Hong-Linh Truong Mini Project

Advanced Services Engineering – Summer 2014 23.05.2014

Engineering Complex Data Analytics Services

The goal of this mini project is to perform some engineering tasks for complex data analytics services. You are asked to design and implement a simple complex service for data analytics and discuss your design and implementation

1) You select an existing DaaS (e.g., Xively, Azure, etc.) and consider it as **a data provider** which provides a selected, small set of data resources.
2) You build **your DaaS**, e.g., based on REST, that interfaces to the data provider. Your DaaS provide the data resources together with some data concerns (you decide and determine the concerns – simulating concern evaluation is accepted).
3) You build a simple ***data analytics Web service*** that accesses the data from **your DaaS** and perform simple analytics (e.g., counting some events or merging some data types). The analytics are based on some simple concerns (e.g., reject input data if the quality is too low or do not get the data if the cost is too high)
4) After the analytics your data analytics Web service will store **analysis results together with data concerns associated with the results** in a **public, cloud-based Database-as-a-service/DaaS** (e.g., MongoLab, Amazon, Xively)
5) When there is a new analytics result, your data analytics Web service will send a notification to **a public cloud-based queuing and messaging service** (e.g., CloudAMQP -- http://www.cloudamqp.com/)
6) Build **a simple data analytics client** that receives notifications from the public queuing and messaging service and then obtains the corresponding analytics result based on data contracts/concerns for further analytics

You are expected to design and implement a prototype. You must discuss your choices of technologies. You must analyze some concerns (e.g., cost, quality) for the whole simple complex service.

The deliverable for this mini project should be in a presentation (show the design) and a running prototype (code) and be given on **Friday 20.06.2014** to truong@dsg.tuwien.ac.at. The mini project results will be presented for all lecture participants.