Sonsuming Linked Data

Linked Open Data Forecasting: Cloudy with a chance of services

 Today's vision of a common Web of Data is mostly achieved and coined by the Linked Open Data movement. The first wave of this movement transformed silo-based portions of data into a plethora of open accessible and interlinked data sets. The community itself provided guidelines as well as open source tools to foster interactions with the Web of data. Harmonisation between those data sets has been established at the modelling level with unified description schemes characterising a formal syntax and common data semantic. Without doubt, Linked Open Data is the de-facto standard to publish and interlink distributed data sets in the Web commonly exposed in SPARQL endpoints. However, a convenient request considering the globally described data set is only possible with strong limitations. The balloon tools want to overcome this issue by providing a large choice of services to simplify utilising the web of data for your projects. We think that Linked Data tools should be available as a service (LDaaS), to avoid high setup and integration costs and data duplication. Therefore all balloon services will be publicly available via HTTP API and don't need to be installed, configured and maintained.

Linked Data as a Service (LDaaS)



Linked Open Data

Commonalities

Exploit extracted hierachy

- Type Index
- Type Matching: Similar Instances or shared types
- Type Distribution: Semantic connections between types
- Structural Distance: Path between two entities
- Further Analysis

Shared Characteristics of Entities

Overflight

Indexing Linked Open Data endpoints

- Index and unify co-reference, instance and inheritance information
- Automatic and continuous SPARQL crawling
- Graph-Database
- Simplified but global bird's-eye view on Linked Data
- Dumps are available for download

Index & Unify

Fusion

Exploit co-reference information

- Single point of access
- Accomplish immediate SPARQL rewriting
- Perform smart endpoint selection
- Execute automatic query federation
- Principal: Semantic concept over identifier

SPARQL Query Federation based on Co-Reference

balloon aims at offering public services and tools to take advantage of the semantic web with less effort

balloon is Open Source

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