

The Linked Data Platform (LDP)

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ABSTRACT

As a result of the Linked Data Basic Profile submission [1], made by several organizations including IBM, EMC, and Oracle, the W3C launched in June 2012 the Linked Data Platform (LDP) Working Group (WG) [2].

The LDP WG is chartered to produce a W3C Recommendation for HTTP-based (RESTful) application integration patterns using read/write Linked Data. This work will benefit both small-scale in-browser applications (WebApps) and large-scale Enterprise Application Integration (EAI) efforts. It will complement SPARQL [3] and will be compatible with standards for publishing Linked Data, bringing the data integration features of RDF [4] to RESTful, data-oriented software development.

This presentation introduces developers to the Linked Data Platform, explains its origins in the Open Services Lifecycle Collaboration (OSLC) initiative [5], describes how it fits with other existing Semantic Web technologies and the problems developers will be able to address using LDP, based on use cases such as the integration challenge the industry faces in the Application Lifecycle Management (ALM) space.

By attending this presentation developers will get an understanding of this upcoming W3C Recommendation which is posed to become a major stepping stone in enabling broader adoption of Linked Data in the industry, not only for publishing data but also for integrating applications.

Categories and Subject Descriptors

H.5.4 [Information Systems]: Hypertext/Hypermedia-Architectures

General Terms

Standardization

Keywords

Linked Data; LDP, RDF, Application Integration, W3C

INTRODUCTION

Linked Data, as defined by Tim Berners-Lee's 4 rules [6], has enjoyed considerable well-publicized success as a technology for publishing data in the World Wide Web [7]. Data served in this fashion is typically loaded into a datastore using some local access method and made available on the web in read-only mode [8].

The Linked Data Platform [9] extends this paradigm to allow read-write access over HTTP [10] enabling a new way of integrating applications that builds on the architecture of the World Wide Web [11]. This read-write usage of Linked Data can help solve perennial problems which other application integration architectural styles fail to address in a satisfactory manner. [12]

By leveraging a simple common protocol, data model and data format, Linked Data provides a loosely-coupled integration framework which presents several key benefits. Namely this framework allows for application integrations to be quickly developed and for them to be independently updated later on.

The LDP standard represents a major addition to the existing collection of W3C Recommendations [13] which will provide the industry with a formal definition of Linked Data and the interoperability needed for the enterprise.

PRESENTATION

The presentation covers the following points:

- What is Linked Data?
Brief introduction to Linked Data as defined by Tim Berners-Lee
- An Example of Linked Data use
Using Linked Data to publish data on the web
- Linked Data as a read-write integration architecture
Introduction to using Linked Data as a way to integrate applications, illustrated with the ALM integration challenge.
- Linked Data Platform (LDP) Working Group
Introduction to the LDP WG
- Linked Data Platform Use Cases and Requirements
Review of some of the main use cases and Requirements
- Linked Data Platform Specification
Review of the main features:

- LDP Resources
- LDP Containers
- Open Services Lifecycle Collaboration (OSLC)
 - Introduction to OSLC, an application of LDP
- Software
 - What tools are available today for developers who want to start using LDP

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