

**CLARIN**

Common Language Resources and Technology Infrastructure



# Dynamic web services deployment

## 4 oktober 2011

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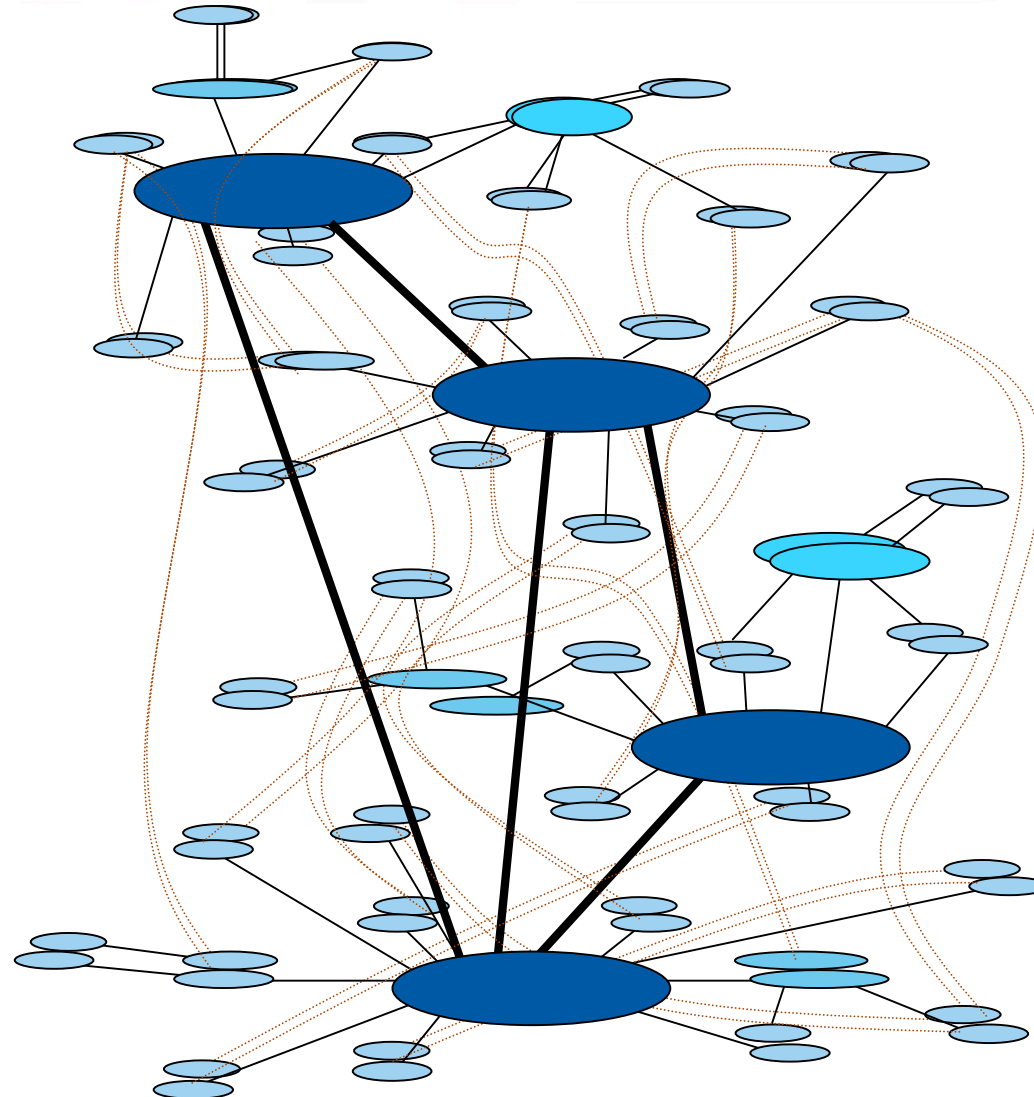
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- **Mission:**
  - **create an infrastructure which makes language resources** (annotated recordings, texts, lexica, ontologies) **and technology** (speech recognizers, lemmatizers, parsers, summarizers, information extractors) **available and readily usable to scholars of all disciplines, in particular the Humanities and Social Sciences.**

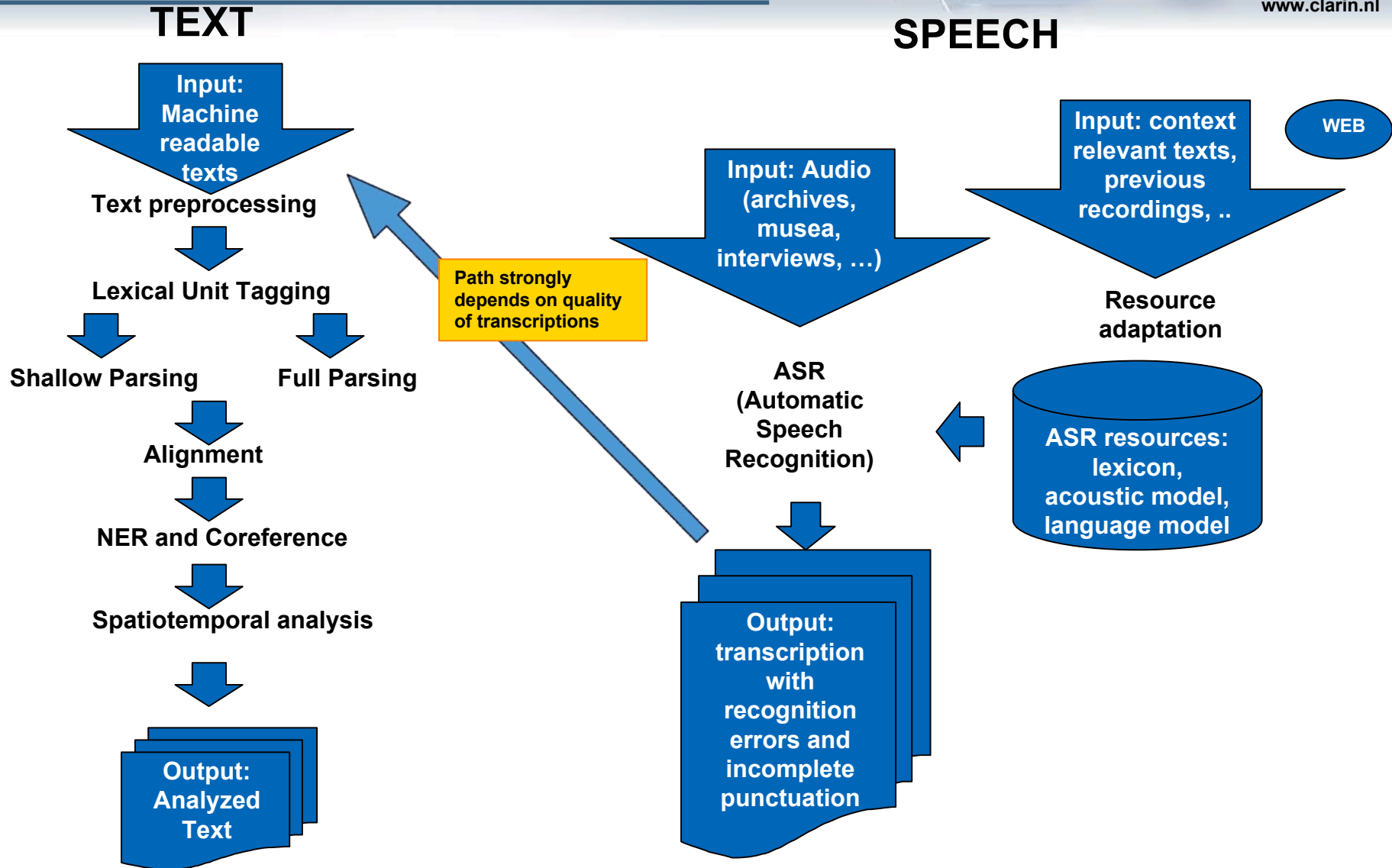
# CLARIN Centres



*Scenario where dedicated services centres of new type interact in a stable way and give persistent and easy-to-use services to the community. Researchers must be able to rely on the services offered*

*Scenario characterized mainly by accidental and temporary interactions*

# TTNWW workflow (simplified)



# Questions

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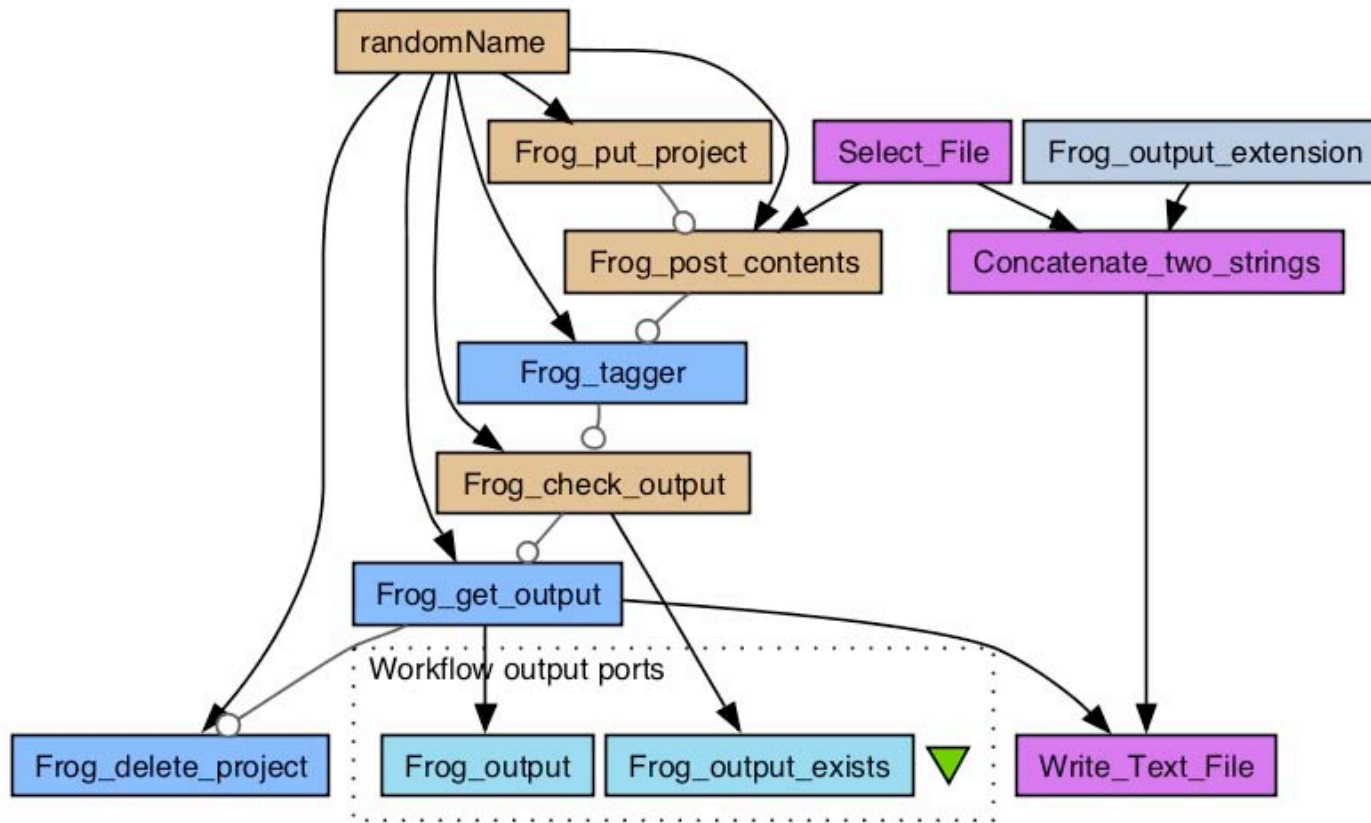
- How to make these services available?
  - Services are SOAP or REST web services
    - Tilburg University provides easy to use CLAM wrapper to make existing functionality available as a REST web service
    - Installation often requires significant effort
- How to construct workflows from these services?
  - Services are combined in a workflow and executed using Taverna
- How to handle different usage scenarios?
  - Infrequent use during initial project phase
  - Some large jobs
- How to provide a stable platform for delivering these services?

# Taverna workbench workflow design



www.clarin.nl

The screenshot shows the Taverna Workbench interface. At the top, there are 'Design' and 'Results' tabs. Below them is a 'Filter:' field and an 'Import new services' button. A list of 'Available services' is shown, including 'Service templates', 'Local services', and several 'Biomart', 'Biomoby', 'SADI', 'Soaplab', and 'WSDL' services. Below this is a tree view for 'Workflow15', showing 'Workflow input ports', 'Workflow output ports', and 'Services' like 'Concatenate\_tv', 'Frog\_check\_out', 'Frog\_delete\_pr', 'Frog\_get\_outpu', 'Frog\_output\_ex', and 'Frog\_post\_cont'.



# Cloud advantages

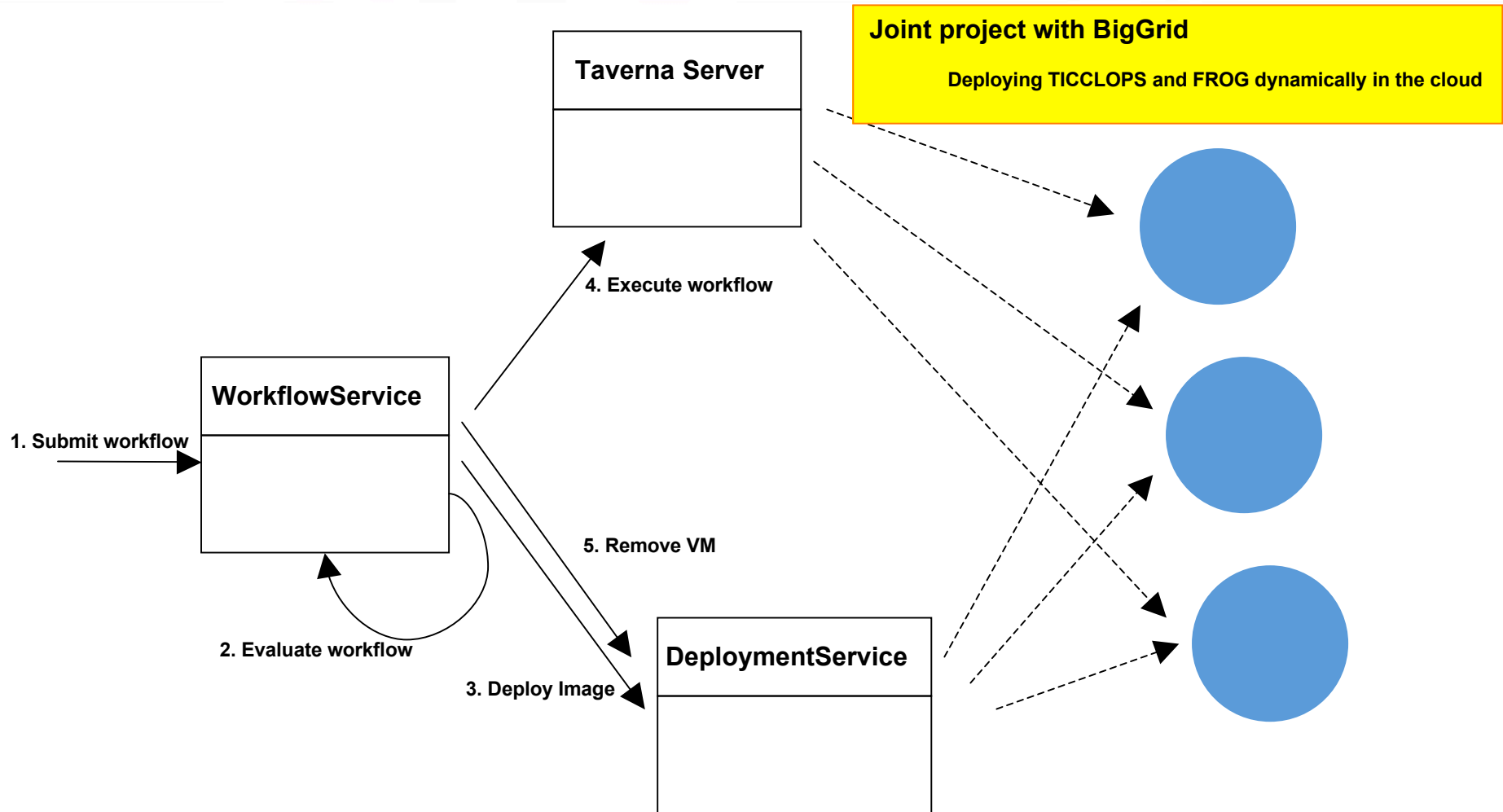
Why use cloud ?

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- Services images are stored on disk (number of running virtual machines is reduced)
- Images/services are only deployed when a workflow is executed using one of the services on disk (on demand deployment)
- Manual interface of HPC Cloud can be replaced by automatic deployment module

# Dynamic deployment of web services





# Experiences

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- **Quick startup**
  - Developers up to speed after first session (1 afternoon)
  - All essentials present
- **Responsive helpdesk**
  - Requests and issues are handled quickly
  - One node failure, all deployed images were stored and notification was sent immediately
- **Provides secure test environment**
  - Firewall settings only allow selected IP addresses to work with cloud environment
  
- We will start incorporating more services very soon.
- We will start testing some bigger jobs.

# CLARIN

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## Thank you for your attention

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