

D4Science Infrastructure - Task #5338

Allow XHR requests on D4science Geoserver WFS

Oct 03, 2016 01:19 PM - Emmanuel Blondel

Status:	Closed	Start date:	Oct 03, 2016
Priority:	Urgent	Due date:	
Assignee:	Andrea Dell'Amico	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:	External Tools		
Infrastructure:	Development, Production		
Description At now JS clients are not able to perform XHRs on GeoServer. This is blocking for implementing UIs that require WFS XHRs. Example: XMLHttpRequest cannot load http://geoserver-dev.d4science-ii.research-infrastructures.eu/geoserver/ows?service=wfs&version=1.0.0&request=GetFeature&typeName=W_mpa:ecoregions&outputFormat=json . No 'Access-Control-Allow-Origin' header is present on the requested resource. Origin 'http://localhost' is therefore not allowed access.			
Related issues: Related to D4Science Infrastructure - Task #5501: Move data from development ... Closed Oct 11, 2016 Oct 13, 2016			

History

#1 - Oct 03, 2016 02:34 PM - Pasquale Pagano

- Assignee set to Francesco Mangiacrapa
- Target version changed from UnSprintable to External Tools

#3 - Oct 06, 2016 11:02 PM - Emmanuel Blondel

Please be sure to target also dev geoservers (and not only), required for the ongoing UI developments (<http://geoserver-dev.d4science-ii.research-infrastructures.eu/geoserver/>)
Many thanks, and looking forward to your feedback

#4 - Oct 06, 2016 11:41 PM - Emmanuel Blondel

Blocking for <https://support.d4science.org/issues/4991>

#5 - Oct 11, 2016 12:25 PM - Emmanuel Blondel

Any update on this?

I remind this is blocking the MPA web-app VRE integration, and i hope that this restriction preventing XHR requests on D4Science WFS could be removed soon.

Thanks in advance

#6 - Oct 11, 2016 05:38 PM - Pasquale Pagano

I believe that we should consider to move this work in production since the activity #5214 clearly illustrate that:

- ENG did not start yet to implement the proxy service
- CNR is working to move the dev infrastructure to modern instances of the services and this will require still some days.

Moving in production is easier. It is sufficient to create a VRE accessible only by accepted members. If you agree, please proceed with the request for creating a new VRE.

#7 - Oct 11, 2016 05:58 PM - Emmanuel Blondel

In principle, i have nothing against moving to prod, if it can boost the overall MPA activity and solve its blocking tasks (including this ticket, + HTTPS on Geoserver). But with this i think that moving all data to production is becoming a bottleneck. I'm not sure that @levi.westerveld@gmail.com can do this in the short-term (he's on leave), unless CNR can support to move all the data he published in dev. Resources includes 27 feature types/layers in geoserver (all under 'W_mpa' workspace) and its associated styles. Let me know if this is doable, and if i have to create a ticket for it.

We don't need a VRE, there is yet an MPA VRE in prod for later, and in any case the developments and integration will be done in

<https://next.d4science.org/group/nextnext/mpa> (yet a portlet there to test this integration and layout compatibility with liferay), invoking runtime resources (that could be from prod or dev, as long it doesn't prevent the UI to work). Please note also that the portlet has only one role: grab VRE token at JS level and pass it to a web-app simply embedded. This flexible approach allows customer to be modular:

- to have the app running outside (if a public token is provided for WPS invocation)
- to have the app running inside a VRE: inheriting the VRE token

Note that the portlet could be generic (and i'd like to make it as configurable liferay portlet for future, this would simplify a lot integration of js web-apps that could run outside/inside VRE, this respecting the token-based authorization mechanism)

For now, app can be run outside (and under evaluation by Levi), but still not within in VRE because of the known issues: XHR prevented on WFS, HTTPS needed on geoservers (yet the other domain needed under as https support it: data.d4science.org, access.d4science.org, and [wps /dataminer](https://wps.dataminer.org)).

#8 - Oct 11, 2016 07:50 PM - Pasquale Pagano

- Related to Task #5501: Move data from development to production GeoNetwork added

#9 - Oct 11, 2016 07:52 PM - Pasquale Pagano

I opened a ticket, [#5501](#), and related to this activity. It is about the porting of data from development to production.

However, it is needed I believe to clarify if the data are public or private. In the first case the porting should not be a problem. In the second case, they have to be associated to a production VRE. Please clarify.

#10 - Oct 11, 2016 08:36 PM - Emmanuel Blondel

Done. Many thanks

#11 - Oct 13, 2016 08:05 PM - Emmanuel Blondel

- Infrastructure Production added

#12 - Oct 21, 2016 12:53 PM - Emmanuel Blondel

- Priority changed from High to Urgent

Until now we were relying directly on VLIZ Geoserver WFS (temporarily) to let GRID-ARENDAL test their web-app (using dynamic WFS selectors). However, VLIZ just released a new version of their EEZ layer, changing the featureType (schema), which breaks our current app. For all GIS resources used in the MPA analysis we need to rely on D4Science Geoserver, to make the app working again, and stop relying on remote sources out of our control.

Given these considerations, Can you please let us know if this Cross-Origin restriction on WFS can be removed, and when.

#13 - Oct 21, 2016 12:59 PM - Emmanuel Blondel

Please note that it's not really about "external tools", it's about to query a **D4Science** Geoserver WFS, which is not external, but unfortunately from server POV seen as cross origin when querying it under access.d4science.org and the portal domain. Clearly it's a limitation if we are not able to query WFS data from web-clients, in particular web-clients hosted in D4Science.

#14 - Oct 21, 2016 05:14 PM - Pasquale Pagano

Please [@francesco.mangiacrapa@isti.cnr.it](mailto:francesco.mangiacrapa@isti.cnr.it), [@andrea.dellamico@isti.cnr.it](mailto:andrea.dellamico@isti.cnr.it), and [@gianpaolo.coro@isti.cnr.it](mailto:gianpaolo.coro@isti.cnr.it) look at this request. It is urgent and it is blocking the activity of WP7. Can you clarify when and how you can satisfy this request? Thanks.

#15 - Oct 21, 2016 05:39 PM - Andrea Dell'Amico

- Status changed from New to In Progress

- Assignee changed from Francesco Mangiacrapa to Andrea Dell'Amico

#16 - Oct 21, 2016 07:29 PM - Andrea Dell'Amico

- % Done changed from 0 to 80

[@emmanuel.blondel@fao.org](mailto:emmanuel.blondel@fao.org) I've just enabled both CORS and https on the dev geoserver. Are you able to test if it solves your problem? The CORS configuration only permits requests from the d4science.org domain right now. It can be relaxed if needed.

If it works I'll reconfigure the production geoservers on monday.

#17 - Oct 24, 2016 10:48 AM - Emmanuel Blondel

Hi Andrea, thanks for pushing on this. I've tried it with dev geoserver under <http://access.d4science.org>, but it didn't work:

XMLHttpRequest cannot load

http://geoserver-dev.d4science-ii.research-infrastructures.eu/geoserver/wfs...rsion=1.0.0&request=GetFeature&typeName=W_mpa:ecoregions&outp

utFormat=json. No 'Access-Control-Allow-Origin' header is present on the requested resource. Origin 'http://access.d4science.org' is therefore not allowed access. The response had HTTP status code 404.

Better if could relax domain restrictions.

Thanks in advance

#18 - Oct 24, 2016 11:15 AM - Andrea Dell'Amico

My fault, I assumed that the request were made over https. Now it should work over http too.

#19 - Oct 24, 2016 07:22 PM - Pasquale Pagano

- Status changed from In Progress to Feedback

Please @emmanuel.blondel@fao.org can you check it again?
Thanks

#20 - Oct 24, 2016 07:35 PM - Emmanuel Blondel

It's not working with dev Geoserver on http (invoking on <http://access.d4science.org>)

#21 - Oct 24, 2016 07:43 PM - Andrea Dell'Amico

Can you check now?
Or can you show me a way to test by myself?

#22 - Oct 24, 2016 08:08 PM - Emmanuel Blondel

I couldn't test this time, geoserver-dev seems down.
This test app is a way to check http://access.d4science.org/webpub_96283386-8925-4310-a3ac-9d45793ad782/mpa-web
You can test by selecting "Ecoregion" with the first dropdown-list, it will trigger the WFS request (FYI, the default selector "EEZ" still relies directly on VLIZ Geoserver not D4S geoserver)

#23 - Oct 25, 2016 09:59 AM - Andrea Dell'Amico

I reworked the CORS configuration because it seems that geoserver gets confused (or is the caller to get confused?)
The behaviour I'm seeing now is the following:

- When I set limits to the allow-origin headers, going to http://access.d4science.org/webpub_96283386-8925-4310-a3ac-9d45793ad782/mpa-web gives me results and I can see that the geoserver is queried successfully when EEZ is selected. Example:

```
127.0.0.1 - - [25/Oct/2016:09:46:58 +0200] "GET /geoserver/wms?SERVICE=WMS&VERSION=1.1.1&REQUEST=GetMap&FORMAT=
=image%2Fpng&TRANSPARENT=true&LAYERS=W_mpa%3Ageo_fea_shelf&TILED=true&TILESORIGIN=-180%2C-90&WIDTH=256&HEIGHT=256&SRS=EPSG%3A4326&STYLES=&BBOX=-101.25%2C0%2C-90%2C11.25 HTTP/1.1" 200 855
127.0.0.1 - - [25/Oct/2016:09:46:58 +0200] "GET /geoserver/wms?SERVICE=WMS&VERSION=1.1.1&REQUEST=GetMap&FORMAT=
=image%2Fpng&TRANSPARENT=true&LAYERS=W_mpa%3Ageo_fea_hadal&TILED=true&TILESORIGIN=-180%2C-90&WIDTH=256&HEIGHT=256&SRS=EPSG%3A4326&STYLES=&BBOX=-101.25%2C0%2C-90%2C11.25 HTTP/1.1" 200 674
127.0.0.1 - - [25/Oct/2016:09:46:58 +0200] "GET /geoserver/wms?SERVICE=WMS&VERSION=1.1.1&REQUEST=GetMap&FORMAT=
=image%2Fpng&TRANSPARENT=true&LAYERS=W_mpa%3Ageo_fea_abyss&TILED=true&TILESORIGIN=-180%2C-90&WIDTH=256&HEIGHT=256&SRS=EPSG%3A4326&STYLES=&BBOX=-101.25%2C0%2C-90%2C11.25 HTTP/1.1" 200 1278
```

- When I set limits to the allow-origin headers (so the same configuration of the previous case), going to http://access.d4science.org/webpub_96283386-8925-4310-a3ac-9d45793ad782/mpa-web fails if I select Ecoregions. The tomcat error is puzzling:

```
127.0.0.1 - - [25/Oct/2016:09:49:49 +0200] "GET /geoserver/geoserver/wfs?version=1.0.0&request=GetFeature&typeName=W_mpa:ecoregion&bbox=-99.27246093750001,8.547363281250014,-55.327148437500014,31.618652343750014&outputFormat=json HTTP/1.1" 404 967
```

```
25 Oct 09:49:49 WARN [servlet.PageNotFound] - No mapping found for HTTP request with URI [/geoserver/geoserver/wfs] in DispatcherServlet with name 'dispatcher'
```

But the request from the reverse proxy (nginx) seems correct:

```
146.48.122.27 - - [25/Oct/2016:09:49:49 +0200] "GET /geoserver/wfs?version=1.0.0&request=GetFeature&typeName=W_mpa:ecoregion&bbox=-99.27246093750001,8.547363281250014,-55.327148437500014,31.618652343750014&outputFormat=json HTTP/1.1" 404 967 "http://access.d4science.org/webpub_96283386-8925-4310-a3ac-9d45793ad782/mpa-web/" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_6) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/53.0.2785.143 Safari/537.36"
```

- If I relax the CORS settings, allowing calls from anywhere, I still obtain results when EEZ is selected but tomcat gives an exception when I select Ecoregions

The tomcat access log:

```
127.0.0.1 - - [25/Oct/2016:09:55:12 +0200] "GET /geoserver/wfs?version=1.0.0&request=GetFeature&typeName=W_mpa:ecoregion&bbox=-99.27246093750001,8.547363281250014,-5|---|5.327148437500014,31.618652343750014&outputFormat=json HTTP/1.1" 200 260
```

And the tomcat exception:

```
25 Oct 09:55:12 ERROR [geoserver.ows] -
org.geoserver.wfs.WFSException: Feature type W_mpa:ecoregion unknown
    at org.geoserver.wfs.kvp.GetFeatureKvpRequestReader.checkTypeName(GetFeatureKvpRequestReader.java:370)
    at org.geoserver.wfs.kvp.GetFeatureKvpRequestReader.read(GetFeatureKvpRequestReader.java:137)
    at org.geoserver.ows.Dispatcher.parseRequestKVP(Dispatcher.java:1405)
    at org.geoserver.ows.Dispatcher.dispatch(Dispatcher.java:622)
    at org.geoserver.ows.Dispatcher.handleRequestInternal(Dispatcher.java:263)
    at org.springframework.web.servlet.mvc.AbstractController.handleRequest(AbstractController.java:153)
    at org.springframework.web.servlet.mvc.SimpleControllerHandlerAdapter.handle(SimpleControllerHandlerAdapter.java:48)
    at org.springframework.web.servlet.DispatcherServlet.doDispatch(DispatcherServlet.java:923)
    at org.springframework.web.servlet.DispatcherServlet.doService(DispatcherServlet.java:852)
    at org.springframework.web.servlet.FrameworkServlet.processRequest(FrameworkServlet.java:882)
    at org.springframework.web.servlet.FrameworkServlet.doGet(FrameworkServlet.java:778)
    at javax.servlet.http.HttpServlet.service(HttpServlet.java:620)
    at javax.servlet.http.HttpServlet.service(HttpServlet.java:727)
    at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:303)
    at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:208)
    at org.geoserver.filters.ThreadLocalsCleanupFilter.doFilter(ThreadLocalsCleanupFilter.java:23)
    at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:241)
    at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:208)
    at org.geoserver.filters.SpringDelegatingFilter$Chain.doFilter(SpringDelegatingFilter.java:74)
    at org.geoserver.filters.SpringDelegatingFilter.doFilter(SpringDelegatingFilter.java:45)
    at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:241)
    at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:208)
    at org.geoserver.platform.AdvancedDispatchFilter.doFilter(AdvancedDispatchFilter.java:49)
    at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:241)
    at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:208)
    at org.vfny.geoserver.filters.SetCharacterEncodingFilter.doFilter(SetCharacterEncodingFilter.java:109)
    at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:241)
    at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:208)
    at org.springframework.security.web.FilterChainProxy$VirtualFilterChain.doFilter(FilterChainProxy.java:311)
    at org.geoserver.security.filter.GeoServerCompositeFilter$NestedFilterChain.doFilter(GeoServerCompositeFilter.java:68)
    at org.springframework.security.web.access.intercept.FilterSecurityInterceptor.invoke(FilterSecurityInterceptor.java:116)
    at org.springframework.security.web.access.intercept.FilterSecurityInterceptor.doFilter(FilterSecurityInterceptor.java:83)
    at org.geoserver.security.filter.GeoServerCompositeFilter$NestedFilterChain.doFilter(GeoServerCompositeFilter.java:72)
    at org.geoserver.security.filter.GeoServerCompositeFilter.doFilter(GeoServerCompositeFilter.java:91)
    at org.springframework.security.web.FilterChainProxy$VirtualFilterChain.doFilter(FilterChainProxy.java:323)
    at org.geoserver.security.filter.GeoServerCompositeFilter$NestedFilterChain.doFilter(GeoServerCompositeFilter.java:68)
    at org.springframework.security.web.access.ExceptionTranslationFilter.doFilter(ExceptionTranslationFilter.java:113)
    at org.geoserver.security.filter.GeoServerCompositeFilter$NestedFilterChain.doFilter(GeoServerCompositeFilter.java:72)
    at org.geoserver.security.filter.GeoServerCompositeFilter.doFilter(GeoServerCompositeFilter.java:91)
    at org.springframework.security.web.FilterChainProxy$VirtualFilterChain.doFilter(FilterChainProxy.java:323)
    at org.geoserver.security.filter.GeoServerAnonymousAuthenticationFilter.doFilter(GeoServerAnonymousAuthenticationFilter.java:53)
    at org.springframework.security.web.FilterChainProxy$VirtualFilterChain.doFilter(FilterChainProxy.java:323)
    at org.geoserver.security.filter.GeoServerCompositeFilter$NestedFilterChain.doFilter(GeoServerCompositeFilter.java:68)
    at org.springframework.security.web.authentication.www.BasicAuthenticationFilter.doFilter(BasicAuthenticationFilter.java:150)
    at org.geoserver.security.filter.GeoServerCompositeFilter$NestedFilterChain.doFilter(GeoServerCompositeFilter.java:72)
    at org.geoserver.security.filter.GeoServerCompositeFilter.doFilter(GeoServerCompositeFilter.java:91)
```

```

        at org.geoserver.security.filter.GeoServerBasicAuthenticationFilter.doFilter (GeoServerBasicAuthenticat
ionFilter.java:82)
        at org.springframework.security.web.FilterChainProxy$VirtualFilterChain.doFilter (FilterChainProxy.java
:323)
        at org.geoserver.security.filter.GeoServerCompositeFilter$NestedFilterChain.doFilter (GeoServerComposit
eFilter.java:68)
        at org.springframework.security.web.context.SecurityContextPersistenceFilter.doFilter (SecurityContextP
ersistenceFilter.java:87)
        at org.geoserver.security.filter.GeoServerCompositeFilter$NestedFilterChain.doFilter (GeoServerComposit
eFilter.java:72)
        at org.geoserver.security.filter.GeoServerCompositeFilter.doFilter (GeoServerCompositeFilter.java:91)
        at org.springframework.security.web.FilterChainProxy$VirtualFilterChain.doFilter (FilterChainProxy.java
:323)
        at org.springframework.security.web.FilterChainProxy.doFilter (FilterChainProxy.java:173)
        at org.geoserver.security.GeoServerSecurityFilterChainProxy.doFilter (GeoServerSecurityFilterChainProxy
.java:97)
        at org.springframework.web.filter.DelegatingFilterProxy.invokeDelegate (DelegatingFilterProxy.java:346)
        at org.springframework.web.filter.DelegatingFilterProxy.doFilter (DelegatingFilterProxy.java:259)
        at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter (ApplicationFilterChain.java:241)
        at org.apache.catalina.core.ApplicationFilterChain.doFilter (ApplicationFilterChain.java:208)
        at org.geoserver.filters.LoggingFilter.doFilter (LoggingFilter.java:71)
        at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter (ApplicationFilterChain.java:241)
        at org.apache.catalina.core.ApplicationFilterChain.doFilter (ApplicationFilterChain.java:208)
        at org.geoserver.filters.GZIPFilter.doFilter (GZIPFilter.java:41)
        at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter (ApplicationFilterChain.java:241)
        at org.apache.catalina.core.ApplicationFilterChain.doFilter (ApplicationFilterChain.java:208)
        at org.geoserver.filters.SessionDebugFilter.doFilter (SessionDebugFilter.java:46)
        at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter (ApplicationFilterChain.java:241)
        at org.apache.catalina.core.ApplicationFilterChain.doFilter (ApplicationFilterChain.java:208)
        at org.apache.catalina.core.StandardWrapperValve.invoke (StandardWrapperValve.java:220)
        at org.apache.catalina.core.StandardContextValve.invoke (StandardContextValve.java:122)
        at org.apache.catalina.authenticator.AuthenticatorBase.invoke (AuthenticatorBase.java:501)
        at org.apache.catalina.core.StandardHostValve.invoke (StandardHostValve.java:170)
        at org.apache.catalina.valves.ErrorReportValve.invoke (ErrorReportValve.java:98)
        at org.apache.catalina.valves.AccessLogValve.invoke (AccessLogValve.java:950)
        at org.apache.catalina.core.StandardEngineValve.invoke (StandardEngineValve.java:116)
        at org.apache.catalina.connector.CoyoteAdapter.service (CoyoteAdapter.java:408)
        at org.apache.coyote.http11.AbstractHttp11Processor.process (AbstractHttp11Processor.java:1040)
        at org.apache.coyote.AbstractProtocol$AbstractConnectionHandler.process (AbstractProtocol.java:607)
        at org.apache.tomcat.util.net.JIoEndpoint$SocketProcessor.run (JIoEndpoint.java:313)
        at java.util.concurrent.ThreadPoolExecutor.runWorker (ThreadPoolExecutor.java:1145)
        at java.util.concurrent.ThreadPoolExecutor$Worker.run (ThreadPoolExecutor.java:615)
        at java.lang.Thread.run (Thread.java:745)

```

#24 - Oct 25, 2016 10:22 AM - Emmanuel Blondel

Hi Andrea, thanks for this, indeed now we don't get any cross-origin exception on the client (the good news!). But instead, as you said, we had some issue with the featuretype name in geoserver, that i've fixed now (and sorry if it created confusion when doing your final test). The remote WFS can be queried now! I suppose you will proceed in prod? Many thanks for your support

PS: as said, the EEZ was called from another remote server (not D4science), that's why you always got the WFS working on it

#25 - Oct 25, 2016 10:58 AM - Francesco Mangiacrapa

- *Tracker changed from Support to Task*

Thanks @andrea.dellamico@isti.cnr.it for your support, I'm going to change this ticket as Task Ticket

#26 - Oct 25, 2016 01:11 PM - Andrea Dell'Amico

- *% Done changed from 80 to 100*

Emmanuel Blondel wrote:

Hi Andrea, thanks for this, indeed now we don't get any cross-origin exception on the client (the good news!). But instead, as you said, we had some issue with the featuretype name in geoserver, that i've fixed now (and sorry if it created confusion when doing your final test). The remote WFS can be queried now! I suppose you will proceed in prod? Many thanks for your support

Yes. The production geoservers have CORS enabled now.

PS: as said, the EEZ was called from another remote server (not D4science), that's why you always got the WFS working on it

Hm. But I saw queries to the geoserver when I used it, and each time I added/removed a layer...

#27 - Oct 25, 2016 02:34 PM - Emmanuel Blondel

I confirm it works as well on prod. Many thanks for your support @andrea.dellamico@isti.cnr.it , much appreciated!

#28 - Oct 25, 2016 03:43 PM - Andrea Dell'Amico

- *Status changed from Feedback to Closed*