



adaptTo()

EUROPE'S LEADING AEM DEVELOPER CONFERENCE

27th – 29th SEPTEMBER 2021

Manage HTTP Redirects in AEM with Ease!

Yegor Kozlov, Fleetcor Technologies Inc.

About Me

- AEM Developer
- OpenSource Enthusiast
- Apache POI PMC



Redirects: Why Bother?

- The most common case: setup redirects to avoid 404s
- Managing redirects should be authorable in AEM and ***should not*** require IT support
- Compatibility with AEM as a Cloud Service

Redirects: Existing Approaches

- Core Page Component

 - `@cq:redirectTarget=/content/another-path`

- Sling Mappings

- Apache `mod_rewrite/mod_alias` rules

 - Existing tools, e.g. ACS Commons Redirect Map Manager are not compatible with AEMaaCS

- CDN, e.g. Lambda@edge functions in AWS Cloudfront

ACS Commons Redirect Manager

- Servlet filter which evaluates redirect configurations and issues a 302 or 301
- AEM UI to manage redirect rules
- 100% AEM Solution, does not require Dispatcher



Core Features

- Flexible matching including regex and back-references
- Context-aware configurations
- Rewriting Location header
- Export/Import to/from Excel spreadsheet
- AEM as a Cloud Service compatible

Live Example

Redirect Rules

Source	Target
/content/we-retail/hello	/content/we-retail/welcome
/content/dam/we-retail/hello.pdf	/content/dam/we-retail/welcome.pdf
/content/we-retail/es/about/*	/content/we-retail/en/about
/content/we-retail/de/about/(.*)	/content/we-retail/en/about/\$1
/content/we-retail/en/hello.html	/en/hello?a=1&b=2
/content/geometrixx/de/(.*)	https://www.geometrixx.de/welcome



Context Aware Configurations

■ Default Global Configuration (OOB)

```
/conf/global
```

```
+ settings
```

```
+ redirects
```

```
+ rule-1
```

```
- source = "/content/we-retail/page1"
```

```
- target = "/content/we-retail/page2"
```

```
- statusCode = 302
```

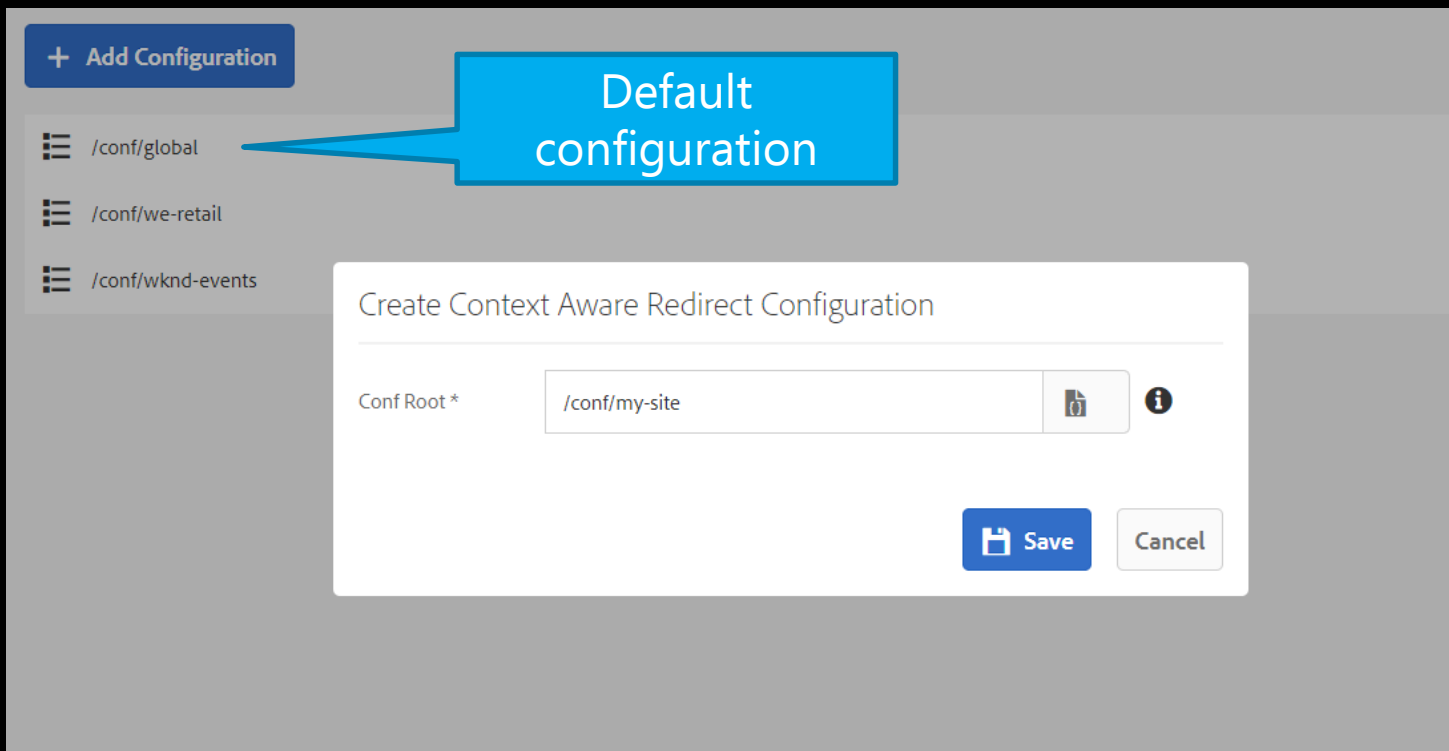
```
+ rule-2
```

```
- source = "/content/wknd/page1"
```

```
- target = "/content/wknd/page2"
```

```
- statusCode = 302
```

Context Aware Configurations






+ Add Configuration

- /conf/global
- /conf/we-retail
- /conf/wknd-events

Default configuration

Create Context Aware Redirect Configuration

Conf Root *  

 Save

- Context Configuration (User-Defined)

```
/content/we-retail
```

```
+ jcr:content
```

```
- cq:conf = "/conf/we-retail"
```

```
/conf/we-retail
```

```
+ settings
```

```
+ redirects
```

```
+ rule-1
```

```
- source = "/content/we-retail/page1"
```

```
- target = "/content/we-retail/page2"
```

```
- statusCode = 302
```

Rewriting Location Header

```
/content/we-retail/en/page1 => /content/we-retail/en/page2
```

Redirect
Rule

```
$ curl -I https://www.we-retail.com/en/page1.html  
HTTP/1.1 302 Found  
Location: /content/we-retail/en/page2.html
```

```
# redirect will result in 404  
# https://www.we-retail.com/content/we-retail/en/page2.html
```

Short URL
expected

```
$ curl -I https://www.we-retail.com/en/page1.html  
HTTP/1.1 302 Found  
Location: https://www.we-retail.com/en/page2.html
```

Option 1: Use short or absolute urls

Source	Target
/content/we-retail/en/page1	/en/page2
/content/we-retail/en/page1	https://www.we-retail.com/en/page2

Option #2: Sling Mappings

- ResourceResolver#map Location Header before delivery
 - Enable re-writing Location header in OSGi configuration
 - Create a node **/etc/map/https/www.we-retail.com** with the following content:

```
+ /etc/map
  +-- https
    +-- www.we-retail.com
      +-- jcr:primaryType = "sling:Mapping"
      +-- sling:internalRedirect = "/content/we-retail"
```

```
$ curl -I http://localhost:4503/content/we-retail/en/page1.html
HTTP/1.1 302 Found
Location: https://www.we-retail.com/en/page2.html
```

Option #3: Location Header Rewriter

```
import com.adobe.acs.commons.redirects.LocationHeaderAdjuster;

@Component
public class MyLocationAdjuster implements LocationHeaderAdjuster
{
    @Override
    public String adjust(SlingHttpServletRequest request, String location) {
        String loc = StringUtils.substringAfter
            (location, "/content/we-retail/de/");
        return "https://www.we-retail.de/" + loc;
    }
}
```

- Rules are cached on first hit
- Separate cache per caconfig
- Evaluation
 - Evaluate exact matches by path: $O(1)$
 - Evaluate regex rules: $O(N)$ where N is the number of regex rules

- <https://adobe-consulting-services.github.io/acs-aem-commons/features/redirect-manager/index.html>
- <https://github.com/Adobe-Consulting-Services/acs-aem-commons>
 - since v5.0.6
 - patches are welcome



Thank You!