

Geoserver GWC preseed scripts

July 4, 2011 / Gavin Jackson

geoserver

geospatial

gis

gwc

performance



GIS servers can pre-generate tiles to vastly improve WMS performance. Geoserver provides a handy web interface for interacting with the geoserver web cache (GWC), but sometimes it is handy to script this process (particularly when you are working with hundreds of layers). Geoserver 2.1 provides a REST API that allows you to trigger tile preseed jobs. Here are a couple of python scripts that I wrote that use this API to perform a purge and seed operation. Change the following config file to include your desired geoserver layers and zoom levels (I assume that you want 900913 png tiles, and two threads per layer - the scripts can easily be modified to change this however). Listing 1 seed_config.py:

```
#This config file contains options for the gwc preseeding scripts
geoserver_userpass = "admin:XXXXX"
geoserver_url = "http://GEOSERVER_URL"

#Zoom levels to create tiles for
zoom_start = "0"
zoom_stop = "10"

#Geoserver layers to perform preseeding operation on

layers =
["ALA:Rees_CAAB37009001Polygon", "ALA:Rees_CAAB37007002Polygon", "ALA:Rees_CAAB37007001Polygon", "ALA:Rees_CAAB37006001Polygon", "ALA:Rees_CAAB37010004Polygon", "ALA:Rees_CAAB37005005Polygon", "ALA:Rees_CAAB37008003Polygon", "ALA:Rees_CAAB37005002Polygon", "ALA:Rees_CAAB37011001Polygon", "ALA:Rees_CAAB37008001Polygon", "ALA:Rees_CAAB37005004Polygon", "ALA:Rees_CAAB37005001Polygon", "ALA:Rees_CAAB37012002Polygon", "ALA:Rees_CAAB37007003Polygon", "ALA:Rees_CAAB37010002Polygon", "ALA:Rees_CAAB37010003Polygon"]
```

Listing 2 purge.py:

```
#!/usr/bin/python

#This script removes tiles from the GWC cache
#Ensure that seed_config.py has been configured before use

import os
import seed_config

for layer in seed_config.layers:
    curlstring="curl -u " + seed_config.geoserver_userpass + " -XPOST -H 'Content-type: text/xml' -d '"
    + layer + "900913" + seed_config.zoom_start + "" + seed_config.zoom_stop + "image/pngtruncate2' " +
    seed_config.geoserver_url + "/geoserver/gwc/rest/seed/" + layer + ".xml"
    os.system(curlstring)
    print "truncated " + layer
```

Listing 3 seed.py:

```
#!/usr/bin/python

#This script is used to preseed gwc layers
#Ensure that seed_config.py has been configured before use

import os
import seed_config

for layer in seed_config.layers:
    curlstring="curl -u " + seed_config.geoserver_userpass + " -XPOST -H 'Content-type: text/xml' -d '"
    + layer + "900913" + seed_config.zoom_start+ "" + seed_config.zoom_stop + "image/pngseed2' " +
    seed_config.geoserver_url + "/geoserver/gwc/rest/seed/" + layer + ".xml"
    os.system(curlstring)
    print "seeded " + layer
```

After you initiate the preseed jobs, you can jump back into the GWC tile creation page to get an idea of the status.

List of currently executing tasks:

Id	Layer	Type	Estimated # of tiles	Tiles completed	Time elapsed	Time remaining	Threads	Kill All Threads
92	ALA:Rees_CAAB37008001Polygon	SEED	18,781	7,920	21 minutes 45 s	4 minutes 2 s	(Thread 1 of 2)	Kill Thread
93	ALA:Rees_CAAB37008001Polygon	SEED	18,781	7,936	21 minutes 44 s	3 minutes 59 s	(Thread 2 of 2)	Kill Thread
96	ALA:Rees_CAAB37005001Polygon	SEED	21,213	5,344	14 minutes 40 s	14 minutes 27 s	(Thread 1 of 2)	Kill Thread
97	ALA:Rees_CAAB37005001Polygon	SEED	21,213	5,296	14 minutes 41 s	14 minutes 43 s	(Thread 2 of 2)	Kill Thread
98	ALA:Rees_CAAB37012002Polygon	SEED	15,229	4,288	11 minutes 23 s	8 minutes 50 s	(Thread 1 of 2)	Kill Thread
99	ALA:Rees_CAAB37012002Polygon	SEED	15,229	4,256	11 minutes 23 s	8 minutes 59 s	(Thread 2 of 2)	Kill Thread
102	ALA:Rees_CAAB37010002Polygon	SEED	16,333	3,872	10 minutes 33 s	11 minutes 42 s	(Thread 1 of 2)	Kill Thread
103	ALA:Rees_CAAB37010002Polygon	SEED	16,333	3,840	10 minutes 33 s	11 minutes 53 s	(Thread 2 of 2)	Kill Thread
104	ALA:Rees_CAAB37010003Polygon	SEED	17,389	2,976	8 minutes 30 s	16 minutes 20 s	(Thread 1 of 2)	Kill Thread
105	ALA:Rees_CAAB37010003Polygon	SEED	17,389	3,008	8 minutes 30 s	16 minutes 4 s	(Thread 2 of 2)	Kill Thread

All generated tiles end up in your {geoserver_data_dir}/gwc/ folder. Update: The following solution for.net developers running an older version of Geoserver has been provided by Arnaud Buisson-Delandre below:

I finally managed to achieve some kind of preseed on 2.03 with a webservice in c#.

The tricks are : don't use xml but plain html webrequest and encode the post data. Here are the "harsh" hard coded code ;) just in case...

[WebMethod]

```
public void reseed_Postgis_tbv_p2000_cad2010()
{
    ASCIIEncoding encoding = new ASCIIEncoding();

    string postData =
"threadCount=12&type=reseed&gridSetId=EPSG%3A900913&format=image%2Fpng&zoomStart=00&zoomStop=16
&minX=&minY;&maxX=&maxY=";

    byte[] data = encoding.GetBytes(postData);

    // Prepare web request...
    HttpWebRequest myRequest =
(HttpWebRequest)WebRequest.Create("http://SERVER:8081/geoserver/gwc/rest/seed/Postgis:tbv_p2000_cad2
010");

    myRequest.Method = "POST";

    myRequest.ContentType = "Content-Type=application/x-www-form-urlencoded";

    myRequest.Headers.Add("Authorization", "Basic " +
Convert.ToBase64String(Encoding.ASCII.GetBytes("admin:PASSWORD")));

    myRequest.ContentLength = data.Length;

    Stream newStream = myRequest.GetRequestStream();

    // Send the data.

    newStream.Write(data, 0, data.Length);

    HttpWebResponse WebResp = (HttpWebResponse)myRequest.GetResponse();
    newStream.Close();
}
```

I just had to put my asmx file on a IIS server and automatically call it from a blank asp.net page

After that I put some "explorer http://server/myasp.asp" on a task scheduler to execute daily

Cheers,

Arnaud