Quick introduction to components

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• This tutorial assumes you have done the “Advanced Taverna features” tutorial
• The workflow to call EBI InterproScan was quite complex.
• It would be nice to be able to package that workflow up and be able to use it as a single service in other workflows
• That is exactly what components allow
Importing a component family

- **Components** are grouped into **component families**
- **Component families** are held in a **component registry**
- myExperiment is a component registry
- You can import a component family into the **Service Panel**
- Click **Import new services** and then
- **Component service...**
Selecting a component family

- In the dialog
- Select *myExperiment* component registry, and
- *Test components* family
- Click **OK**
Added component family

- In the **Service panel** you can now expand and see the **Test components** family
Adding a component to a workflow

- Create a new workflow
- Add the EBI_InterproScan component into the workflow
- Create input and output workflow ports and connect them to the ports of the component
EBI InterproScan component

Workflow input ports:
- email
- sequence

Workflow output ports:
- status
- text
- xml
Running the workflow

- You can now run the workflow
- The value for the sequence should be something like:

```
>sp|Q9BTV4|TMM43_HUMAN Transmembrane protein 43 OS=Homo sapiens GN=TMEM43 PE=1 SV=1
MAANYSSTREHERVKTSSQPGLQFLRSETSGGMFVGLMAFLLSFYLIFTNEGRALKT
ATSLAEGLSLVPSDHSVAPENGRVLVHIIGALRTSLLDSDPNYGVHLPAVKLRRHVE
MYQWVETEESEYTEDGQKVKKETRYNTEWRSEIINSKNFDREIGHKNPSAMAVESFMA
TAPFVQIGRFFLSGLIDKVDNFSLSKLEDPHVDIIRRGGFYYHSENPKYPEVGDLR
VSFSYAGLSDDPLGPAHVVTIARQRGDQTVLPFTKSGDPLLHHGDSAEVHFRE
LRSNSMKTWGLRAAGWMAMFMGLNLMTIRILYTLVDWFPFRDLPVNIKLFAFCVATSLT
LLTVAAGWLFYRPLWALLIAGLALVPILVAPAKKLE
```
Connecting components

- The workflow just contains the single service, we need to connect the component with other services
- In the **Design view**, delete the *sequence* workflow input port
  - Right click and select **Delete workflow input port**
- Add **Local Services -> ncbi -> Get Protein FASTA** to the workflow
- Connect the *outputText* of *Get Protein FASTA* to the *sequence* port of the *EBI_InterproScan*
- Connect the *id* port of *Get Protein FASTA* to a workflow input port
Your workflow should now look like:

Workflow input ports:
- email
- id

Workflow output ports:
- status
- text
- xml

Processes:
- Get_Protein_FASTA
- EBI_InterproScan
Running the workflow - 2

- Run the workflow again
- You can use Q9BTV4 as the value for id
Is it really the complex workflow?

- In the **Results view** you can click on **Progress report**
- Expand **EBI_InterproScan**
- You can see all the services “hidden” inside the component
Summary

- You have learnt how to make the components in a component family available for use
- How to include a component in a workflow
- How components are very useful to hide complexity