The Bipolar Enterprise

Enterprise Data

Documents
Many companies think they have a "big data" problem when they really have a big "data problem."
Today’s Data on the Web
Linked Data on the Web

- Galway Airport
  - collected at
- my data
  - collection
- a measurement
  - date: 2011-01-01
  - value: 0
  - units of measure: degrees Centigrade
- Person
  - first name: Michael
  - last name: Hausenblas
“Semantic Technology is not an end in itself, it is a means to an end, a set of tools and techniques for supporting modern data analytics. It goes alongside other essential technologies like machine learning, databases, information retrieval, etc.”

Chris Welty
Callimachus Enterprise supports distributed, in-browser workflow creation, editing and publication using the Linked Data model.
<table>
<thead>
<tr>
<th>Open Source</th>
<th>Licensed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community supported</td>
<td><strong>Commercial support</strong></td>
</tr>
<tr>
<td>in-browser development, deployment, backups</td>
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<tr>
<td>Linked Data publication</td>
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<tr>
<td><strong>User profiles, social sharing</strong></td>
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<td><strong>Document, app management</strong></td>
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<td><strong>OpenAnnotation support</strong></td>
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<td><strong>External datasources</strong></td>
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<td><strong>Shared deployments, realms</strong></td>
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<tr>
<td><strong>Enterprise management</strong></td>
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</table>
Files and Formats

**Actions:**
- SPARQL 1.1 queries
- SPARQL 1.1 Update
- XProc pipelines
- XQuery
- PURLs

**RDF Constructs:**
- RDF Turtle
- RDF/XML
- Folders
- SKOS Concepts
- RDFS Classes

**Documents:**
- DocBook articles and books
- HTML (optional theming)
- CSS files
- JavaScript files
- XSLT files
- Plain text files
- Image files (PNG, JPG, GIF, SVG)
- PDF files

**Data Sources:**
- RDF Databases
- SQL Databases
- HTTP(S) servers returning text or XML
- Other Callimachus servers

**Users & Groups:**
- User profiles
- Groups & domains
Social features:
• OpenAnnotation tags and categories for all resources.
• Timeline of user activities.
• Exposed as Linked Data

Document management:
• Documents & folders associated with user profiles.
• Folders can contain data, documents and Callimachus applications.
• In-browser editing tools are available for many document types.
Rendering Instances of OWL Classes

**Advantages:**

- Most simple approach; lots of examples and documentation

**Considerations:**

- Need to associate OWL classes in your data with Callimachus classes via the class explorer.
- Limited to data in the default RDF database (Sesame)
SPARQL Named Queries

Advantages:

• Like a stored procedure called via a URL
• Accepts parameters!
• Can query multiple SPARQL endpoints

Considerations:

• Need to know SPARQL syntax
XProc Pipelines

Advantages:

• Accepts parameters!

• Can combine data from various sources in complex ways, including remote HTTP calls

• Can render results into any textual data type

Considerations:

• Need to learn XProc syntax: http://xproc.org/
Getting Started
Get Callimachus 1.3

callimachusproject.org

3roundstones.com
It's easy to get started...

1. Sign in
Login to your Callimachus instance.

2. Create your profile
Your profile describes you, your interests, and your expertise.

3. Upload documents
Using original or publicly available content already published as PDF, put together new and interesting documents.

Get Started

Callimachus Enterprise for
New Users

Callimachus Enterprise for
Developers

Callimachus Enterprise for
Administrators

Recent Documents

Callimachus Enterprise
Getting Started for
Application Developers

Callimachus Enterprise
Getting Started for
End Users
Hello Luke Ruth,

A new account has been created for you using a Callimachus service. Use the link below to pick a password or other authentication options.

http://localhost:8080/?register&token=65dd980cfb925e45f16e36fe5d84f6b&nonce=597b88a5&email=david.wood%40roundstones.com&fullname=Luke%20Ruth

If you have any questions, please contact your systems administrator who set this up for you.

Kind regards,
The Callimachus service running at http://localhost:8080
3roundstones.co Sign in

- Sign in with your email address and a site password
- Sign in with your Google account
- Sign in with your Yahoo! account

- Your custom J2EE authentication here!
It's easy to get started...

1. Sign in
Login to your Callimachus instance.

2. Create your profile
Your profile describes you, your interests, and your expertise.

3. Upload documents
Using original or publicly available content already published as PDF, put together new and interesting documents.

Looks like you've got the basics down. Use the main menu to access "My Documents" and keep working.

Get Started

Callimachus Enterprise for
New Users

Callimachus Enterprise for
Developers

Callimachus Enterprise for
Administrators

Recent Documents

Emerging content architecture

Callimachus Enterprise
Getting Started for Application Developers

Callimachus Enterprise
Getting Started for End Users
Create your Profile

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Using original or publicly available content already published as PDF, put together new and interesting documents.
Complete your profile, including the Biography and Social tabs.

Select the Create button to save your profile.
You will be dropped into your new profile page.

Try uploading a text or PDF document or an image file!
You can upload a number of different file types into Callimachus, but start easy by choosing a PDF document or an image.
You Can Upload:

- PDF files (presentations or documents)
- Text documents
- Image files (.png, .jpg, .gif, .svg)
- HTML files, CSS stylesheets, JavaScript files
- RDF data! (Turtle, N3, RDF/XML)

Developers can also create Linked Data applications!
Try uploading a PDF file
Linked Data: Structured Data on the Web
(the jargon-free version)
Health Datapalooza

David Wood, Bernadette Hyland
{david, bhyland}@3RoundStones.com
@3RoundStones
Washington DC, 4 June 2013

By: Luke Ruth

Originally created Fri May 31 2013 15:07:05 GMT-0400 (EDT)
Your uploaded files appear on your profile.
You can return to your profile by selecting your name from the breadcrumbs at the top of the page.
You can get back to your profile from anywhere by selecting the “**My Documents**” option from the main menu.
Explore other Callimachus users to find their documents and Linked Data applications!

Select Browse Profiles from the main menu.
Bonobos!
Bonobos!

@prefix dbpedia: <http://dbpedia.org/resource/> .
@prefix rdf:  <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .

<Mary> a dbpedia:Bonobo
  ; rdfs:label "Mary"
  ; rdfs:comment "Mary is a pleasant bonobo." 
.
Mary is a pleasant bonobo.
Callimachus Enterprise Tutorial
Conference on Semantic Healthcare and Life Sciences 2014

Introductory Presentation

This presentation provides an introductory explanation of what Callimachus is and how it can help you. Click the button to the right to view the presentation as a PDF in a new tab.

Sample Applications

Bonobos Example

The Bonobos example is a small use case intended to demonstrate the power of using Callimachus templates to describe and display your data.

Biomarkerpedia

The Biomarkerpedia prototype is a more fully functional example of a Callimachus application that demonstrates a real world use case in the healthcare and life sciences field.

Learn more
Working with Callimachus Templates
The Bonobos Example

Instructions

1. Getting Started
Log into a version of Callimachus or Callimachus Enterprise version 1.3 or later.

2. Finding the Home Folder
Navigate to the home folder by selecting the "Home folder" option from the main menu (in the upper right corner of the Callimachus user interface).

3. Making a Folder
Create a new folder called "Bonobos" under the home folder. Select the "Create" menu above the folder entries and select "Folder". Enter "Bonobos" as the folder name (with the first letter capitalized) and select the "Create" button.

4. Installing the Bonobos Application
Once in the /Bonobos folder, select the "Import folder contents" option from the main menu. Choose the Bonobos.car file from your local drive and upload it by selecting the "Import" button.

5. Understanding the Bonobos Application
Select the file called "index". This is a summary page for the Bonobos application and will show in your browser. Read it and click around. Get a feel for the application.

6. Investigating the Bonobos Application
You can go back to the /Bonobos folder view at any time. Explore the RDF data in the /Bonobos/some-bonobos.ttl file and the application files in the /Bonobos folder. Familiarize yourself with both the data and the application.
Callimachus Enterprise

Tutorial

3roundstones.com  @3roundstones
<her2> a bmterms:Biomarker, bmterms:Protein
 ; rdfs:label "HER2"
 ; bmterms:related <erbb2>
 ; bmterms:therpeuticArea bmareas:oncology
 ; bmterms:therpeuticArea bmareas:breast_cancer
 ; bmterms:drug drug:Ado-Trastuzumab-Emtansine
 ; bmterms:device
device:INFORM-HER2-Dual-ISH-DNA-Probe-cocktail-assay
 ; bmterms:cro bmo:wuxiapptec
 .
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View Application

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View Application

Learn more
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4. Installing the Biomarkerpedia Application
Once in the /Biomarkerpedia folder, select the "Import folder contents" option from the main menu. Choose the Biomarkerpedia.car file from your local drive and upload it by selecting the "Import" button.

5. Understanding the Biomarkerpedia Application
Select the file called "index". This is a summary page of Biomarkerpedia and will show in your browser. Read it and click around. Get a feel for the application.

6. Investigating the Biomarkerpedia Application
You can go back to the /Biomarkerpedia folder view at any time. Explore the RDF data in the /Biomarkerpedia/biomarkers folder and the application files in the /Biomarkerpedia/schema folder. Familiarize yourself with both the data and the application. The tutorial will lead you through the application.

7. Add a Biomarker to the Application
When you are ready, navigate to the folder /Biomarkerpedia/biomarkers and add a new biomarker to the application. Either
Callimachus Enterprise

Tutorial
Contributing to Callimachus

- Open Source Developers
  - Server
    - Mostly Java
    - Some JavaScript, Bash/BAT
    - RDF, SPARQL 1.1, PURLs, XProc, XSLT, XQuery
  - Client:
    - (X)HTML, RDFa, JavaScript/JQuery, Bootstrap 3, Less, CSS3
    - Documents in DocBook articles and books
Contributing to Callimachus Enterprise

- Corporate Developers
  - Feature requests
    - Considered on a case-by-case basis
    - Often associated with a services contract
  - Code contributions
    - Accepted with appropriate legal releases/licenses
Getting Support

- Callimachus Open Source users can join community discussions via http://callimachusproject.org

- Callimachus Enterprise customers can open a support ticket by sending email to support@3roundstones.com

- Urgent requests can be made by calling 3 Round Stones at +1.877.290.2127. Please note that we are located in the U.S. Eastern timezone.