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Cloud Process Execution Engine Demo

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CPEE – Cloud Process Execution Engine

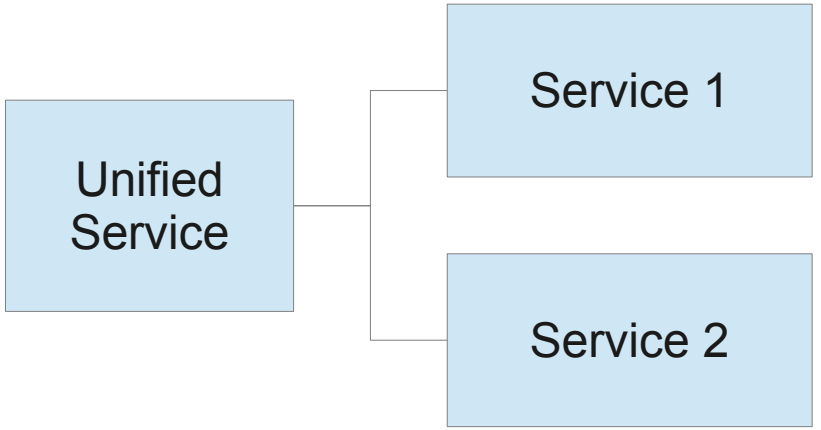
- **It is a RESTful Service.**
- It has been designed to be flexible to foster the trying out of new ideas (in a research context).
- It has been designed to be lightweight.
  - ~700 lines of code. Small is easy to maintain.
- It has been designed as a teaching tool.
- It is easy to use, self-contained and runs on all major platforms.
  - Windows, Linux, OSX
  - Android, iOS
- It is efficient.
  - Startup in less than 10 ms.
  - After startup it consumes ~ 17 MiB memory
  - Per running instance it consumes less than 2 MiB memory.
- It beats all major workflow engines when it comes to control-flow patterns.
  - http://arxiv.org/abs/1003.3330
- It is heavily multi-threaded and hence scales well on multicore architectures.

CPEE – Cloud Process Execution Engine

- Process Languages:
  - Supports YAML and BPEL
  - Allows to use arbitrary Process Languages by transformation.
- Extensible Communication Mechanism
  - Pluggable at runtime
  - Currently handlers for REST, SOAP and mixed REST/SOAP
- CPEE Cockpit:
  - Pure HTML + JavaScript (no server side components) + SVG. AJAX, WebSockets to communicate with CPEE.
  - Allows to model, execute, change and monitor instances running on a CPEE.

CPEE – Extend Every Aspect Through Services

- REMUS - a REstful Marketplace for Unified Services:
  - Independent of technical properties (REST/SOAP)
  - Concentrate on semantic aspects of interacting with services



- REMAR - Runtime Event Monitoring, Analysis and Response Library
  - Analyse events from CPEE (or any RESTful service) and trigger operations.

Concurrent - Mozilla Firefox

Firefox | Concurrent

cpee.org/~demo/cpee-cockpit/index.html?monitor=http://cpee.org:9298/84/

New | **Instance** | **Execution**

http://cpee.org:9298/84/

Instance Url: http://cpee.org:9298/84/
Vote to Continue: ☐
Vote to Stop: ☐

Concurrent | load from testset

Browse... | load from testset

save testset

save svg graph

Data Elements | **Endpoints**

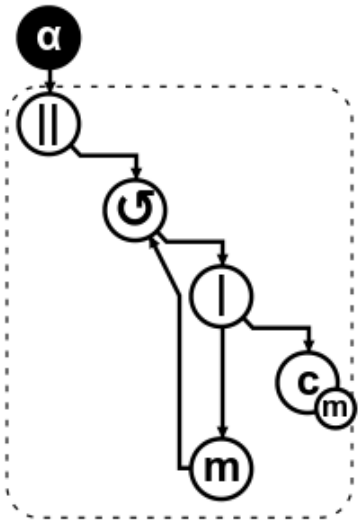
New | Save

- costs ⇒ 0
- persons ⇒ 3
- hotels ⇒ []

drag to resize

Graph | **Description** | **Log**

Save



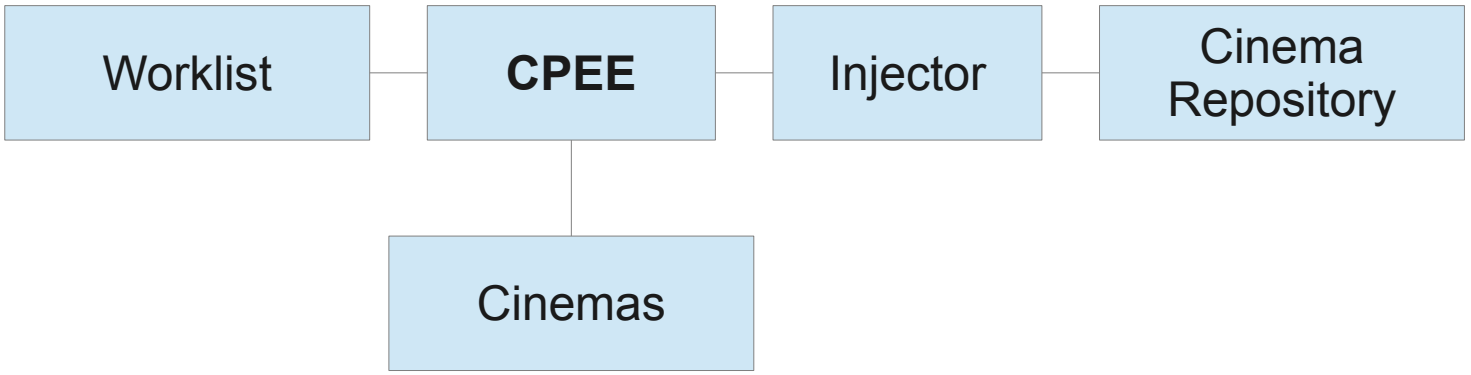
drag to resize

Element	⇒ loop
Mode	⇒ pre_test
Condition	⇒ data.persons > 0

http://cpee.org

CPEE – Adaptive Demo

- Cinemas in Vienna
  - Different Technologies (REST, SOAP, Static Webpages)
  - Different Interfaces
  - Same notion (semantic) how to do things
  - High Level Book / Search + per Cinema specialization



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