

# Using SOA Gateway to access Web Services

Web services are Web based applications that use open, XML-based standards and transport protocols to exchange data with clients.

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## Introduction

SOA Gateway can be used to access other web services. The web service driver queries the WSDL exposed by these services and creates a service to enable these to be called.

## Accessing Web Services

In this example we will use the web service <http://footballpool.dataaccess.eu/data/info.wso>.

- In the Control Centre SOA Gateway tab, select the chosen server. Under Services select the web service driver. Right-click and select Discover Service(s) :
- Specify the Service WSDL URI and click the 'Discover' button:

The screenshot shows a software window titled "Driver Options" with two main sections: "Service discovery" and "Status".

**Service discovery section:**

- A header "Service discovery" is followed by a highlighted blue bar labeled "Specify discovery source".
- Below this is a text input field labeled "Service WSDL URI" containing the URL: `http://footballpool.dataaccess.eu/data/info.wso?WSDL`.
- On the right side of this section, there is a "Discover" button.
- At the bottom right of the "Service discovery" section, there is an "Exit" button.

**Status section:**

- The "Status" section contains two informational messages, each preceded by an information icon (i):
  - "Please specify selection parameters"
  - "Service Discovery commencing"

- The Status section will display the progress of each stage of the web service discovery and the Service discovery section will display the following information retrieved from the service description:

Driver Options

Service discovery

Service name	Operation	Binding
<input type="checkbox"/> WS_Driver_AllPlayersWithYellowCards_In...	AllPlayersWithYellowCards	InfoSoapBinding
<input type="checkbox"/> WS_Driver_AllPlayersWithRedCards_Info...	AllPlayersWithRedCards	InfoSoapBinding
<input type="checkbox"/> WS_Driver_AllCards_InfoSoapBinding	AllCards	InfoSoapBinding
<input type="checkbox"/> WS_Driver_Cities_InfoSoapBinding	Cities	InfoSoapBinding
<input type="checkbox"/> WS_Driver_StadiumNames_InfoSoapBinding	StadiumNames	InfoSoapBinding
<input type="checkbox"/> WS_Driver_StadiumURL_InfoSoapBinding	StadiumURL	InfoSoapBinding
<input type="checkbox"/> WS_Driver_StadiumInfo_InfoSoapBinding	StadiumInfo	InfoSoapBinding
<input type="checkbox"/> WS_Driver_AllStadiumInfo_InfoSoapBinding	AllStadiumInfo	InfoSoapBinding
<input checked="" type="checkbox"/> WS_Driver_FullTeamInfo_InfoSoapBinding	FullTeamInfo	InfoSoapBinding
<input type="checkbox"/> WS_Driver_Teams_InfoSoapBinding	Teams	InfoSoapBinding
<input type="checkbox"/> WS_Driver_GroupCount_InfoSoapBinding	GroupCount	InfoSoapBinding
<input type="checkbox"/> WS_Driver_Groups_InfoSoapBinding	Groups	InfoSoapBinding
<input type="checkbox"/> WS_Driver_GroupCompetitors_InfoSoapB...	GroupCompetitors	InfoSoapBinding

Generate >

< Back

Select all

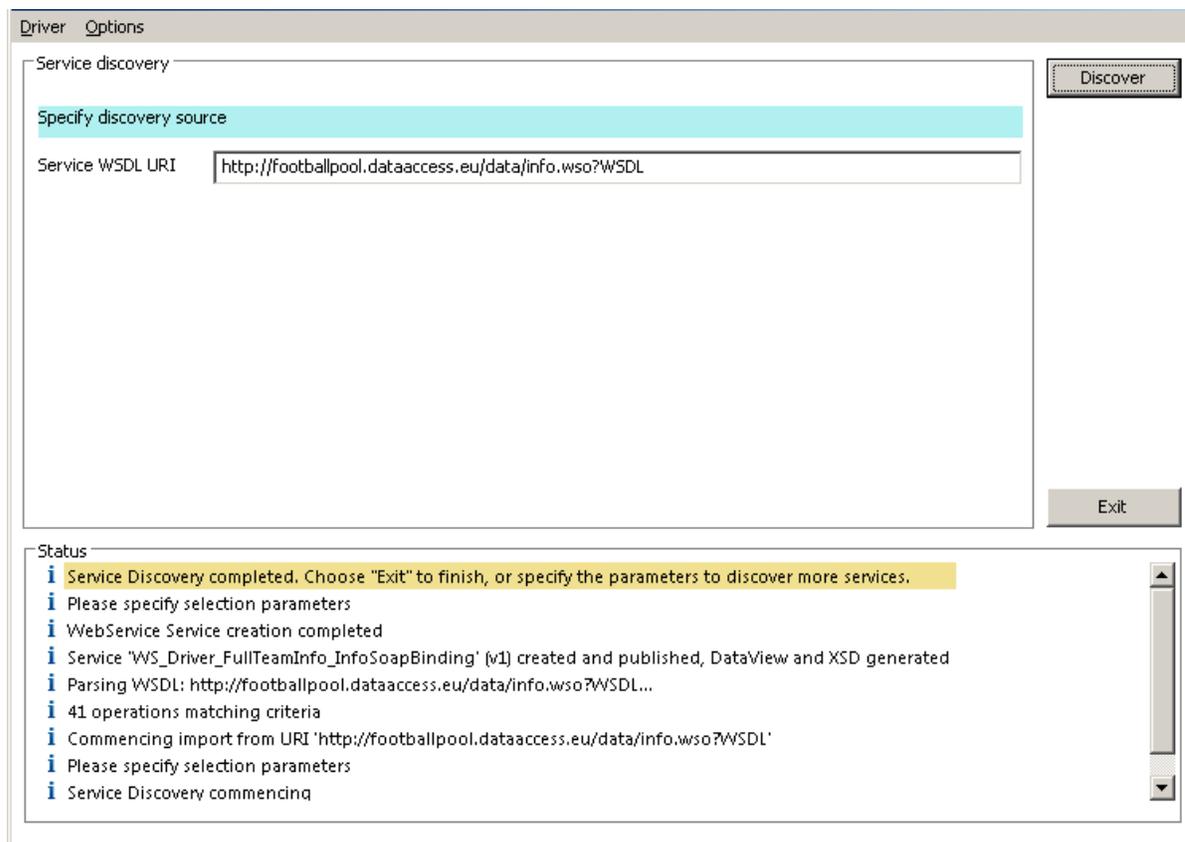
Deselect all

Exit

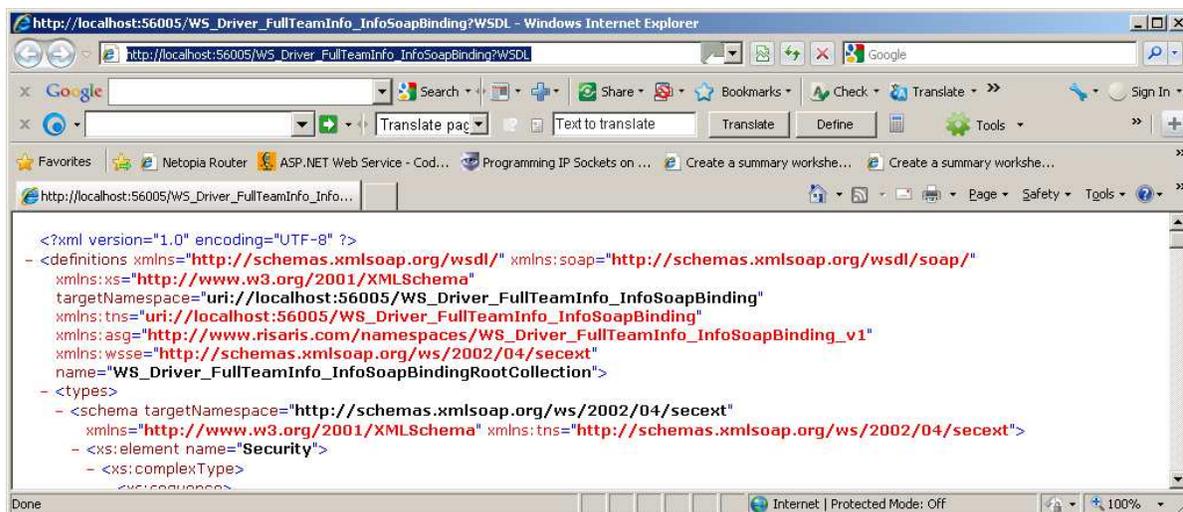
Status

- i 41 operations matching criteria
- i Commencing import from URI 'http://footballpool.dataaccess.eu/data/info.wso?WSDL'
- i Please specify selection parameters
- i Service Discovery commencing

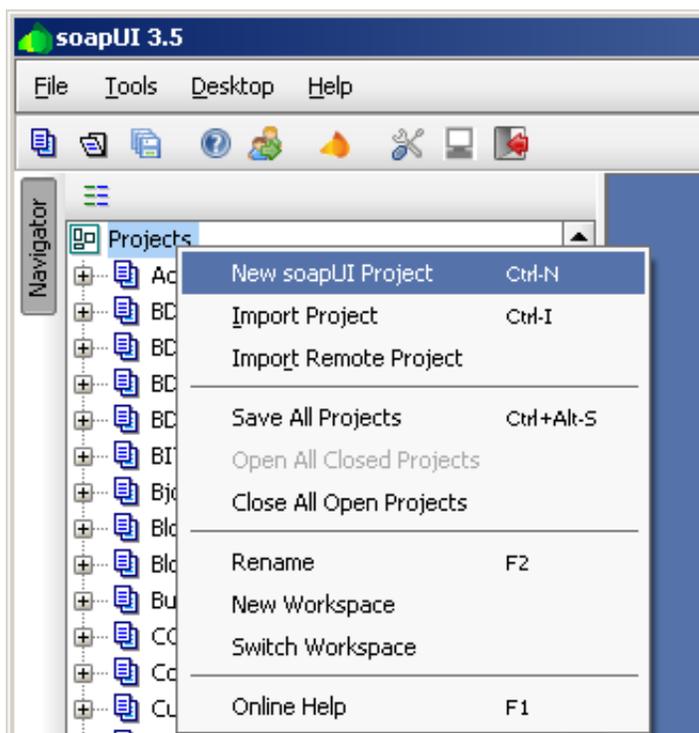
- Use Select all to choose all operations or select on an individual basis. For clarity we have chosen the FullTeamInfo operation only. When chosen click the Generate button.
- The Status section will be updated with the progress of the generation process, listing the operations selected and the results for each one:



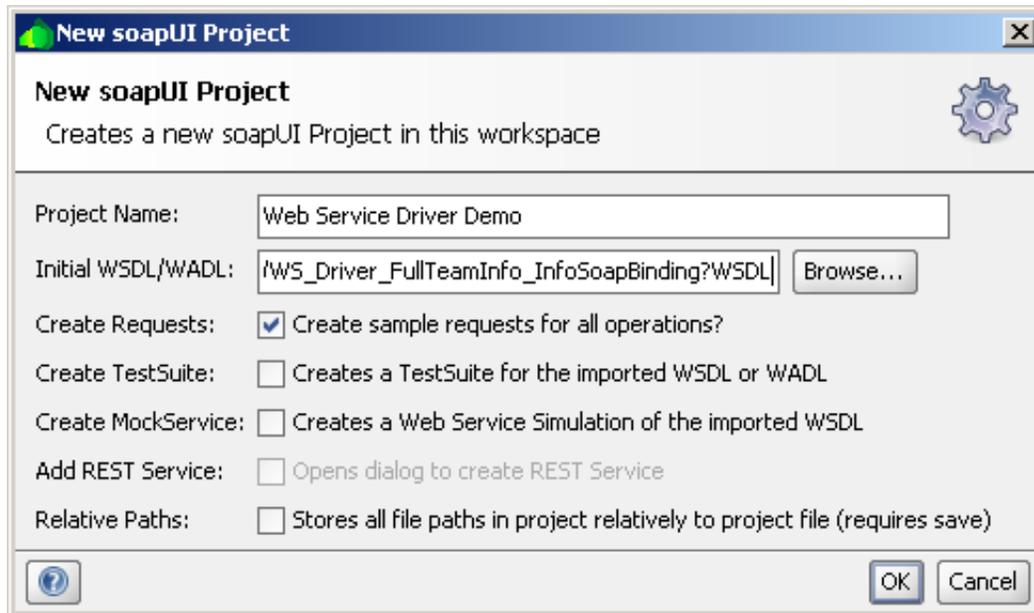
- The Wizard is still active and ready for further discovery, click Discover to start the process again, or Exit to dismiss the wizard.
- The generated Service(s) will be listed under the Web Service driver.
- To view the WSDL generated select 'WSDL URL is..' : which can be found in the Properties View for the service. This will open in your default browser e.g.



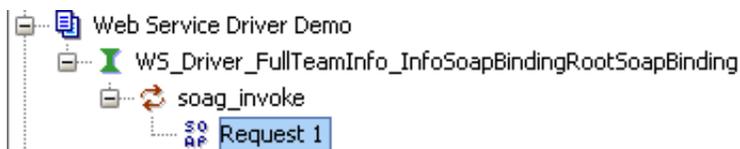
- Here we are using soapUI to demonstrate how this web service can be invoked. Open soapUI, right click on Projects and choose New soapUI Project :



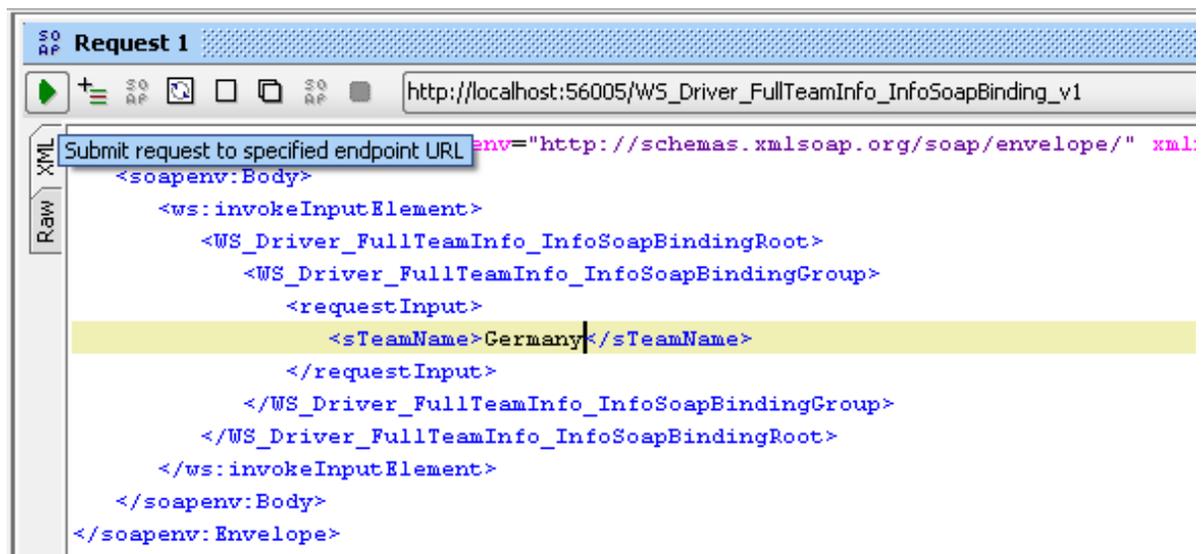
- Enter the name of the project and set the WSDL to the value copied previously :



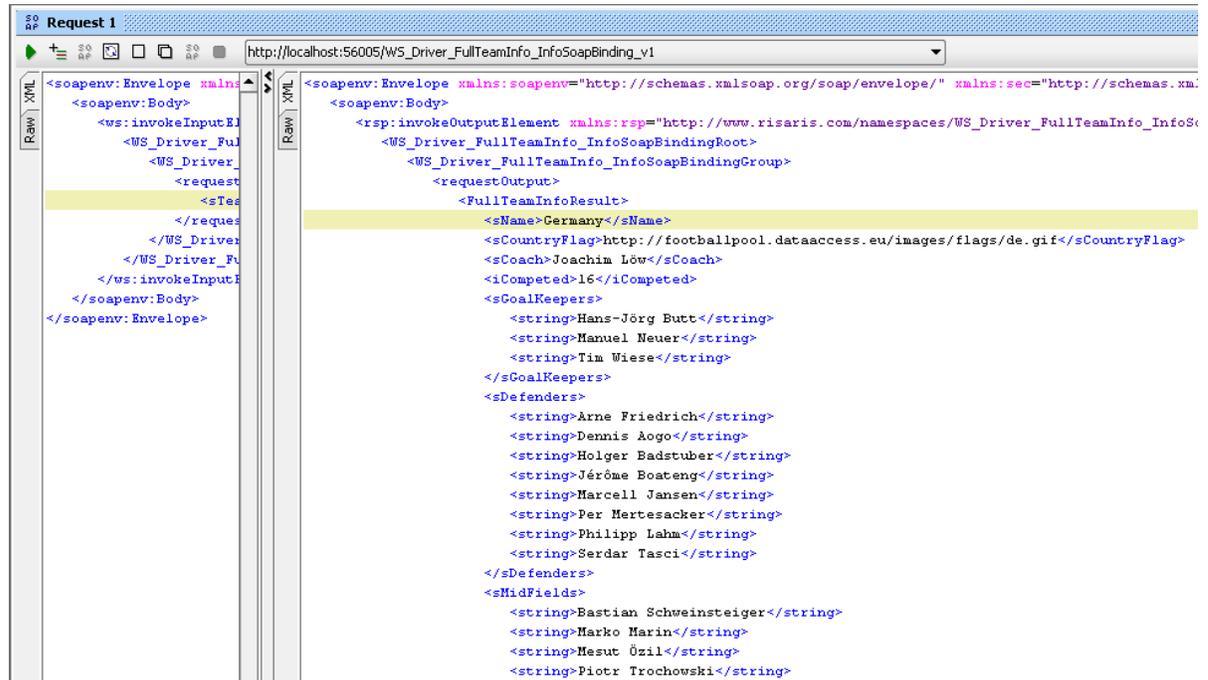
- When the import is complete double click on the Request 1 entry to open the dialog :



- For this request there is no need for the <soapenv:Header> so select all of this and delete it. Set "Germany" as the content of the <sTeamName> element and issue the request by selecting the play button :



- The results will be displayed as shown:



The screenshot displays a SOAP message viewer interface. The top bar shows the URL: `http://localhost:56005/WS_Driver_FullTeamInfo_InfoSoapBinding_v1`. The left pane shows the raw XML of the request, and the right pane shows the raw XML of the response.

```
<?xml version="1.0" encoding="UTF-8" ?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:sec="http://schemas.xmlsoap.org/security/2001/04" ?>
  <soapenv:Body>
    <ws:invokeInputElement xmlns:ws="http://schemas.xmlsoap.org/ws/2003/05/soap" ?>
      <WS_Driver_FullTeamInfo_InfoSoapBindingRoot xmlns="http://www.risaris.com/namespaces/WS_Driver_FullTeamInfo_InfoSoapBinding" ?>
        <WS_Driver_FullTeamInfo_InfoSoapBindingGroup ?>
          <requestOutput ?>
            <FullTeamInfoResult ?>
              <sName>Germany</sName>
              <sCountryFlag>http://footballpool.dataaccess.eu/images/flags/de.gif</sCountryFlag>
              <sCoach>Joachim Löw</sCoach>
              <iCompeted>16</iCompeted>
              <sGoalKeepers ?>
                <string>Hans-Jörg Butt</string>
                <string>Manuel Neuer</string>
                <string>Tim Wiese</string>
              </sGoalKeepers>
              <sDefenders ?>
                <string>Arne Friedrich</string>
                <string>Dennis Aogo</string>
                <string>Holger Badstuber</string>
                <string>Jérôme Boateng</string>
                <string>Marcell Jansen</string>
                <string>Per Mertesacker</string>
                <string>Philipp Lahm</string>
                <string>Serdar Tasci</string>
              </sDefenders>
              <sMidFields ?>
                <string>Bastian Schweinsteiger</string>
                <string>Marko Marin</string>
                <string>Mesut Özil</string>
                <string>Piotr Trochowski</string>
              </sMidFields>
            </FullTeamInfoResult>
          </requestOutput>
        </WS_Driver_FullTeamInfo_InfoSoapBindingGroup>
      </WS_Driver_FullTeamInfo_InfoSoapBindingRoot>
    </ws:invokeInputElement>
  </soapenv:Body>
</soapenv:Envelope>
```

```
<?xml version="1.0" encoding="UTF-8" ?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:sec="http://schemas.xmlsoap.org/security/2001/04" ?>
  <soapenv:Body>
    <rsp:invokeOutputElement xmlns:rsp="http://www.risaris.com/namespaces/WS_Driver_FullTeamInfo_InfoSoapBinding" ?>
      <WS_Driver_FullTeamInfo_InfoSoapBindingRoot xmlns="http://www.risaris.com/namespaces/WS_Driver_FullTeamInfo_InfoSoapBinding" ?>
        <WS_Driver_FullTeamInfo_InfoSoapBindingGroup ?>
          <requestOutput ?>
            <FullTeamInfoResult ?>
              <sName>Germany</sName>
              <sCountryFlag>http://footballpool.dataaccess.eu/images/flags/de.gif</sCountryFlag>
              <sCoach>Joachim Löw</sCoach>
              <iCompeted>16</iCompeted>
              <sGoalKeepers ?>
                <string>Hans-Jörg Butt</string>
                <string>Manuel Neuer</string>
                <string>Tim Wiese</string>
              </sGoalKeepers>
              <sDefenders ?>
                <string>Arne Friedrich</string>
                <string>Dennis Aogo</string>
                <string>Holger Badstuber</string>
                <string>Jérôme Boateng</string>
                <string>Marcell Jansen</string>
                <string>Per Mertesacker</string>
                <string>Philipp Lahm</string>
                <string>Serdar Tasci</string>
              </sDefenders>
              <sMidFields ?>
                <string>Bastian Schweinsteiger</string>
                <string>Marko Marin</string>
                <string>Mesut Özil</string>
                <string>Piotr Trochowski</string>
              </sMidFields>
            </FullTeamInfoResult>
          </requestOutput>
        </WS_Driver_FullTeamInfo_InfoSoapBindingGroup>
      </WS_Driver_FullTeamInfo_InfoSoapBindingRoot>
    </rsp:invokeOutputElement>
  </soapenv:Body>
</soapenv:Envelope>
```

Congratulations! You have now accessed a Web Service using SOA Gateway!