



New plug-in development with LarKC

Alexey Cheptsov

*High-performance Computing Center (HLRS) Stuttgart,
University of Amsterdam*

LarKC Pharma Workshop, Stuttgart
9-10 April 2011



Outline

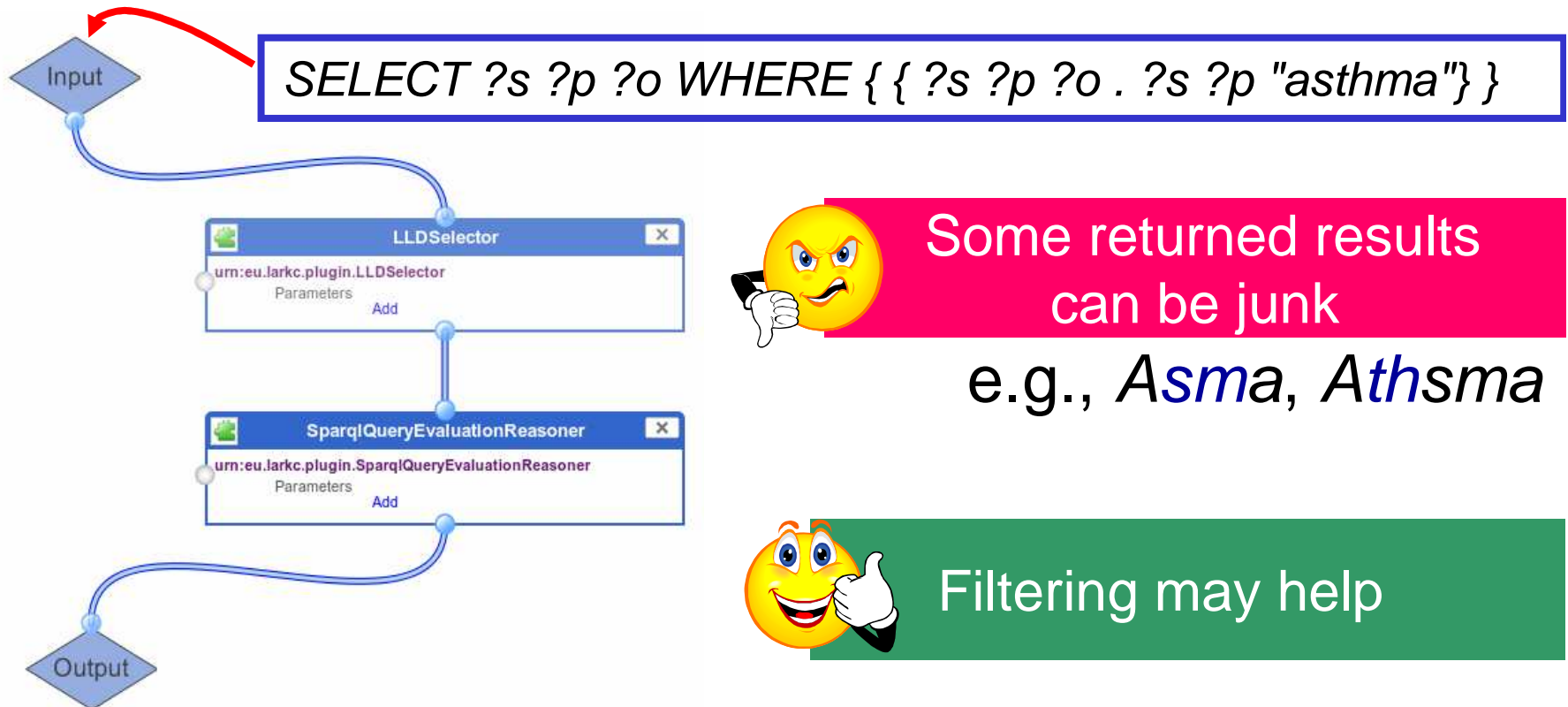
- Use case description
- Skeleton creation
- Filling in
- Integration in a workflow

New Plug-in Creation with LarKC



1 A use case

Insight in the previous workflow

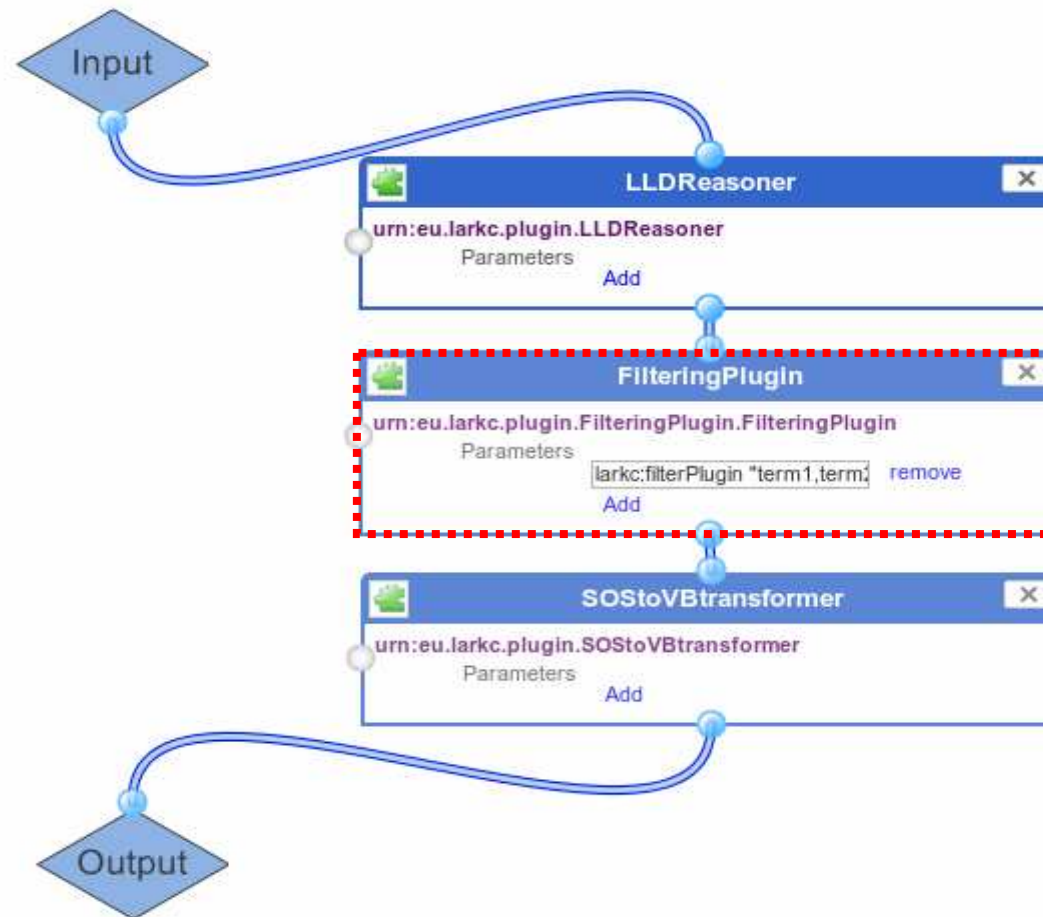


New Plug-in Creation with LarKC



1 A use case

A new workflow with a filtering option



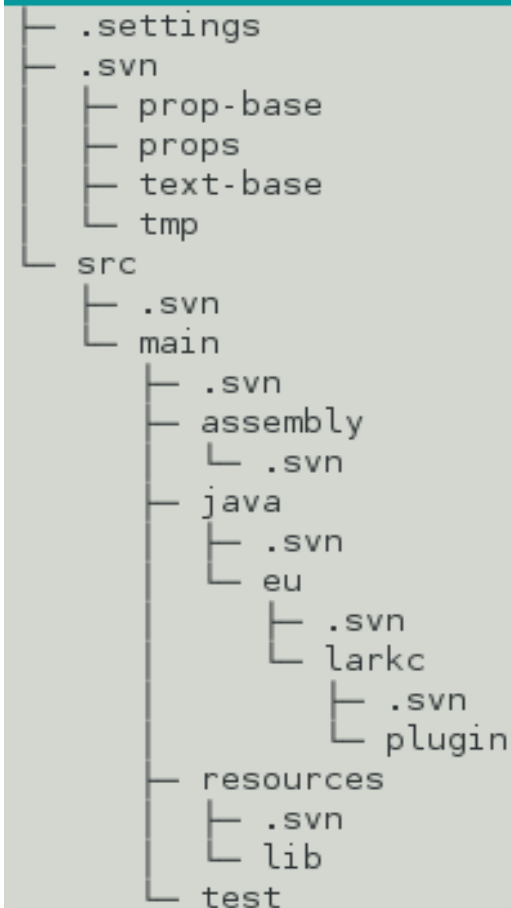
New Plug-in Creation with LarKC



② Plug-in Development

Inside a plug-in...

LLDReasoner



plug-in properties (rdf)

```
@prefix larkc: <http://larkc.eu/plugin#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
```

```
larkc:LLDReasoner
    rdf:type          rdfs:Class ;
    rdfs:subClassOf  larkc:Plugin .
```

deployment parameters

```
<!-- SPECIFIC TO THIS PLUGIN_TYPE -->
<wsdl:service name="urn:eu.larkc.plugin.LLDReasoner"
interface="Plugin"
sawSDL:modelReference="http://larkc.eu/plugin#LLDReasoner" >
  <wsdl:endpoint location="java:eu.larkc.plugin.LLDReasoner" />
</wsdl:service>
</wsdl:description>
```

New Plug-in Creation with LarKC



② Plug-in Development. Skeleton

The magic of Maven...

```
mvn archetype:generate
  -DarchetypeCatalog=http://larkc.svn.sourceforge.net/svnroot/larkc/
  trunk/larkc-
```

```
plugin-archetype/
```

```
Choose a number: . 1
```

```
Y: n
```

```
Define value for property 'groupId': eu.larkc:
```

```
Define value for property 'artifactId': plugin.myplugin: plugin.MyFilteringPlugin
```

```
Define value for property 'version': 0.0.1-SNAPSHOT:
```

```
Define value for property 'package': eu.larkc.plugin.myplugin:
```

```
eu.larkc.plugin.MyFilteringPlugin
```

```
Define value for property 'larkcPluginName': MyPlugin: MyFilteringPlugin
```

```
Confirm properties configuration:
```

```
groupId: eu.larkc
```

```
artifactId: plugin.MyFilteringPlugin
```

```
version: 0.0.1-SNAPSHOT
```

```
package: eu.larkc.plugin.MyFilteringPlugin
```

```
larkcPluginName: MyFilteringPlugin
```

```
Y: Y
```

New Plug-in Creation with LarKC



③ Plug-in Development. Eclipse project

Let's try Eclipse out!

```
protected SetOfStatements invokeInternal(SetOfStatements input) {
    logger.info("FilteringPlugin working.");

    logger.debug("FilterString is: {}", filterString);

    List<Statement> output = new ArrayList<Statement>();

    CloseableIterator<Statement> statements = input.getStatements();
    if (statements.hasNext()) {
        while (statements.hasNext()) {
            Statement statement = statements.next();
            logger.debug("Got statement: {}", statement);

            if ( filterString.indexOf(statement.getObject().toString().substring(1, statement.getObject().toString().length()-1)) > -1 )
                logger.debug("Deprecated the statements: {}", statement);
            } else
                output.add(statement);
        }
        statements.close();
    }

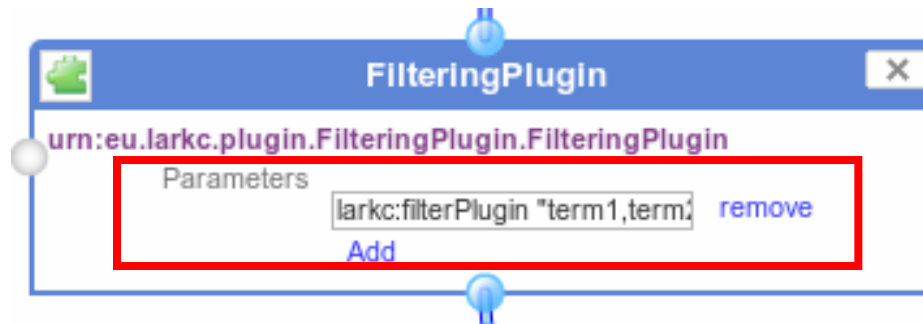
    return new SetOfStatementsImpl(output);
}
```


New Plug-in Creation with LarKC



③ Plug-in Development. Eclipse project

Making it more intelligent



```
protected void initialiseInternal(SetOfStatements workflowDescription) {
    // TODO Auto-generated method stub

    if(workflowDescription != null) {
        CloseableIterator<Statement> it = workflowDescription.getStatements();

        while (it.hasNext()) {
            Statement stmt = it.next();

            if(stmt != null) {
                if(logger.isDebugEnabled())
                    logger.debug(stmt.toString());

                if(stmt.getPredicate().stringValue().equals(WorkflowDescriptionPredicates.LARKC+"filterString"))
                    filterString = stmt.getObject().stringValue();
            }
        }
    }

    logger.info("FilteringPlugin initialized. Hello World!");
}
```

larkc:filterString „Asma, Athsma“

New Plug-in Creation with LarKC



③ *Plug-in Development. Eclipse project*

For the lasy ones



New Plug-in Creation with LarKC



4 Questions

