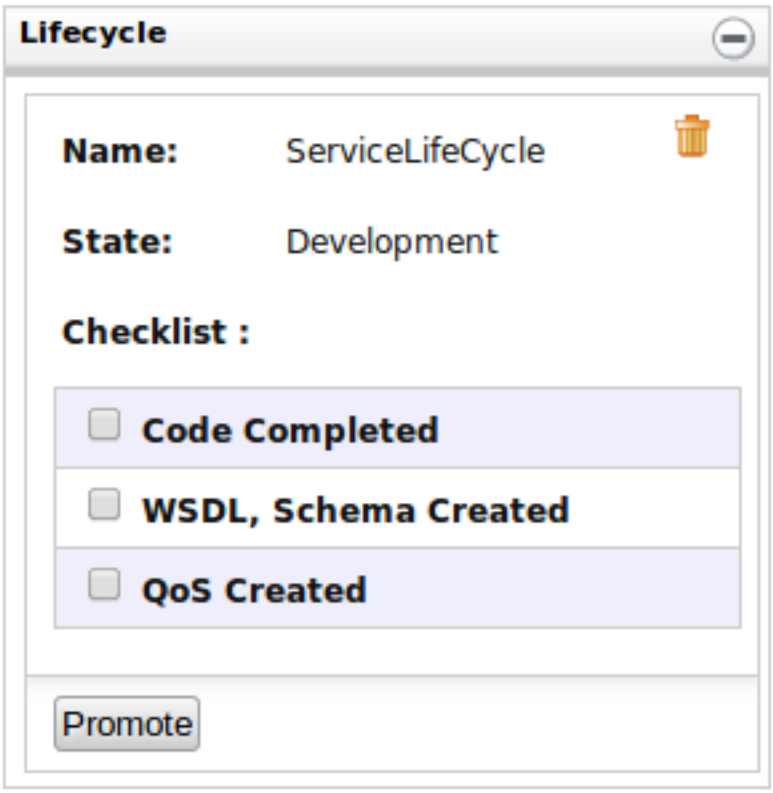
5. If you click on Services you should see an empty list (since we haven't registered any services with the Registry)

6. In a moment we are going to automatically add some services, but let's first do one the "hard way" – by hand. To make it easy we are going to be quite lazy.

7. Go to the **Add /Service** button on the left hand side.

8. This is a "top-down" way of defining a service. Fill in some information. Use the following information / leave other fields empty:
   Name: OrderService
   Namespace: me.freo.po
   Version: 0.0.1
   Description: Ordering Service.
   Save it.

9. Find the Lifecycle section on the right hand side and expand it, if necessary. The service will have been given the "default service lifecycle", and be in the first stage:



10. Now in order to move this Service out of Development we need to complete some tasks:
    * Code Completed
    * WSDL, Schema Created
    * QoS Created

11. Pretend you've done all that. Select the checkboxes. Now click Promote. You will be prompted to enter a new Version Number. Type in 1.0.0

12. Now look at you Services list again. You will have another version of this service available, now in the Testing Lifecycle. Take a look at it.

13. If you want to understand the gory details of how to configure your own lifecycles and lifecycle actions, go to the left hand **Extensions** tab, click Configure/Lifecycles, then **View** the ServiceLifecycle configuration. You

will see an XML based on the SCXML standard.

14. Now lets get our AppServer Services published in the Registry. Our services are hosted in WSO2 Application Server, and this can automatically publish into the Registry using WS-Dynamic Discovery. To do this, we need to tell the AppServer where the Registry is.
[Please note this only currently works for Axis2 services deployed in AS as there is an incompatibility between CXF's WSDD and G-Reg's WSDD which we are looking into.]

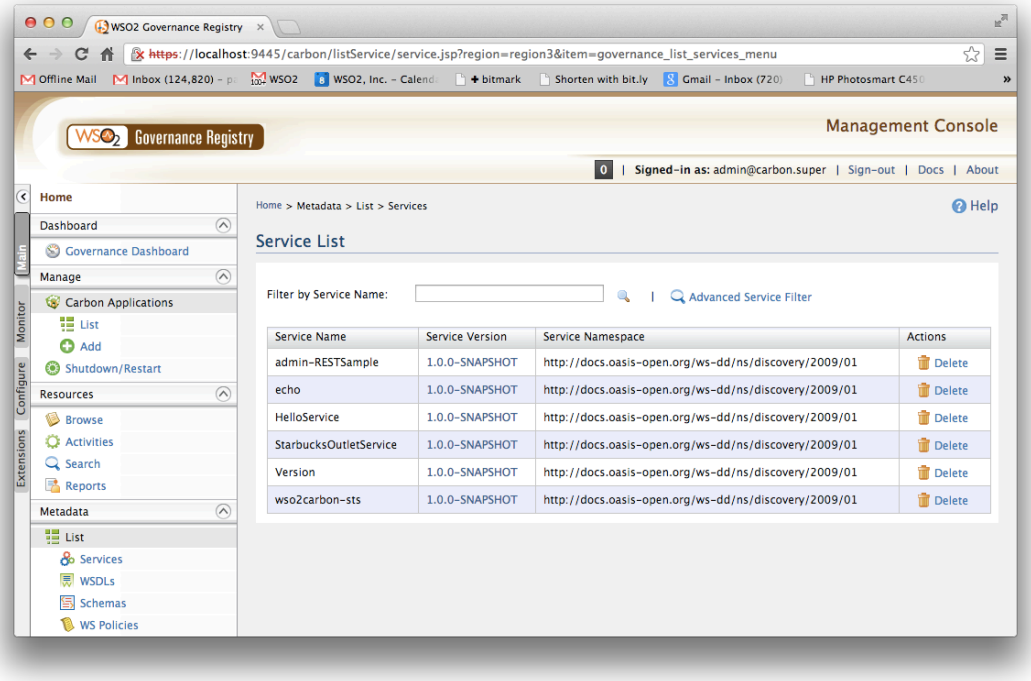
15. To do this, edit the ~/wso2as-5.2.0/repository/conf/axis2/axis2.xml

16. Add the following (bold) line in the correct place:

```
<!-- ================================================= -->
<!-- Parameters -->
<!-- ================================================= -->
<parameter
name="DiscoveryProxy">https://localhost:9445/services/DiscoveryProxy</parameter>
<parameter name="hotdeployment">true</parameter>
```

17. Restart (or Start) the Application Server. You can do this from the Web Admin Console or from the command line.

18. Wait a bit and then check the Registry Services list:



19. You can also find the WSDLs from these services in the WSDL list.

20. We can now “Link” the ESB to the Registry:

21. Start the ESB if it isn’t running.

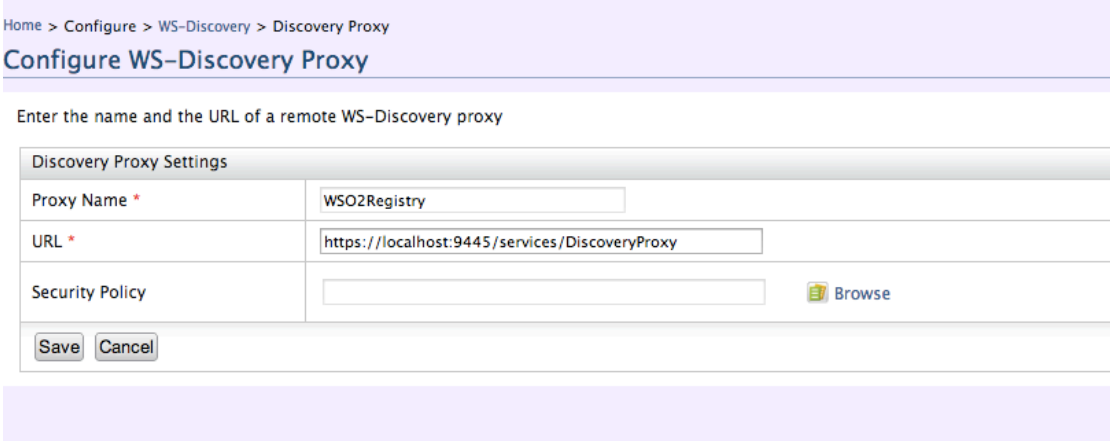
22. Go to the ESB Admin Console (https://localhost:9444)

23. Change the left hand menu tab to Configure

24. Select WS-Discovery

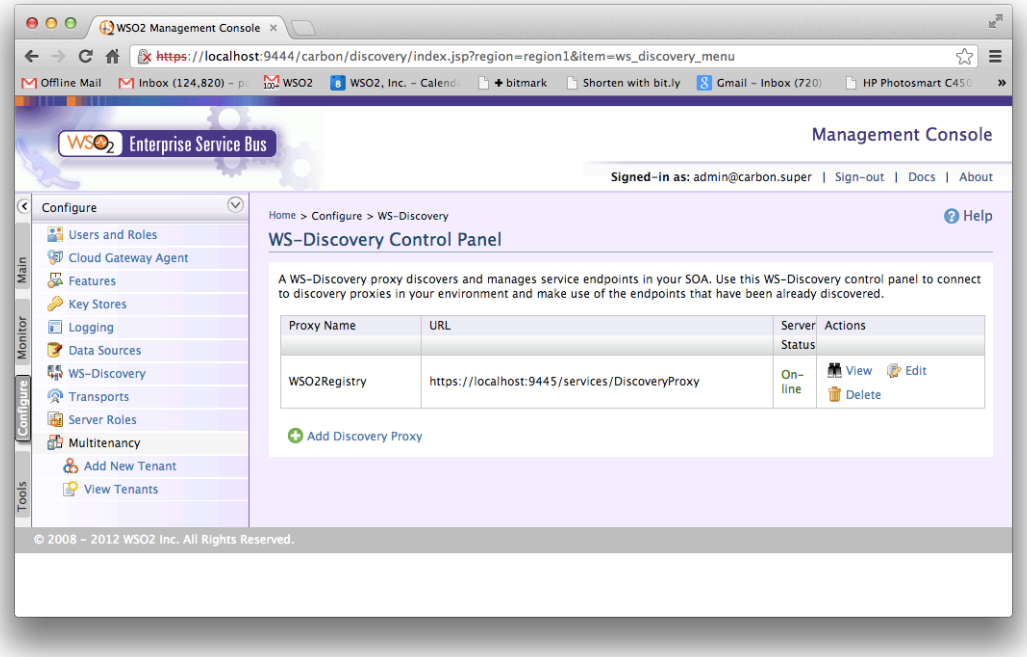
25. Click Add Discovery Proxy

26. Fill in the details as follows:
    Proxy Name: WSO2Registry
    URL: https://localhost:9445/services/DiscoveryProxy
    Security Policy: [Leave empty]



27. Click Save

28. It should now say that the server is Online

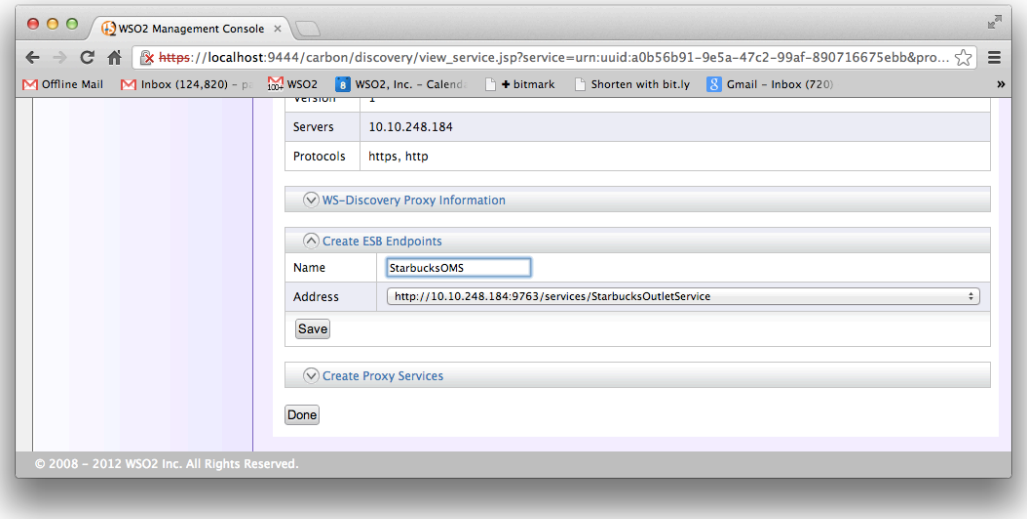


29. Click View

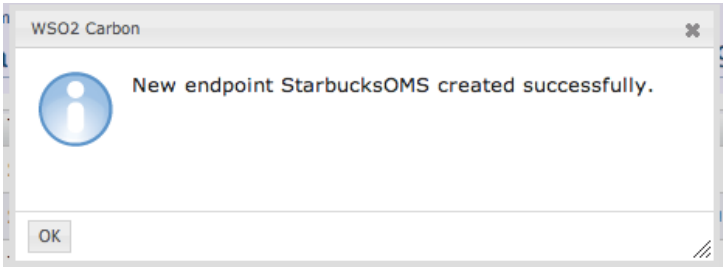
You will see the various endpoints from the services that are published in the Registry. Find the service with the "Starbucks endpoints" e.g. http://10.10.248.184:9763/services/StarbucksOutletService

30. Click on the UUID link

31. Go down to the section “Create ESB Endpoints” and expand it.



32. Give the name StarbucksOMS and hit Save. You should see:



33. If you switch back to the Manage tab and look at the endpoints, you should now find it is there.

34. That’s all folks!