



adaptTo()

APACHE SLING & FRIENDS TECH MEETUP
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Lightning Talk: Superimposing Content

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Use case 1: Multi Language Scenario

- Website with multiple languages
- Allow for partial/gradual translation
- Fallback to a master version, e.g. to the English version

Use case 2: Heavy Multi Site Scenario

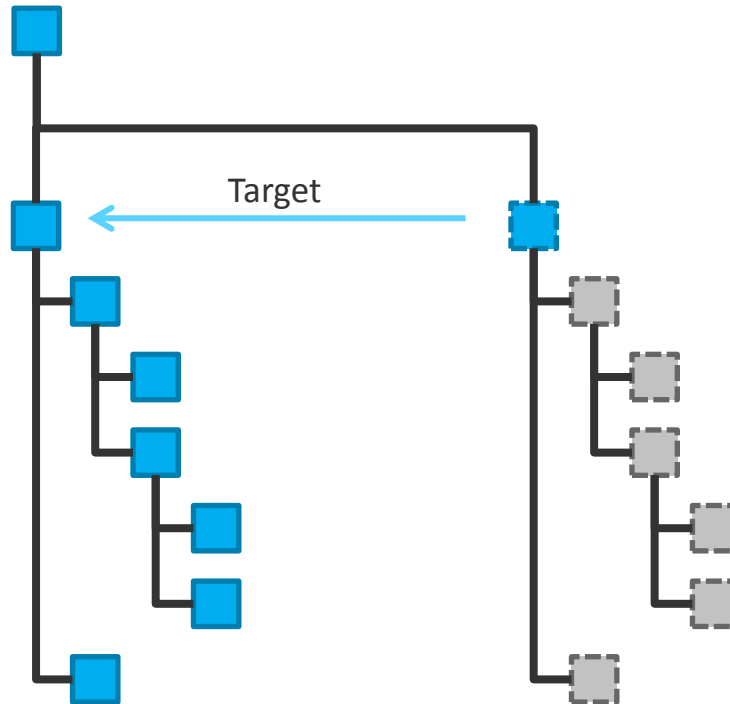
- 1 Master site with ~500 pages having each ~15 nodes = 7,500 Nodes
- Rollout this site to 1,000 tenants
- Content is 95% identical for each tenant, but rendered differently (e.g. company name and logo)
- You do not want to create 7.5mio unnecessary nodes in your repository

Requirements for the solution

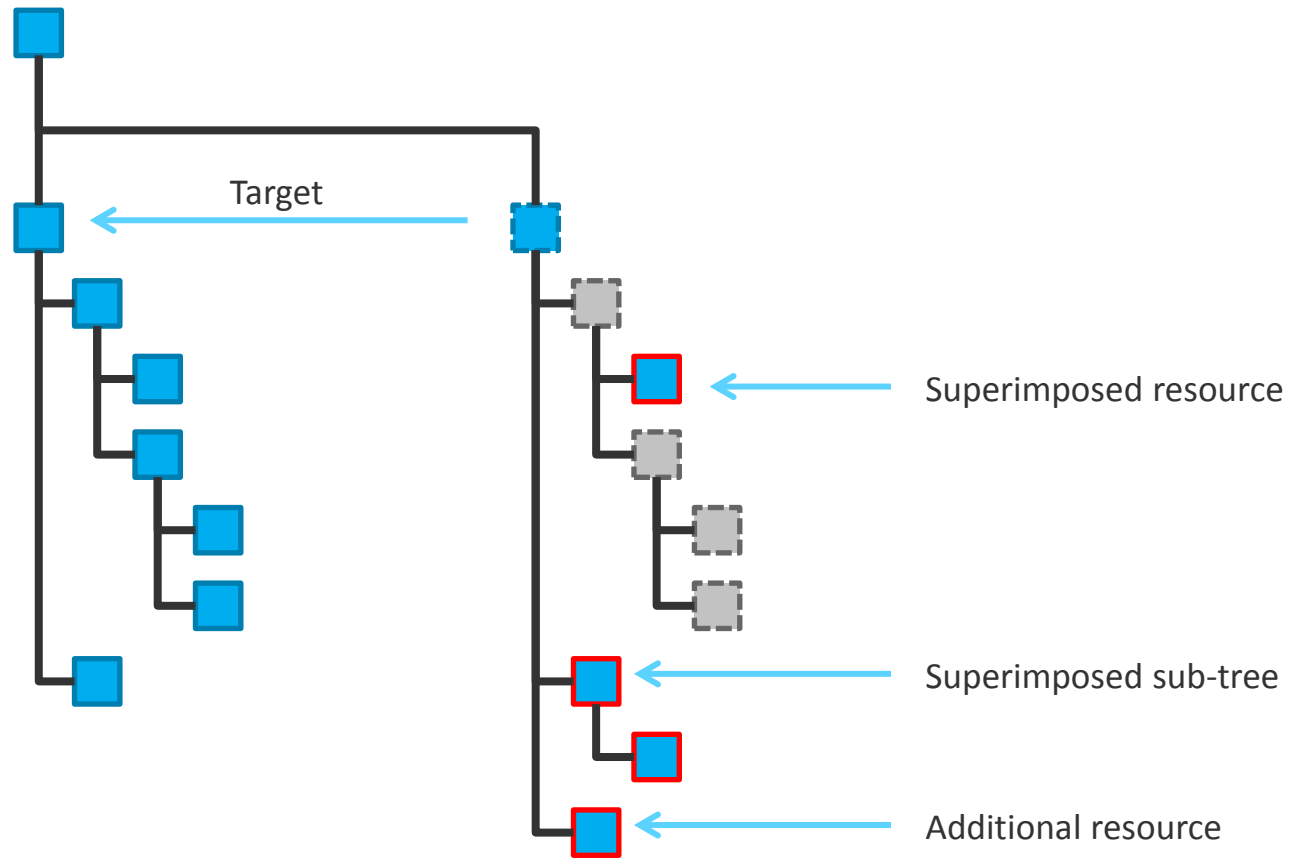
- **Mirroring resource trees**
 - Reflect changes from master tree
 - Avoid unnecessary copies

- **Superimposing resources**
 - Add
 - Remove
 - Overlay

Mirroring resource trees



Superimposing resources



ResourceProvider API

```
package org.apache.sling.api.resource;
```

```
public interface ResourceProvider {
```

```
    /**  
     * Returns a resource from this resource provider or null if  
     * the resource provider cannot find it. The path should have one of the #ROOTS  
     * strings as its prefix.  
     */
```

```
    Resource getResource(ResourceResolver resourceResolver, String path);
```

```
    /**  
     * Returns an Iterator of Resource objects loaded from  
     * the children of the given Resource. The returned Resource instances  
     * are attached to the same  
     * ResourceResolver as the given parent resource.  
     */
```

```
    Iterator<Resource> listChildren(Resource parent);
```

```
}
```

DEMO

- Sling ticket with patch
<https://issues.apache.org/jira/browse/SLING-1778>
- Proposed name:
SuperimposingResourceProvider

What do you think?

Thank you for listening
and enjoy adaptTo() 2013.

Why not JCR Shareable Nodes

- JCR Shareable Nodes allowing multiple parent nodes, thus turning the tree into a graph
- There is no “master” parent node
- Only identical content can be reused, no superimposed modifications possible

Ideas for future enhancements

- Get rid of JCR dependency
- Automatically create structure nodes when superimposing deep nodes
- Ordering of superimposed nodes
- Support editing UIs – mirrored content is read-only