



# Quick introduction to components

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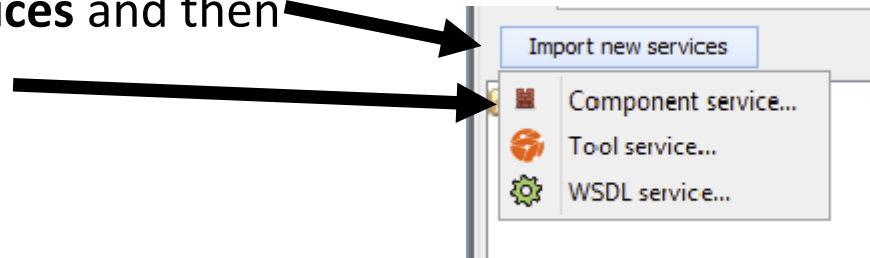
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## EBI InterproScan

- 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

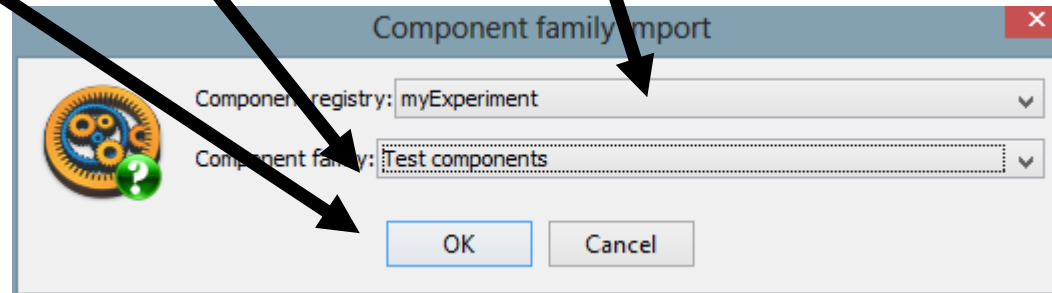
## Importing a component family

- **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...**



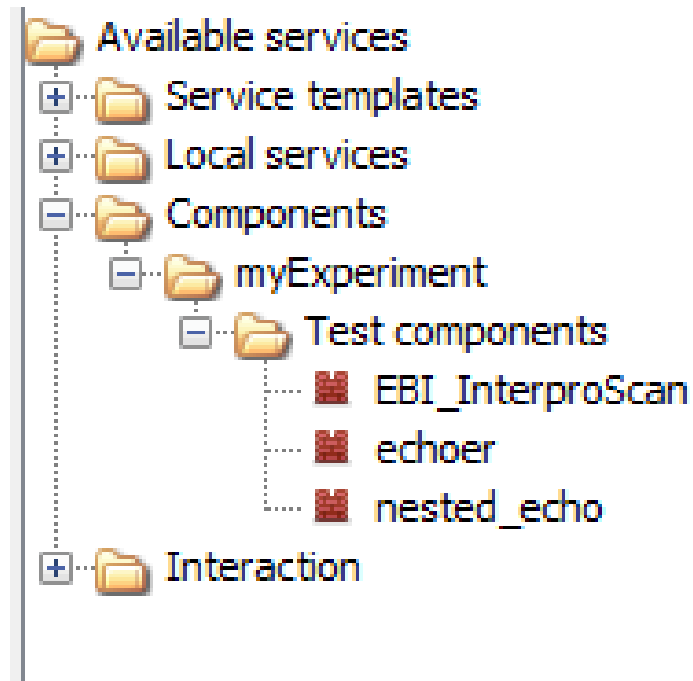
## Selecting a component family

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



## Added component family

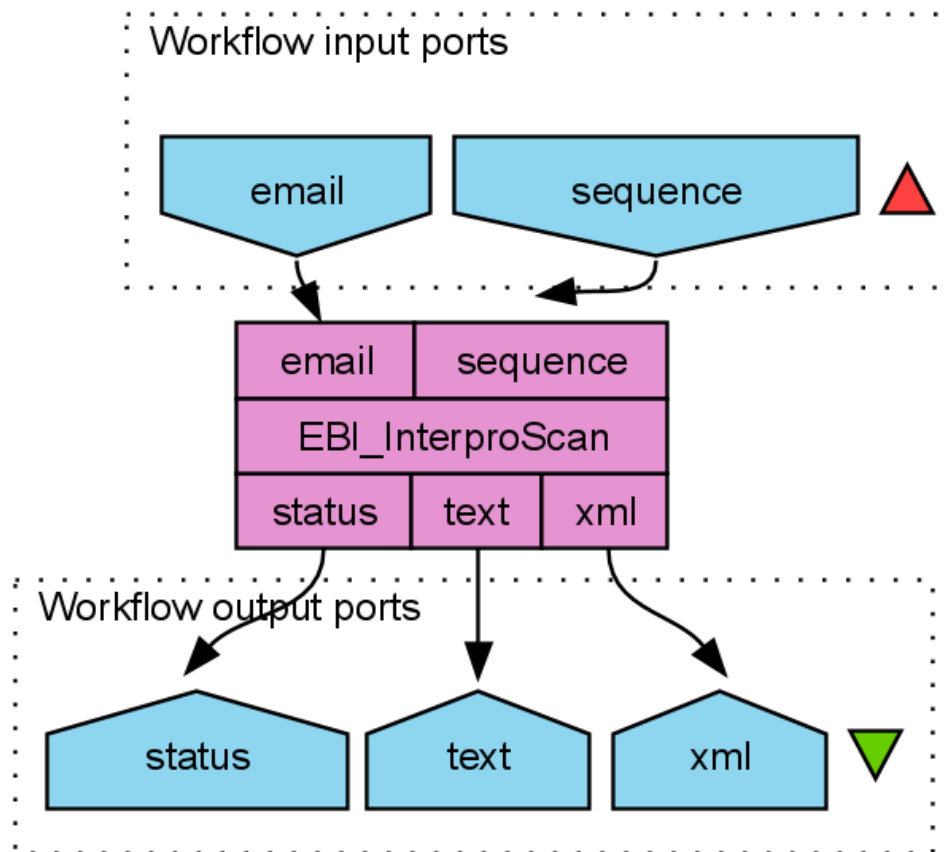
- In the **Service panel** you can now expand and see the *Test components* family



## 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



## 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  
MAANYSSTSTRREHVKVKTSQPGFLERLSETSGGMFVGLMAFLLSFYLIIFTNEGRALKT  
ATSLAEGLSLVVSPDSIHSVAPENEGRLVHIIGALRTSKLLSDPNYGVHLPVAVKLRRHVE  
MYQWVETEEESREYTEDGQVKKETRYSYNTEWRSEIINSKNFDREIGHKNPSAMAVESFMA  
TAPFVQIGRFFLSSGLIDKVDNFKSLSLSKLEDPHVDIIRRGDFFYHSENPKYPEVGDLR  
VSFSYAGLSGDDPDLGPAHVVTVIARQRGDQLVPFSTKSGDTLLLLHHGDFSAAEEVFHRE  
LRSNSMKTWGLRAAGWMAMFMGLNLMTRILYTLVDWFPVFRDLVNIGLKAFACVATSLT  
LLTVAAGWLFYRPLWALLIAGLALVPILVARTRVPAKKLE
```

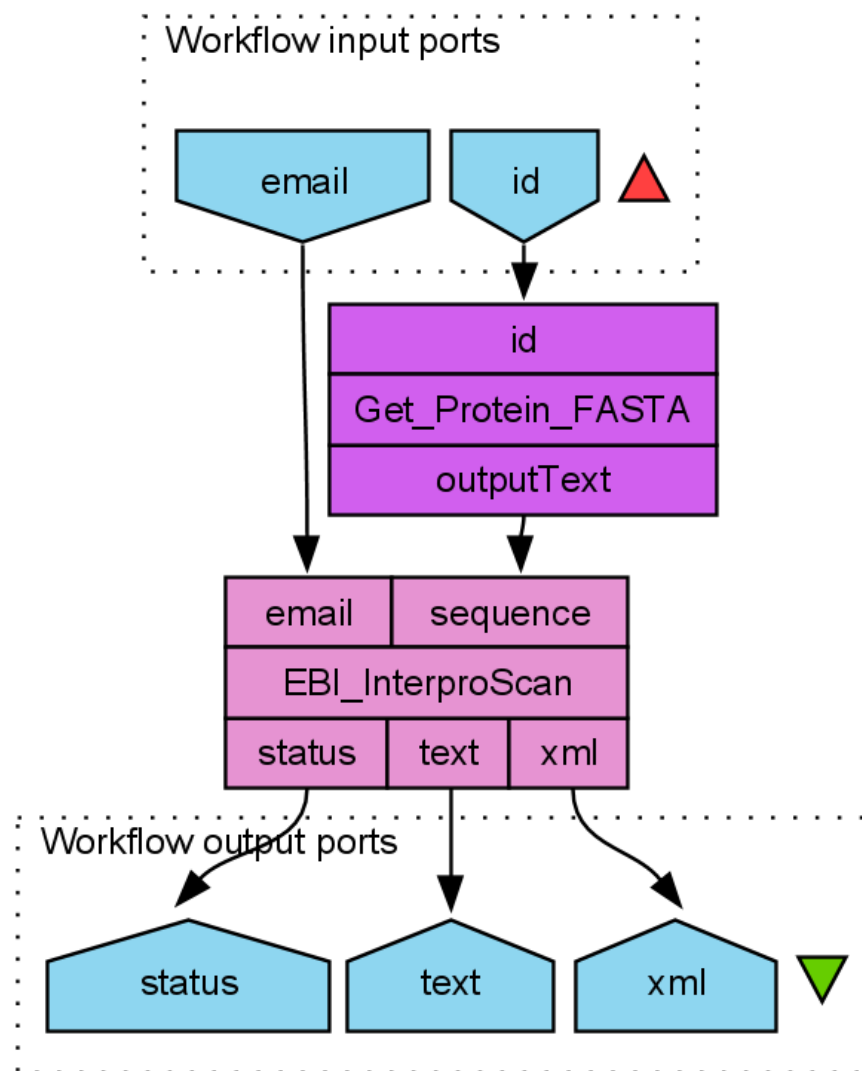


## Connecting components

- 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

## Connected component

Your workflow should now look like:



## 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

Workflow1	Finished
EBI_InterproScan	Finished
getActionResult	Finished
getActionResult_input	Finished
getActionResult_output	Finished
getXmlResult	Finished
getXmlResult_input	Finished
getXmlResult_output	Finished
input	Finished
run	Finished
run_input	Finished
run_output	Finished
Status	Finished
getStatus	Finished
getStatus_input	Finished
getStatus_output	Finished
tsv - tsv	Finished
xml - xml	Finished
Get_Protein_FASTA	Finished

## 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