

Online retrieval, evaluation and visualisation of messages in the UNICORE 6 workflow system

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Topic overview

Grid Middleware UNICORE

- UNICORE workflow system

Visualisation of messages

- Hierarchical graph of services
- Sequence diagram

Database queries

- Structure of queries and answers

Comparison of different Workflow Engine implementations

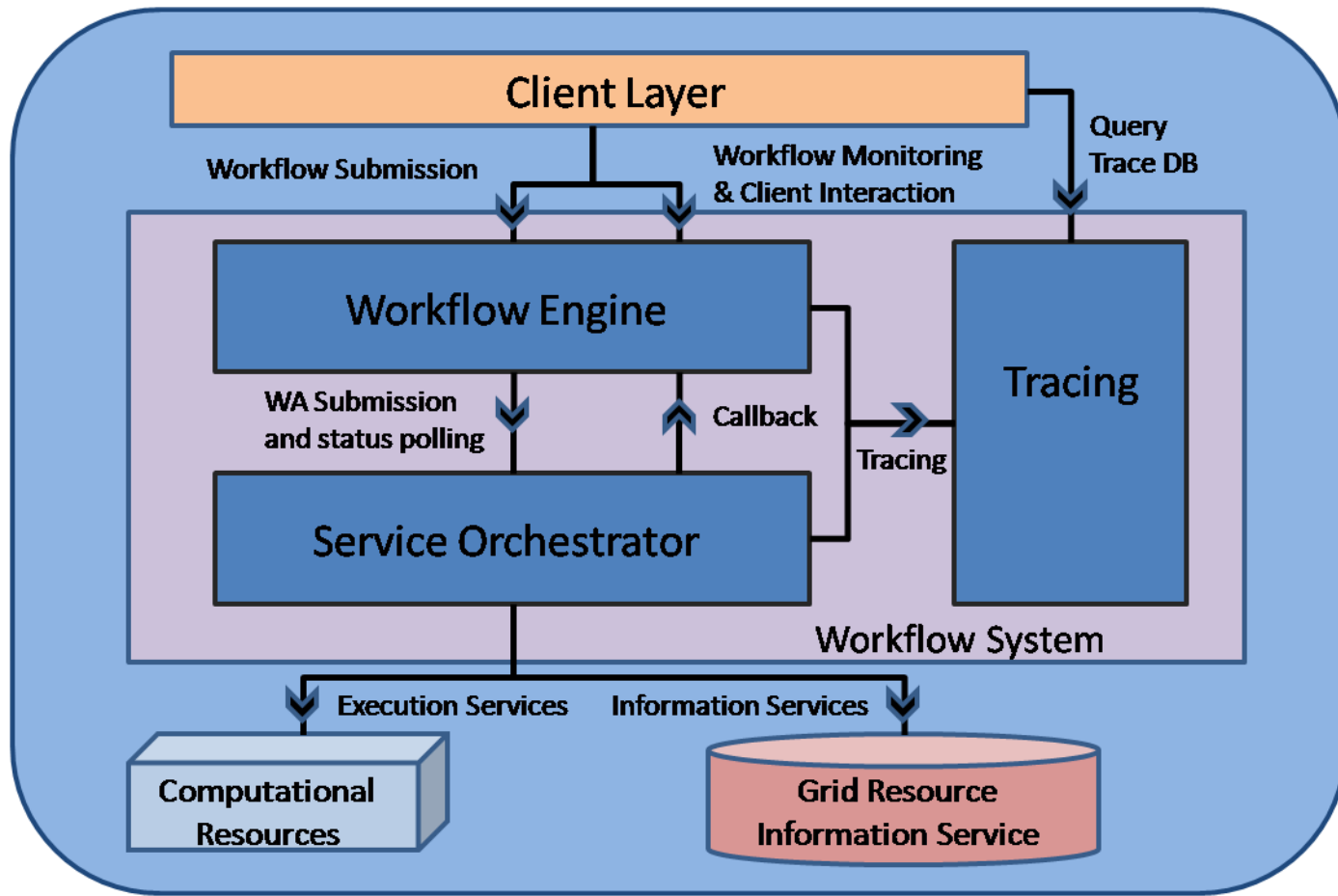
Summary and future work

Introduction

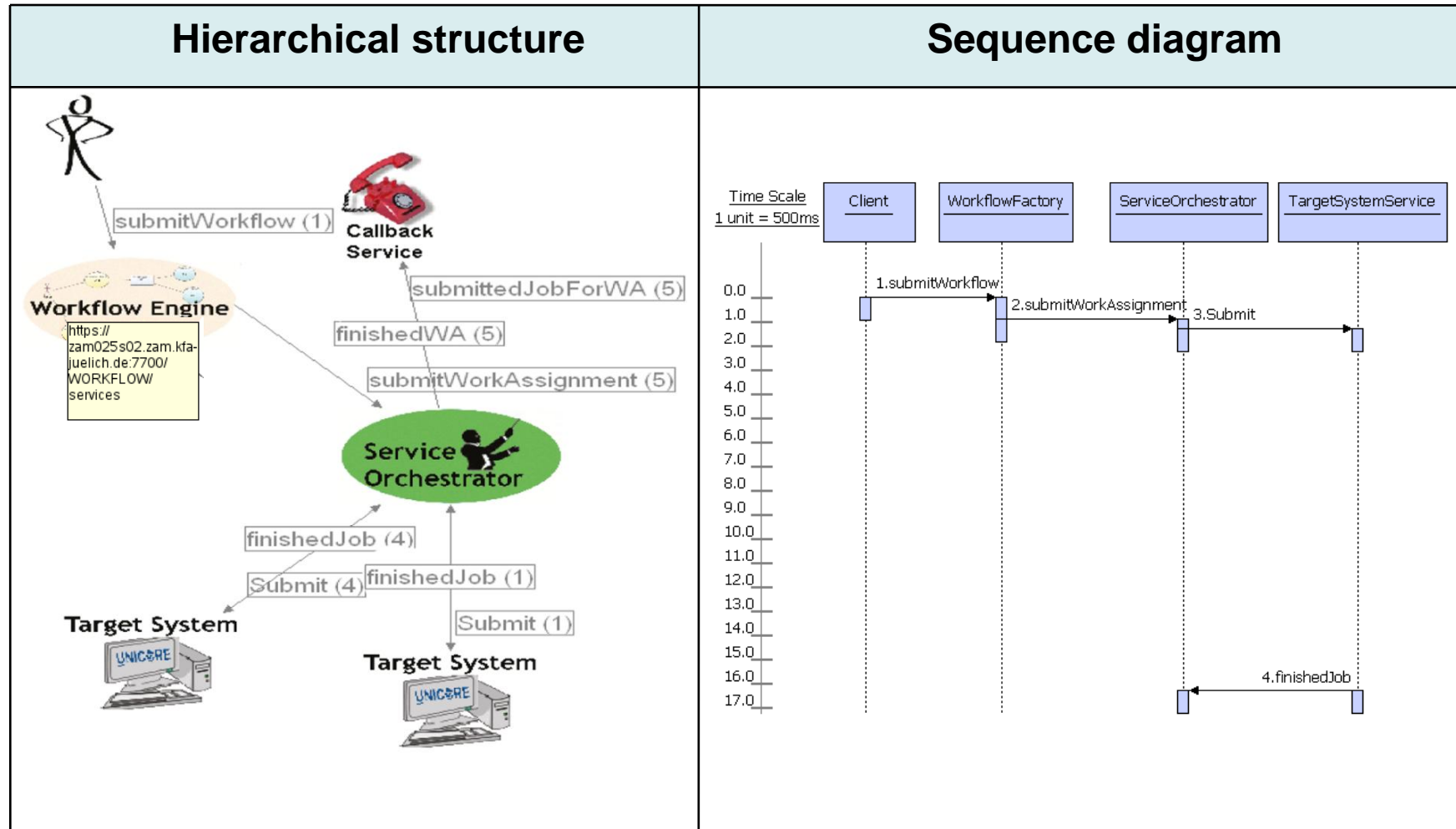
- **Grid middleware: UNICORE**
 - Coordination of combined resources
 - Hiding heterogeneity of resources
 - Providing services for resource management
 - Used in the DEISA project



UNICORE workflow system



Visualisation of messages




Database structure

Source_id	Source_type	Target_id	Target_type
http://url.zam.kfa-juelich.de:7778/services/ServiceOrchestrator	ServiceOrchestrator	http://url.zam.kfa-juelich.de:7777/services/TargetSystemService	TargetSystemService

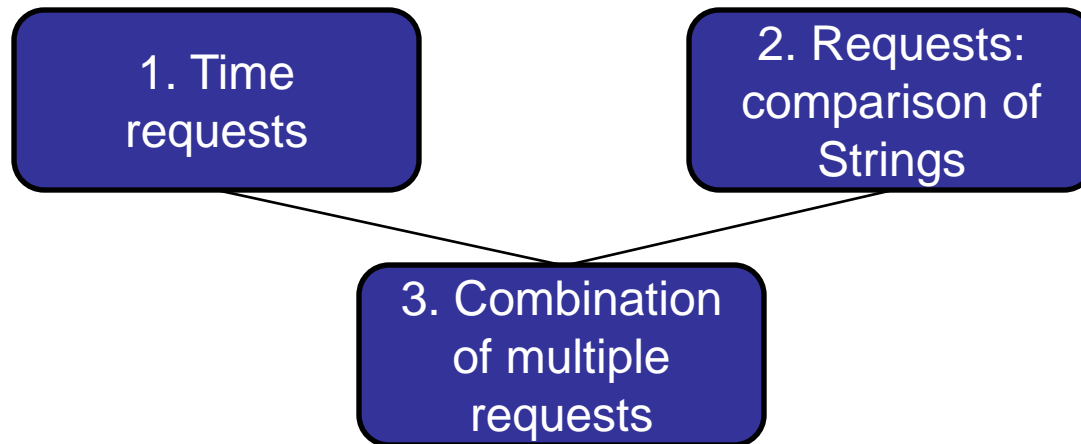
Timestamp	Operation	Message_id	Message
2009-01-19T09:28:22.963+01:00	submit	7fd725b5-938f-4a2b-8d5b-16e	XML-Dokument

Different analyses of messages

- Database query  mode
 - Messages related to one workflow
 - System messages
- Additionally, a time range is defined
- Easily extensible by adding new modes

XML-Schema document

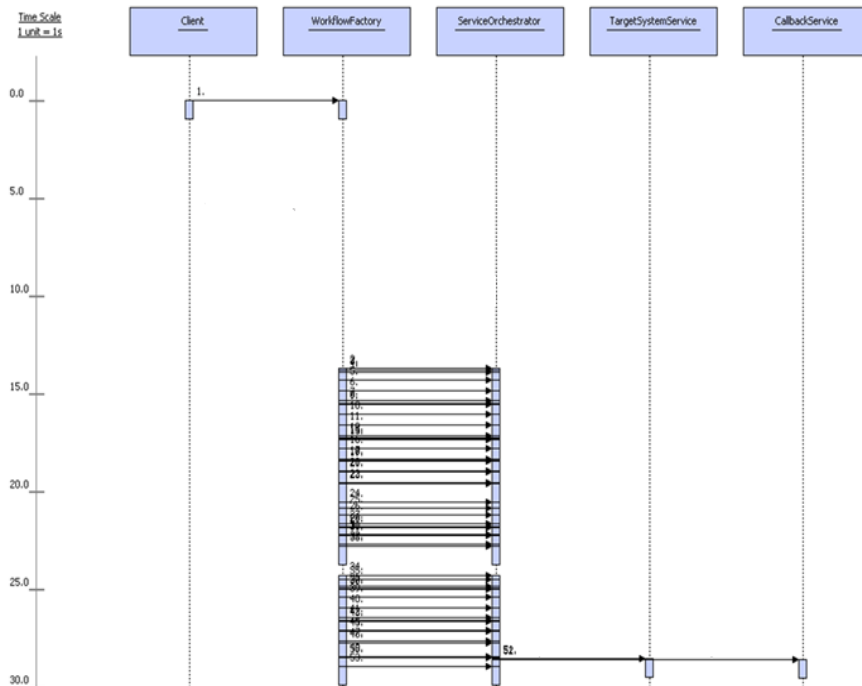
- Three types of requests



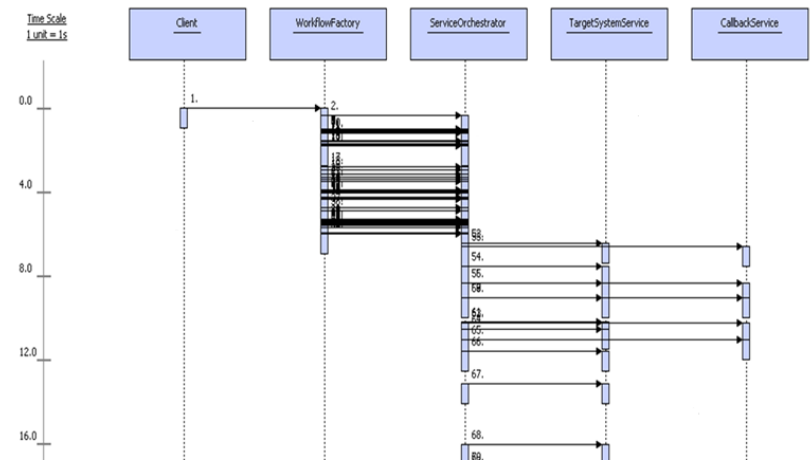
- Answer from the server:
 - Found messages (selected attributes and message ranges)
 - Number of found messages

Comparison of different Workflow Engine implementations

Workflow-Engine 1



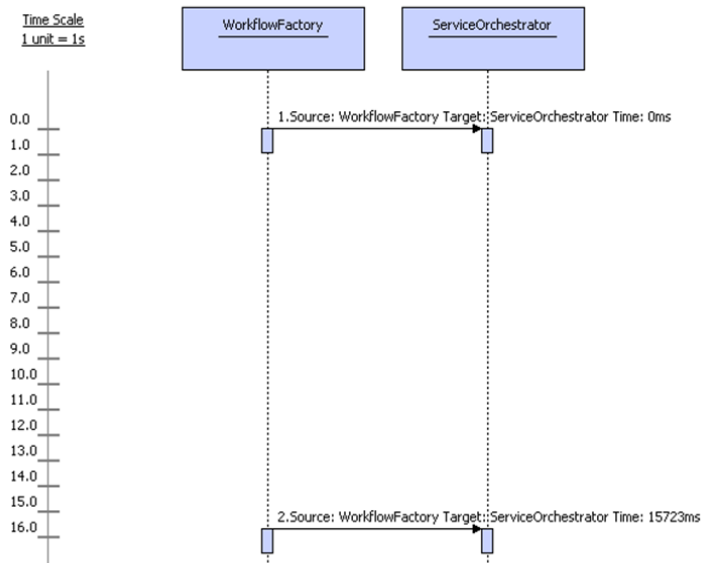
Workflow-Engine 2



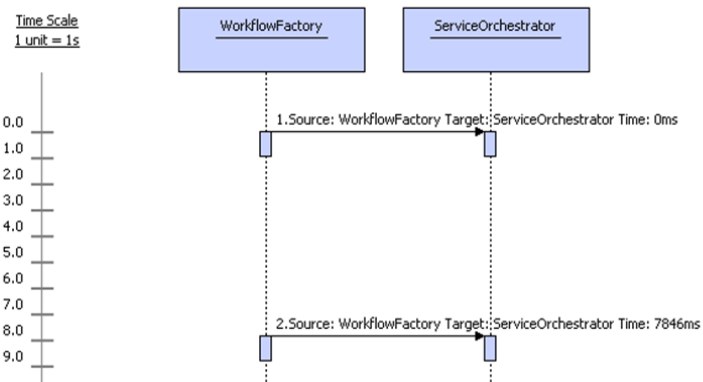
Comparison of different Workflow Engine implementations

Request: only messages that represent the first and last submissions of work assignments

Workflow-Engine 1



Workflow-Engine 2



Summary

- Grid Middleware UNICORE
 - Coordination of resources in grids
- Visualisation of messages in two different diagrams:
 - Hierarchical structure of services
 - Sequence diagram
- Database requests
 - Creation of complex Boolean requests

Future work

- Adding new modes
- Specific analyses of messages illustrated in pie charts or histograms
- Usage of XML specific requests

Thanks for your attention

Questions?

