

**adaptTo()**

APACHE SLING & FRIENDS TECH MEETUP  
BERLIN, 22-24 SEPTEMBER 2014



The Sling JCRBrowser  
Sandro Böhme, inovex GmbH



1. About me and my motivation
2. JCRBrowser Demo
3. Inner workings
4. Roadmap

# About me and my motivation



# About me and my motivation

- Classic web based JEE background

# About me and my motivation

- Classic web based JEE background
- Building up knowledge

# About me and my motivation

Thanks to:

Felix Meschberger

Carsten Ziegler

Alexander Klimetschek

Jukka Zitting

Stuart McCulloch

Bertrand Delacretaz

Eric Norman

Richard S. Hall

Justin Edelson

Michael Dürig

Neil Bartlett

Stefan Guggisberg

for answering my questions in the mailing lists!

# About me and my motivation

- Opportunity to work more intensely



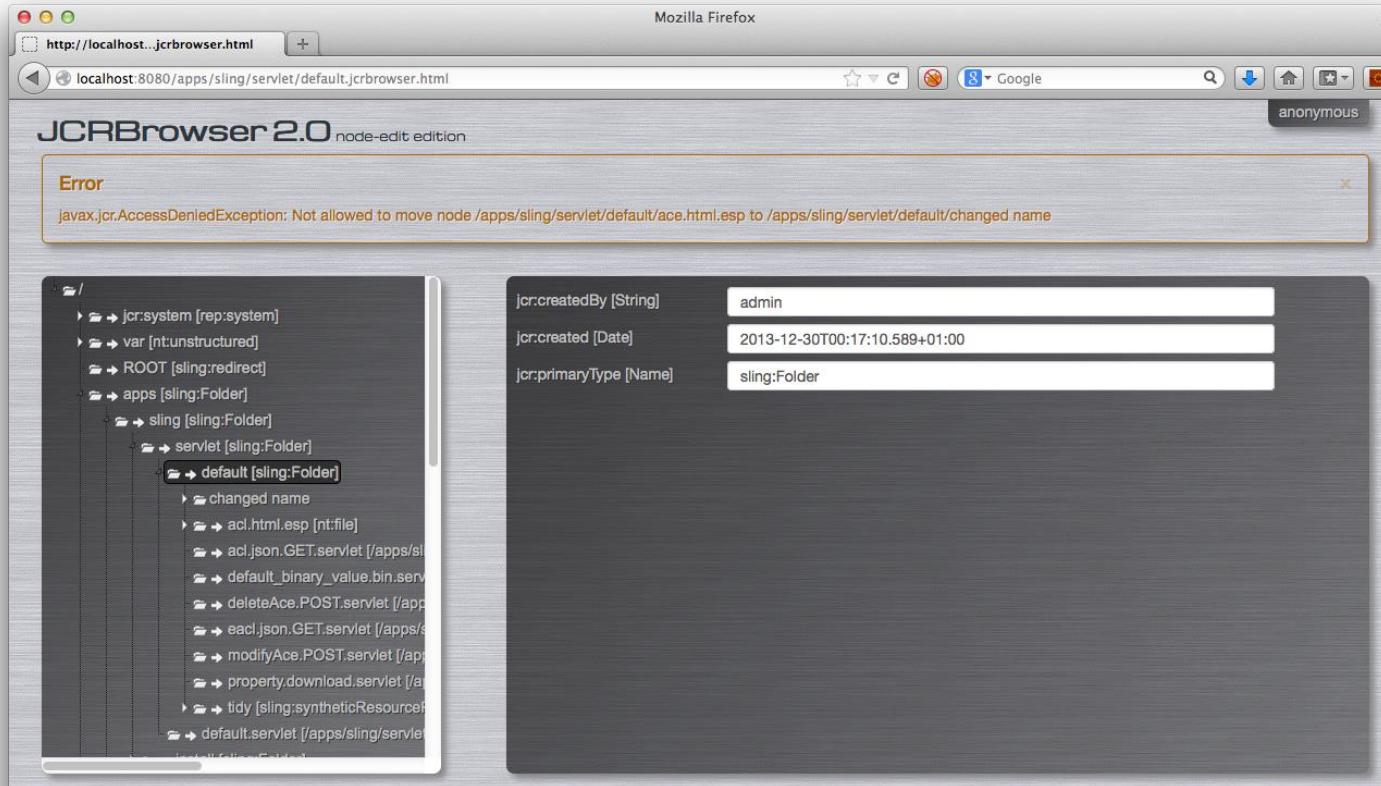
# About me and my motivation

- Opportunity to work more intensely until November 2015
- Working on doing that for a living

# About me and my motivation

- Opportunity to work more intensely until November 2015
- Working on doing that for a living
- Join me in this fun adventure!

# Sling JCRBrowser Demo



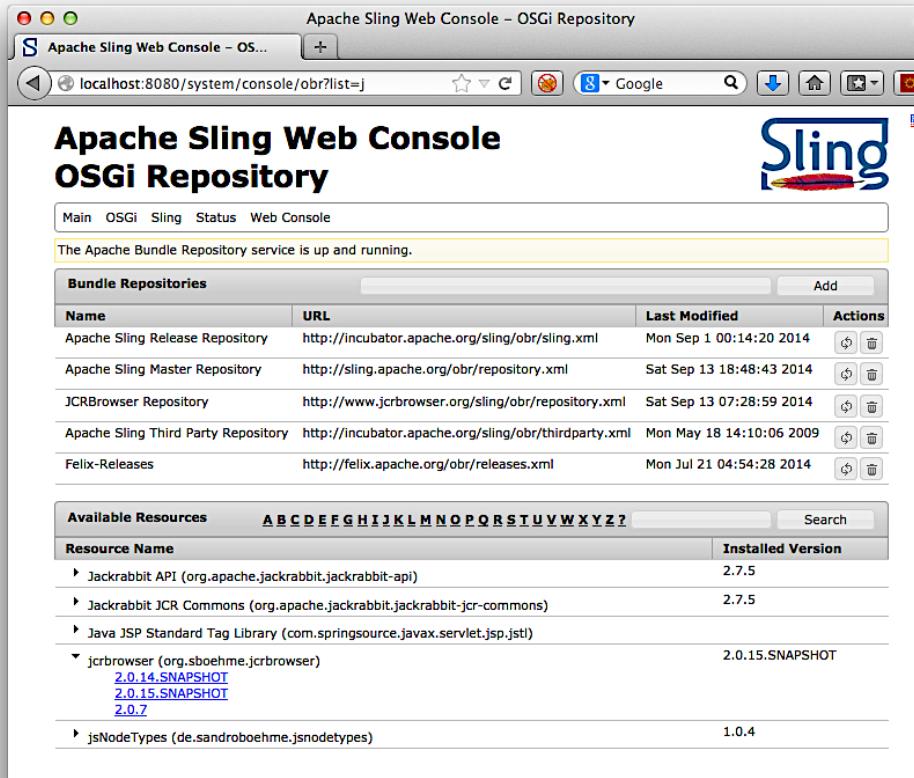
The screenshot shows the JCRBrowser 2.0 interface running in Mozilla Firefox. The title bar indicates the page is at `http://localhost...jcrbrowser.html`. The browser address bar shows `localhost:8080/apps/sling/servlet/default.jcrbrowser.html`. The user is logged in as `anonymous`.

The main area displays the JCRBrowser 2.0 interface with the title "JCRBrowser 2.0 node-edit edition". A modal dialog box is open, displaying an "Error" message: `javax:jcr.AccessDeniedException: Not allowed to move node /apps/sling/servlet/default/ace.html.esp to /apps/sling/servlet/default/changed name`.

On the left, there is a tree view of the JCR repository structure:

- /
- ↳ jcr:system [rep:system]
- ↳ var [nt:unstructured]
- ↳ ROOT [sling:redirect]
- ↳ apps [sling:Folder]
  - ↳ sling [sling:Folder]
    - ↳ servlet [sling:Folder]
      - ↳ default [sling:Folder]
        - ↳ changed name
        - ↳ acl.html.esp [nt:file]
        - ↳ acl.json.GET.servlet [/apps/sling/servlet/default/\_binary\_value/bin.servlet]
        - ↳ deleteAce.POST.servlet [/apps/sling/servlet/default/\_binary\_value/bin.servlet]
        - ↳ eacl.json.GET.servlet [/apps/sling/servlet/default/\_binary\_value/bin.servlet]
        - ↳ modifyAce.POST.servlet [/apps/sling/servlet/default/\_binary\_value/bin.servlet]
        - ↳ property.download.servlet [/apps/sling/servlet/default/\_binary\_value/bin.servlet]
        - ↳ tidy [sling:syntheticResource]
        - ↳ default.servlet [/apps/sling/servlet/default/\_binary\_value/bin.servlet]

# Sling JCRBrowser Demo



The Apache Sling Web Console – OSGi Repository

localhost:8080/system/console/obr?list=j

## Apache Sling Web Console OSGi Repository

The Apache Bundle Repository service is up and running.

### Bundle Repositories

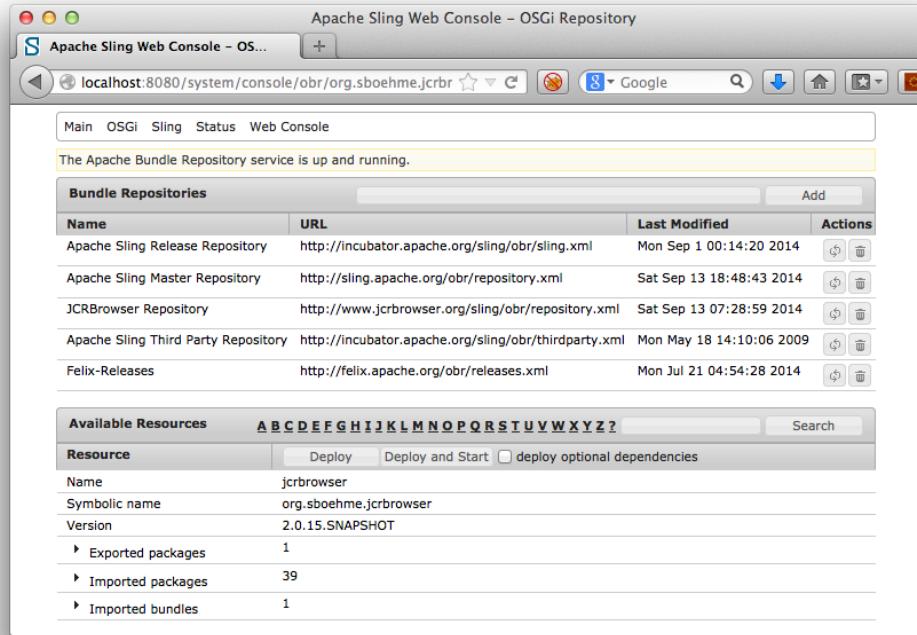
Name	URL	Last Modified	Actions
Apache Sling Release Repository	<a href="http://incubator.apache.org/sling/obr/sling.xml">http://incubator.apache.org/sling/obr/sling.xml</a>	Mon Sep 1 00:14:20 2014	
Apache Sling Master Repository	<a href="http://sling.apache.org/obr/repository.xml">http://sling.apache.org/obr/repository.xml</a>	Sat Sep 13 18:48:43 2014	
JCRBrowser Repository	<a href="http://www.jcrbrowser.org/sling/obr/repository.xml">http://www.jcrbrowser.org/sling/obr/repository.xml</a>	Sat Sep 13 07:28:59 2014	
Apache Sling Third Party Repository	<a href="http://incubator.apache.org/sling/obr/thirdparty.xml">http://incubator.apache.org/sling/obr/thirdparty.xml</a>	Mon May 18 14:10:06 2009	
Felix-Releases	<a href="http://felix.apache.org/obr/releases.xml">http://felix.apache.org/obr/releases.xml</a>	Mon Jul 21 04:54:28 2014	

### Available Resources

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z ?

Resource Name	Installed Version
Jackrabbit API (org.apache.jackrabbit.jackrabbit-api)	2.7.5
Jackrabbit JCR Commons (org.apache.jackrabbit.jackrabbit-jcr-commons)	2.7.5
Java JSP Standard Tag Library (com.springsource.jsp.taglib)	
jcrbrowser (org.sboehme.jcrbrowser)	2.0.15.SNAPSHOT
2.0.14.SNAPSHOT	
2.0.15.SNAPSHOT	
2.0.7	
jsNodeTypes (de.sandroboehme.jsnoderotypes)	1.0.4

# Sling JCRBrowser Demo



The screenshot shows the Apache Sling Web Console interface for the OSGi Repository. The main window title is "Apache Sling Web Console – OSGi Repository". The URL in the browser bar is "localhost:8080/system/console/obr/org.sboehme.jcrbr".

The interface includes a navigation bar with links: Main, OSGi, Sling, Status, and Web Console. A message box at the top states: "The Apache Bundle Repository service is up and running."

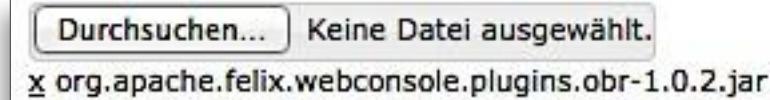
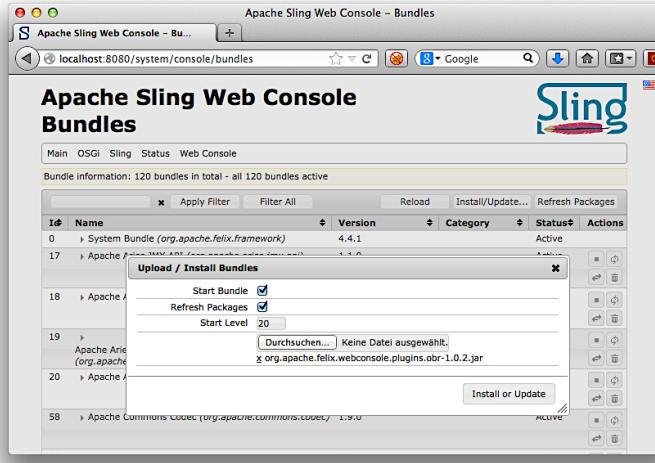
The central part of the screen is the "Bundle Repositories" section, which lists the following repositories:

Name	URL	Last Modified	Actions
Apache Sling Release Repository	<a href="http://incubator.apache.org/sling/obr/sling.xml">http://incubator.apache.org/sling/obr/sling.xml</a>	Mon Sep 1 00:14:20 2014	[Edit] [Delete]
Apache Sling Master Repository	<a href="http://sling.apache.org/obr/repository.xml">http://sling.apache.org/obr/repository.xml</a>	Sat Sep 13 18:48:43 2014	[Edit] [Delete]
JCRBrowser Repository	<a href="http://www.jcrbrowser.org/sling/obr/repository.xml">http://www.jcrbrowser.org/sling/obr/repository.xml</a>	Sat Sep 13 07:28:59 2014	[Edit] [Delete]
Apache Sling Third Party Repository	<a href="http://incubator.apache.org/sling/obr/thirdparty.xml">http://incubator.apache.org/sling/obr/thirdparty.xml</a>	Mon May 18 14:10:06 2009	[Edit] [Delete]
Felix-Releases	<a href="http://felix.apache.org/obr/releases.xml">http://felix.apache.org/obr/releases.xml</a>	Mon Jul 21 04:54:28 2014	[Edit] [Delete]

Below the repository list is the "Available Resources" section, which shows the following details for the "jcrbrowser" resource:

Resource	Deploy	Deploy and Start	<input type="checkbox"/> deploy optional dependencies
Name	jcrbrowser		
Symbolic name	org.sboehme.jcrbrowser		
Version	2.0.15.SNAPSHOT		
Exported packages	1		
Imported packages	39		
Imported bundles	1		

# Sling JCRBrowser Demo





# Inner workings

JCRBrowser  
Based on Apache Sling, build with passion.

# Inner workings :: server libraries

Sling

Servlet 2.5

JSTL 1.2

JSP 2.1



# Inner workings :: frontend libraries

JCRBrowser  
Based on Apache Sling, build with passion.

LESS Elements

Animate.css

Bootbox.js

{less}



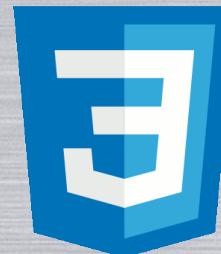
*JSNodeTypes*

HTML



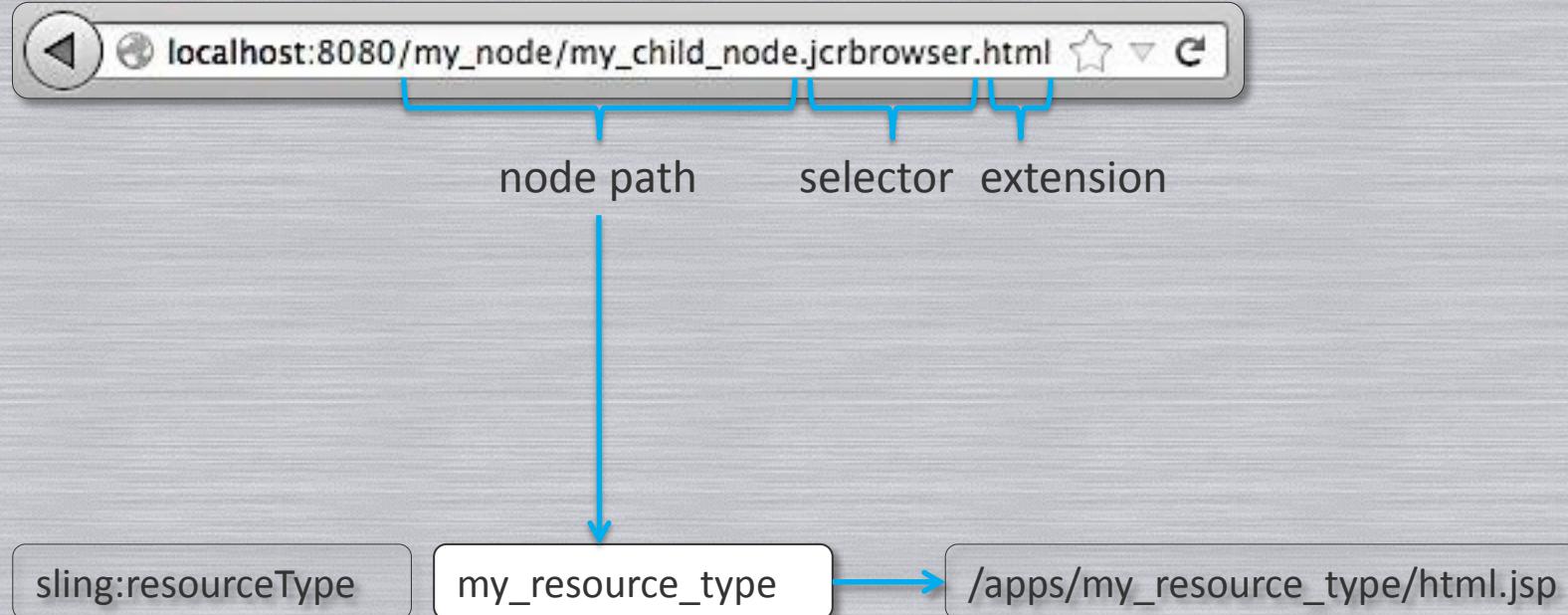
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CSS

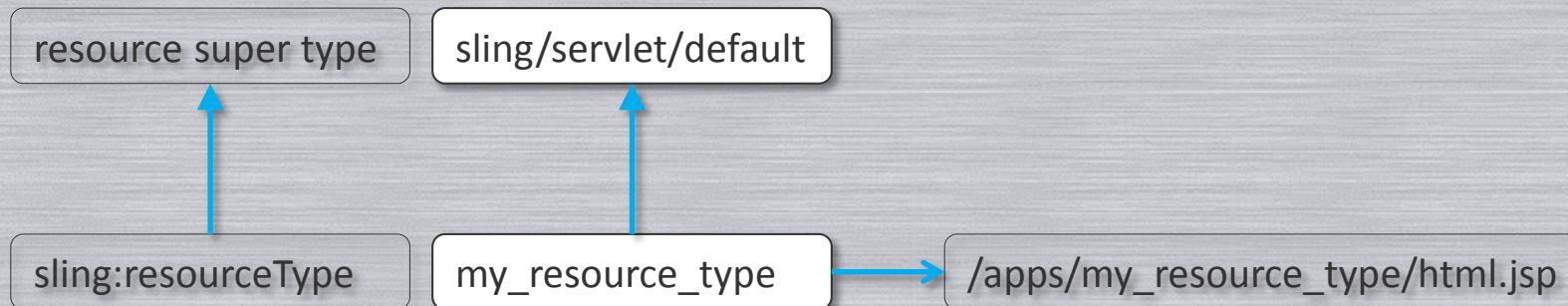
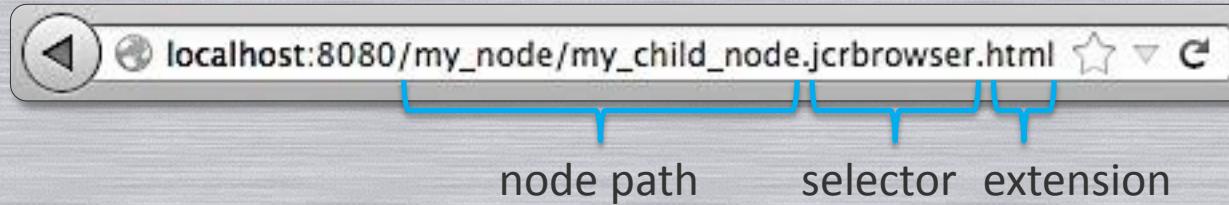


jQuery  
*write less, do more.*

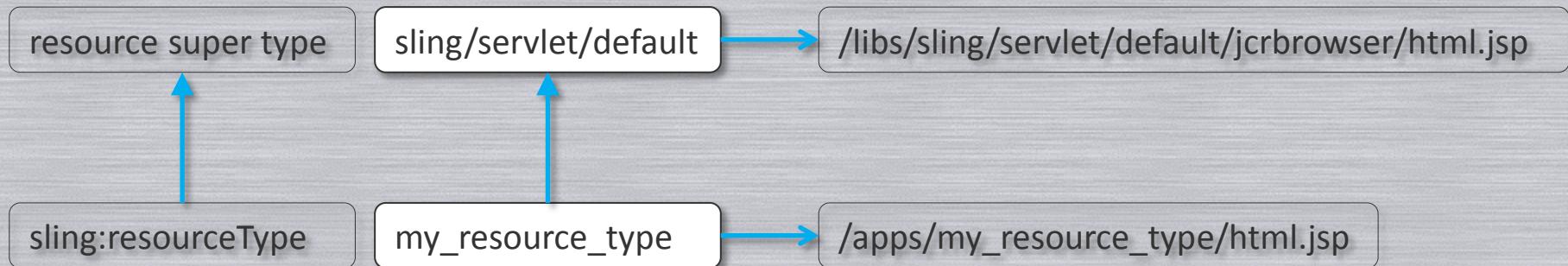
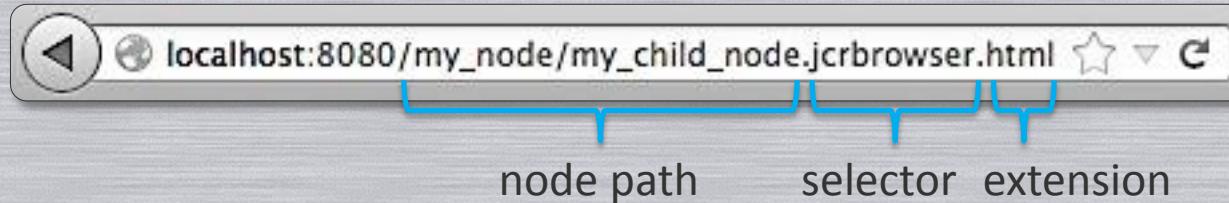
# Inner workings :: script resolution



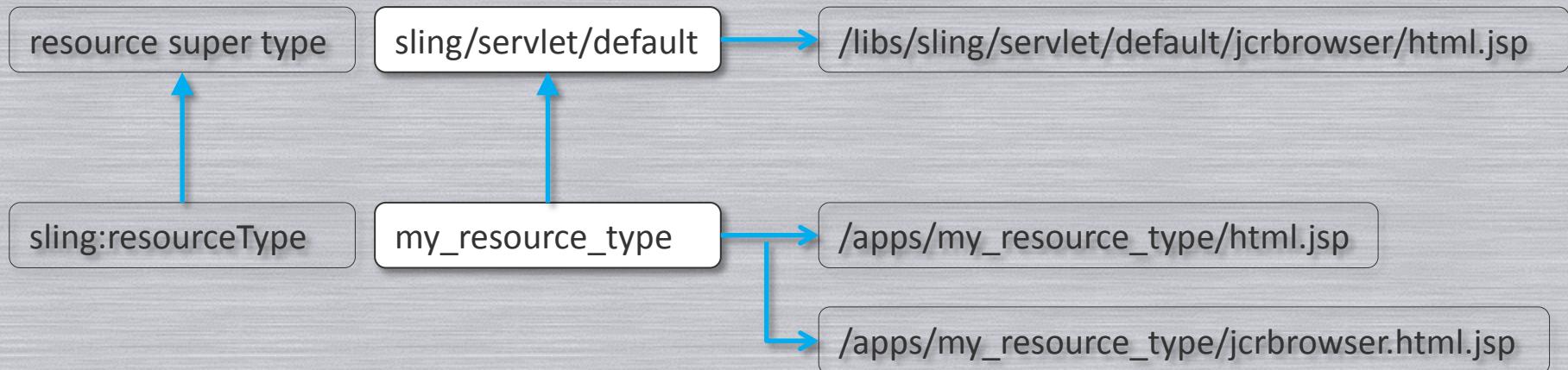
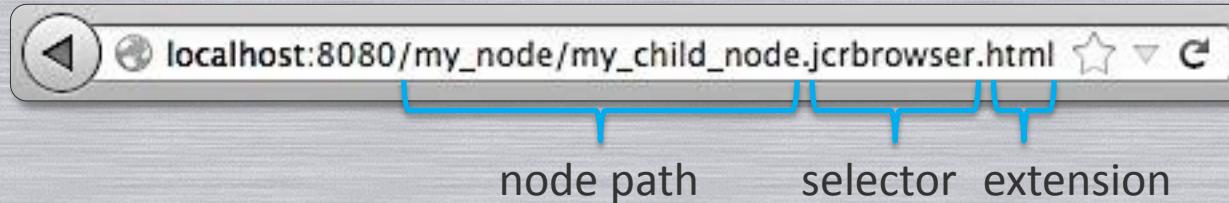
# Inner workings :: script resolution

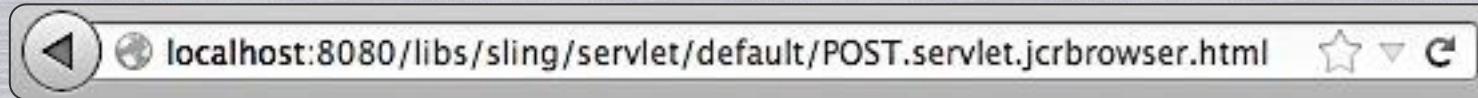


# Inner workings :: script resolution



# Inner workings :: script resolution





## Method GET not supported (405)

# Inner workings :: resource decorator

```
50  public Resource decorate(Resource resource, HttpServletRequest request) {
51      String pathInfo = request.getPathInfo();
52      return getJCRBrowserResourceWrapper(resource, pathInfo);
53  }
54
55  public Resource decorate(Resource resource) {
56      Resource result = null;
57      if (resource != null) {
58          ResourceMetadata resourceMetadata = resource.getResourceMetadata();
59          if (resourceMetadata != null) {
60              String resolutionPathInfo = resourceMetadata.getResolutionPathInfo();
61              result = getJCRBrowserResourceWrapper(resource, resolutionPathInfo);
62          }
63      }
64      return result;
65  }
66
67  private Resource getJCRBrowserResourceWrapper(Resource resource, String resolutionPathInfo) {
68      Resource result = null;
69      if (resolutionPathInfo != null && resolutionPathInfo.endsWith(".jcrbrowser.html")) {
70          result = new ResourceWrapper(resource) {
71              @Override
72              public String getResourceType() {
73                  return "jcrbrowser";
74              }
75          };
76      }
77      return result;
78  }
```

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50+     public Resource decorate(Resource resource, HttpServletRequest request) {
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60                 String resolutionPathInfo = resourceMetadata.getResolutionPathInfo();
61                 result = getJCRBrowserResourceWrapper(resource, resolutionPathInfo);
62             }
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70             result = new ResourceWrapper(resource) {
71                 @Override
72                 public String getResourceType() {
73                     return "jcrbrowser";
74                 }
75             };
76         }
77         return result;
78     }
```

# Inner workings :: lazy loading

## JSTreeAdapter.jcrbrowser.js:

```
url' : function (liJson) {
    // initial call for the root element
    if (liJson.id === '#'){
        return settings.contextPath+"./jcrbrowser.rootnodes.json";
    } else {
        // the li the user clicked on.
        var li = $('#'+liJson.id);
        return treeController.get_uri_from_li(li,".jcrbrowser.nodes.json");
    }
}
```

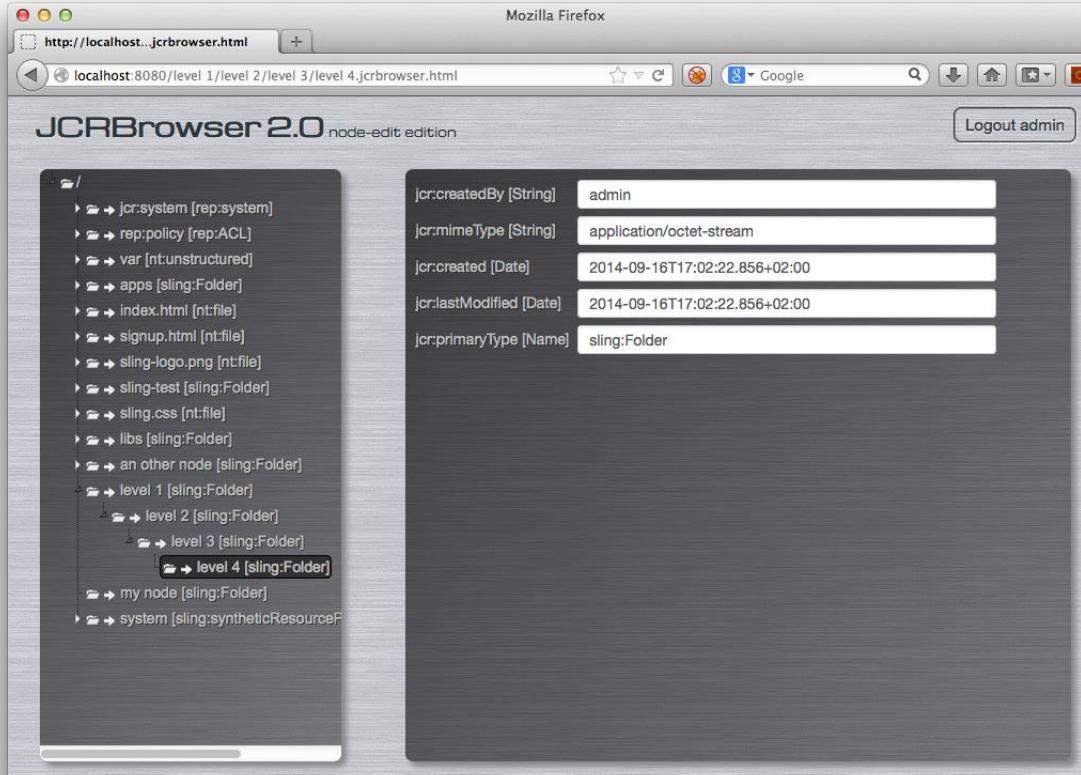
# Inner workings :: lazy loading

## JSTreeAdapter.jcrbrowser.js:

```
url' : function (liJson) {
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    if (liJson.id === '#'){
        return settings.contextPath+"./jcrbrowser.rootnodes.json";
    } else {
        // the li the user clicked on.
        var li = $('#'+liJson.id);
        return treeController.get_uri_from_li(li,".jcrbrowser.nodes.json");
    }
}
```

```
{
    text      : "mynode [nt:folder]"
    li_attr   : {"nodename": "mynode"}
    a_attr    : {"href": "/mynode.jcrbrowser.html"}
    children  : true/false or [{text: "mychildnode", li_attr: {},... }, {},...]
}
```

# Inner workings :: deep links



The screenshot shows a Mozilla Firefox browser window displaying the JCRBrowser 2.0 interface. The URL in the address bar is `http://localhost...jcrbrowser.html`. The page title is "JCRBrowser 2.0 node-edit edition". On the left, there is a tree view of a JCR node structure under the root node "/". The structure includes nodes like "jcr:system", "rep:policy", "var", "apps", "index.html", "signup.html", "sling-logo.png", "sling-test", "sling.css", "libs", "an other node", "level 1", "level 2", "level 3", "level 4", "my node", and "system". On the right, there is a form for editing the properties of the "level 4" node. The properties listed are:

jcr:createdBy [String]	admin
jcr:mimeType [String]	application/octet-stream
jcr:created [Date]	2014-09-16T17:02:22.856+02:00
jcr:lastModified [Date]	2014-09-16T17:02:22.856+02:00
jcr:primaryType [Name]	sling:Folder

A "Logout admin" button is visible in the top right corner of the browser window.

# Roadmap – where will it head to?

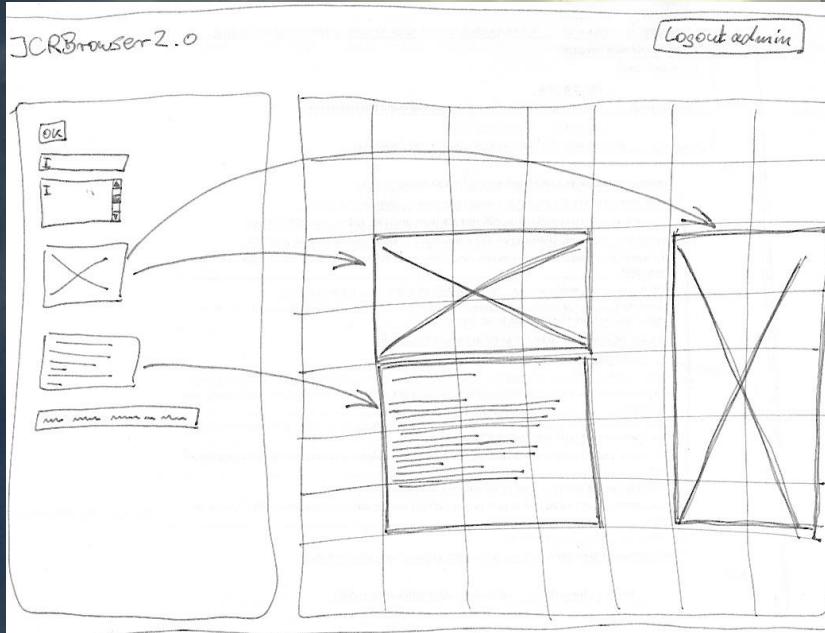


# Roadmap – where will it head to?

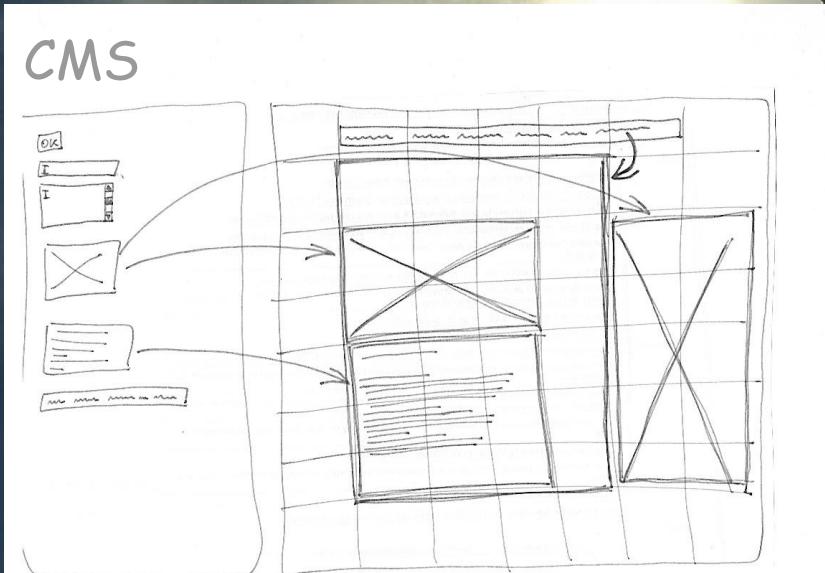
- Enhance node and generic property editor



## Custom properties page editor



## Template editor for small CMS





Small CMS - but easy to create and update websites.

# Roadmap – where will it head to?



Join me at this fun adventure!

- **Website:**  
<http://www.jcrbrowser.org/sling/website>
- **OBR:**  
<http://www.jcrbrowser.org/sling/obr/repository.xml>
- **GitHub:**  
<http://github.com/sandroboehme/jcrbrowse>

- **Employer:** <http://www.inovex.de>
- **WYSIWYG JSP POC:**  
<https://github.com/sandroboehme/wysiwyg-jsp>
- **JSNodeTypes:**  
<https://github.com/sandroboehme/jsNodeTypes>

- **Other talks from my colleagues:**
- [youtube.com/inovexgmbh](https://youtube.com/inovexgmbh)



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# Questions

- **For any discussion:**
  - [users@sling.apache.org](mailto:users@sling.apache.org)
  - [Sandro.boehme@inovex.de](mailto:Sandro.boehme@inovex.de)
  - [Sandro.boehme@gmx.de](mailto:Sandro.boehme@gmx.de)
  - [google.com/+SandroBöhme](https://google.com/+SandroBöhme)

# More about inovex



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- IT Engineering & Operations (Data Center)

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