P

Collaborative Project

LOD2 – Creating Knowledge out of Interlinked Data

Project Number: 257943 Start Date of Project: 01/09/2010 Duration: 48 months

Deliverable 1.4-b

How-To Contibute to the LOD2 stack

Dissemination Level	Public
Due Date of Deliverable	31/08/2011
Actual Submission Date	02/09/2011
Work Package	WP1 – Requirements, Design and LOD2 Stack Prototype
Task	T 1.4
Type	User Guide
Approval Status	
TBC	
Number of Pages	5
Filename	HowToContribute.docx

Abstract: This document describes how new components can be contributed to the LOD2 stack.

The information in this document reflects only the author's views and the European Community is not liable for any use that may be made of the information contained therein. The information in this document is provided "as is" without guarantee or warranty of any kind, express or implied, including but not limited to the fitness of the information for a particular purpose. The user thereof uses the information at his/ her sole risk and liability.

SEVENTH FRAMEWORK PROGRAMME

Project funded by the European Commission within the Seventh Framework Programme (2007 – 2013)

History

Version	Date	Reason	Revised by
0.0	27/08/2011	First Version	TenForce
0.1	31/08/2011	Review	ULEI
0.2	02/09/2011	Final Editing	TenForce

Author List

Organisation	Name	Contact Information
Tenforce	Bert Van Nuffelen	bert.van.nuffelen@tenforce.com
ULEI	Sebastian Tramp	tramp@informatik.uni-leipzig.de
TenForce	Bastiaan Deblieck	bastiaan.deblieck@tenforce.com
TenForce	Johan De Smedt	Johan.de-smedt@tenforce.com

Time Schedule before Delivery

Next Action	Deadline	Care of

Table of Contents

1. Introduction

The LOD2 component stack is a collection of tools to support Linked Data publication. The stack is the result of the EU funded project LOD2.

This guide describes how one can contribute a new component to the LOD2 stack. The LOD2 component stack is a Debian package repository.

2. Uploading a Debian package to the LOD2 stack repository

The repository is publicly available at http://stack.lod2.eu/. The repository forms a trusted group of components. This is achieved by a 'signing procedure' while uploading a new (version of a) component. The component owner signs the component package with its private key. This signature is validated with his public key known by the repository. To contribute a component to the LOD2 Debian repository, the component owner must create a key pair for signing the package as well as a key for the secure connection to the repository.

The GPG key pair can be recreated with:

```
gpg --gen-key
```

The public key is exported with:

```
gpg --export -a > publickey.asc
```

The ssh-key for the upload can be generated as follows:

```
ssh-keygen -t dsa
```

All these public keys are sent to the LOD2 stack responsible (support-stack@lod2.eu). After adding the keys to the trusted key ring, one can upload the component package using the tool "dput". The local configuration file ~/.dput.cf contains:

```
[lod2]
fqdn = stack.lod2.eu
method = scp
login = packaging
incoming = /var/www/stack.lod2.eu/deb/mini-dinstall/incoming
```

The upload command is:

```
dput lod2 <packet>.changes
```

where "<packet>.changes" is the changes file created during the package creation.

For the signing and upload procedure the distribution identifier in the *changelog* file (describing the changes of the package from version to version) must be set to *lod2.* Hereunder one sees and extract of the changelog of the LOD2 demonstrator.

```
lod2demo (1.1.13) lod2; urgency=low
  [ Bert Van Nuffelen (TenForce/LOD2) ]
  * add intro page
  * apply more mockup style
 -- Bert Van Nuffelen (TenForce/LOD2)
<Bert.Van.Nuffelen@tenforce.com> Tue, 30 Aug 2011 15:40:21 -0700
```

After the Debian package is uploaded, the whole repository needs to be signed by a trusted partner.

3. Creating a Debian package

The process of making a Debian package depends on the applications' source code and building process. The main tool for building a Debian package is "debuild".

Many of the LOD2 applications currently in the stack are Java web applications deployed with Tomcat. If Maven is used to build the application, this process can be automated. In http://code.google.com/p/lod2-stack/source/browse/#svn%2Ftrunk%2Fdocuments, the document demonstrator_implementation.pdf describes how the lod2demo package is being built with Maven.

4. Licensing

There is no specific license model required for the components except for an open-source approach, allowing end-users to use, configure and interact with the contributed software. Every component-owner is responsible for validating whether his tool indeed has an open-source license and if the license is compatible with those of the software libraries used by the component.

5. Inter-component integration requirements

The contribution of the component as a Debian package (or a set of Debian packages) to the LOD2 stack repository is the first step in the integration process. A next level is to ease the communication between the different components. For this purpose we require all communication to use SPARQL and SPARQL endpoints as the standard.

Hence, the components' input and output need to be a SPARQL endpoint description w.r.t a graph for reasons of integration. This forms the basic glue between the components in the current version of the LOD2 stack.

In the future, more requirements might be set, like e.g. allowing external programs to share and edit the configuration of the component's functionality.

6. More information

To get in touch with the stack responsible for any support or questions about contributing to the LOD2 stack, contact support-stack@lod2.eu.

- http://stack.lod2.eu: the lod2 stack repository
- http://code.google.com/p/lod2-stack/source/browse/#svn%2Ftrunk%2Fdocuments: installation and configuration guides