DSpace 7 Shibboleth Configuration

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OBSOLETE PAGE

These old notes are now OBSOLETE. The official documentation for DSpace 7 + Shibboleth is now at Authentication Plugins#ShibbolethAuthentication

Problem

Based on the work done on https://github.com/DSpace/dspace-angular/pull/568 and https://github.com/DSpace/DSpace/pull/2651, it isn't been possible for all to accomplish authentication using shibboleth. We agree to share workable configurations.

Solution

In DSpace configuration, local.cfg file, ensure these lines are uncommented:

```plaintext
# Shibboleth authentication/authorization. See authentication-shibboleth.cfg for default configuration.
plugin.sequence.org.dspace.authenticate.AuthenticationMethod = org.dspace.authenticate.ShibAuthentication

# Enabled by default in authentication.cfg
plugin.sequence.org.dspace.authenticate.AuthenticationMethod = org.dspace.authenticate.PasswordAuthentication
```

we also use default attributes that are mapped in my Shibboleth (version 3.0.4) attribute map (this may differ accordingly with the IdP).

In my local setup (Paulo Graça), I'm using Apache/2.4.6 (CentOS) with Proxypass with this settings. This is also tested (Ben Bosman) with Apache/2.4.41 (Amazon Linux 2) and (Andrea Bollini (4Science)) in the official demo with Apache 2 (Ubuntu 18.04LTS):
<VirtualHost *:443>
#(...)
  <Proxy>*</Proxy>
    AddDefaultCharset Off
    Order deny,allow
    Allow from all
</Proxy>

# The Shibboleth handler shall process all HTTPS requests on this location...
<Location /server/api/authn/shibboleth>
  Order deny,allow
  Allow from all
  AuthType shibboleth
  # this must be on
  ShibRequireSession On
  ShibUseHeaders On
  Require shibboleth
</Location>

# The Shibboleth handler shall process all HTTPS requests on this location...
<Location /server/api/authn/login>
  Order deny,allow
  Allow from all
  AuthType shibboleth
  # this require to be off otherwise the available auth methods will be not visible
  ShibRequireSession Off
  ShibUseHeaders On
  Require shibboleth
</Location>

#Adding SSL Proxy Engine On
SSLEngine on
  ProxyRequests off
  ProxyPreserveHost On

  # A specific configuration for shibboleth proxypass
  ProxyPass /Shibboleth.sso !

  # A specific proxypass configuration for DSpace server (both server and angular on the same machine)
  ProxyPass /server ajp://localhost:8009/server
  ProxyPassReverse /server ajp://localhost:8009/server

  # A specific proxypass configuration for Angular
  ProxyPass / http://localhost:3000/
  ProxyPassReverse / http://localhost:3000/
#(...)
</VirtualHost>

The AJP proxy only works (Ben Bosman) if shibboleth2.xml doesn't contain the attribute attributePrefix="AJP_" in the ApplicationDefaults.

I'm (Paulo Graça) also using Tomcat v9 (apache-tomcat-9.0.30) and java-11-openjdk.x86_64, with a almost default tomcat server.xml file. Ben Bosman has created the setup with apache-tomcat-9.0.31 and OpenJDK Runtime Environment Corretto-11.0.6.10.1:
Separate REST and Angular hostname

When using separate hostnames for REST and Angular, more configuration is required on the REST Apache to make sure you allow requests from the given hostname. The configuration below allows access from localhost:4000 and dspace7-demo.atmire.com as used in the official DSpace 7 Demo where the REST API is hosted at a different domain dspace7.4science.it

### Apache config

```xml
<Context>
  ...
  <CookieProcessor sameSiteCookies="none" />
  ...
</Context>
```

Also make sure you don't have a Proxy for http://localhost:3000/ if you're testing from http://localhost:3000/

This setup currently causes warnings:

A cookie associated with a cross-site resource at http://dspace7-rest.atmire.com/ was set without the `SameSite` attribute. A future release of Chrome will only deliver cookies with cross-site requests if they are set with `SameSite=None` and `Secure`. You can review cookies in developer tools under Application>Storage>Cookies and see more details at https://www.chromestatus.com/feature/5088147946030592 and https://www.chromestatus.com/feature/5633521622188032.

A custom context.xml is currently needed for tomcat to allow cookie to full work across domain, this is the current configuration on the official DSpace7 demo

```xml
<?xml version="1.0" encoding="UTF-8"?>
<Context>
  ...
  <CookieProcessor sameSiteCookies="none" />
  ...
</Context>
```

Finally, shibboleth seems to require to be configured to manage the SameSite=None property in its cookies to work properly with DSpace. Please note that this is not what the shibboleth community recommend but it is the result of our current investigation according to the dspace source code at the time of writing, see https://wiki.shibboleth.net/confluence/display/SP3/SameSite

Moreover, on the demo, as the shibboleth daemon version doesn't support the specific attribute sameSiteSession (see https://wiki.shibboleth.net/confluence/display/SP3/Sessions)

we have applied a workaround settings cookieProps as follow

```xml
<Sessions lifetime="28800" timeout="3600" relayState="ss:mem" checkAddress="false" handlerSSL="false" cookieProps="; path=/; SameSite=None; Secure; HttpOnly">
  ...
</Sessions>
```
Related resources

- DSpace 7 Shibboleth Configuration