Taverna Tutorial
Building a simple workflow

Stian Soiland-Reyes and Christian Brenninkmeijer
University of Manchester
materials by Katy Wolstencroft and Aleksandra Pawlik

http://orcid.org/0000-0001-9842-9718
http://orcid.org/0000-0002-2937-7819
http://orcid.org/0000-0002-1279-5133
http://orcid.org/0000-0001-8418-6735

Bonn University, 2014-09-01
http://www.taverna.org.uk/
We will start with something easy - retrieving a protein sequence from a remote database and identifying functional motifs.

- Expand the list
- Available Services
  - Local Services
    - ncbi
- Select ‘Get Protein FASTA’ and drag-and-drop it into the empty workflow diagram
In a blank space in the workflow diagram, **Right-click** and select **Workflow input port** from the **Insert** section.

- Type in a name for this input (e.g. ID) and click **ok**

- Do the same to create a new **Workflow Output Port**. Call this output **Sequence**
You now have 3 boxes in the diagram and we need to connect them up to build our workflow.

Click on the input box ID and drag towards Get_Protein_Fasta and let go. An arrow will connect the two boxes.
- Click on the output box *Sequence*, drag towards "Get_protein_fasta", and let go. An arrow will connect the two boxes.
- You have now built your first workflow!
Running workflow

- In the menu, select “File -> Run workflow”, or click on the green play button at the top of the workbench.
Providing workflow inputs

An input window will appear. We have not yet added a description of the workflow or the input.

Click on ‘Set Value’ in the input window and add a Uniprot protein identifier (e.g. P15409) where it says “some input data goes here”
- Click **Run workflow**
- The workbench changes to the **Results** perspective
- In the bottom left, click on **Value 1**
- You will now see a protein sequence from Uniprot
Taverna can check to see that everything is connected properly and that all the services in your workflow are available.

Go to the workflow explorer (“Design” button) and click on ‘Validation report’ tab.

See if Taverna has found any problems with the workflow. Errors will be displayed in red, warnings in yellow. Workflows with warnings often still run.

If there are problems, follow the instructions to resolve them by clicking on the ‘Solution’ tab.

Are you able to create a workflow that gives warnings or errors?

Tip: Try deleting the data link to the workflow output port.