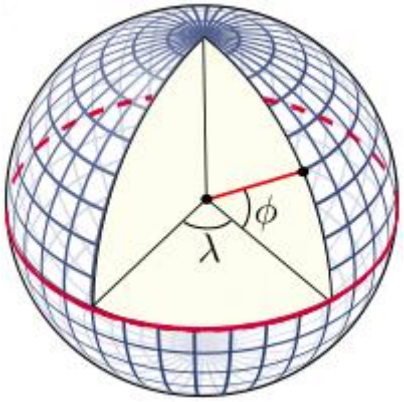
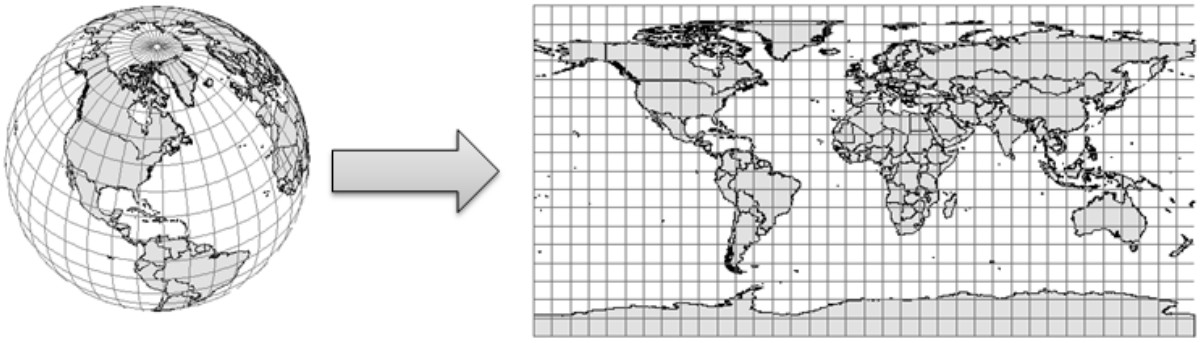
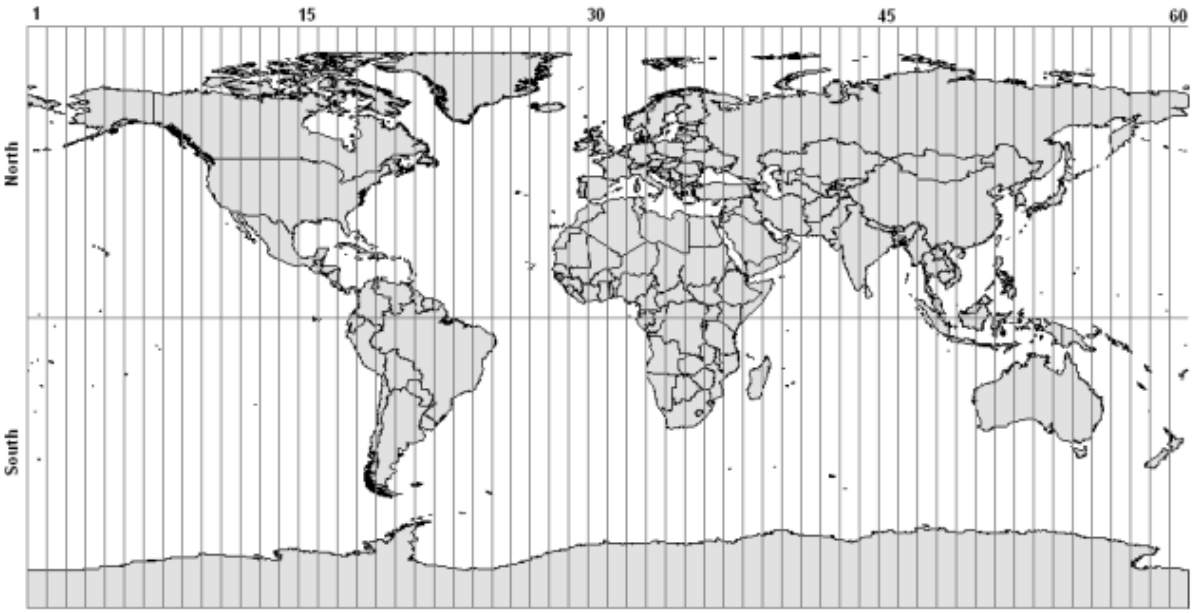
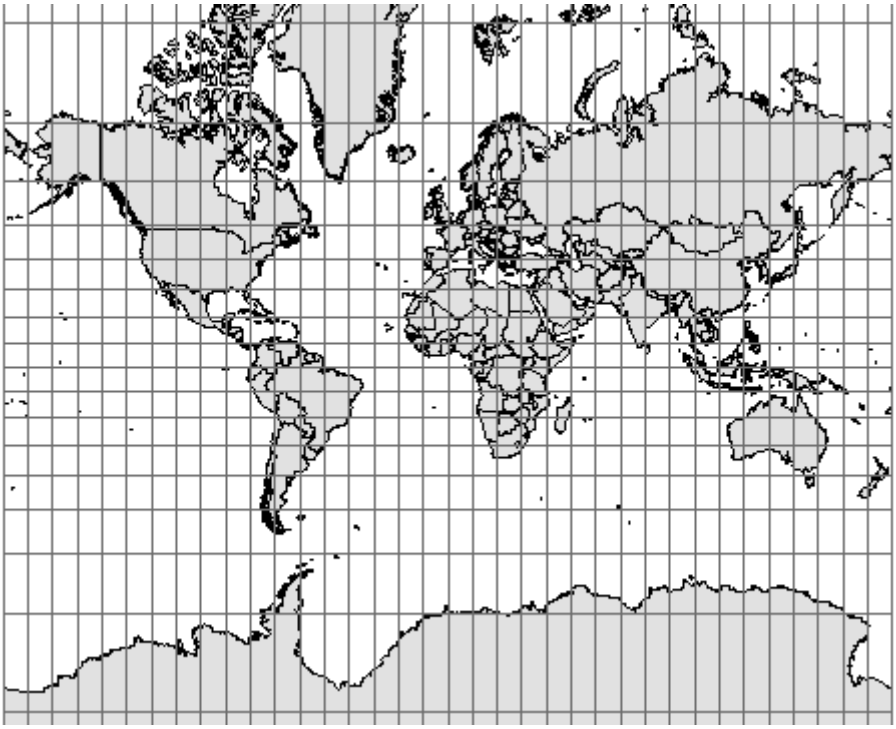
Chapter 1: GIS Fundamentals









query by filter | retrieve by code

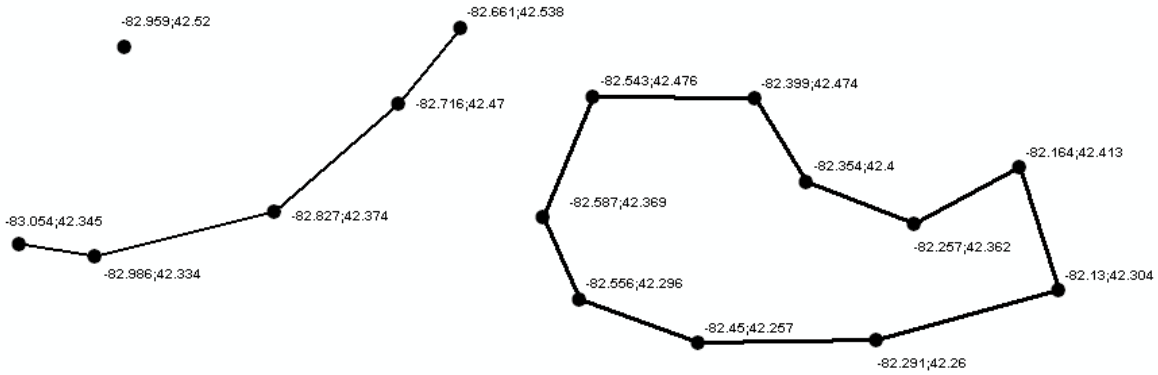
Name:

Type: Click to choose

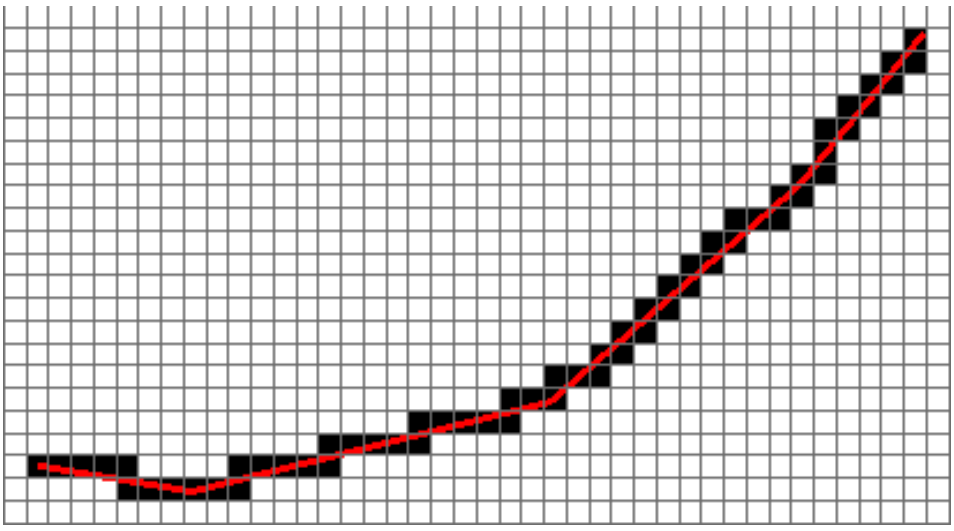
Area: Name of the area of use

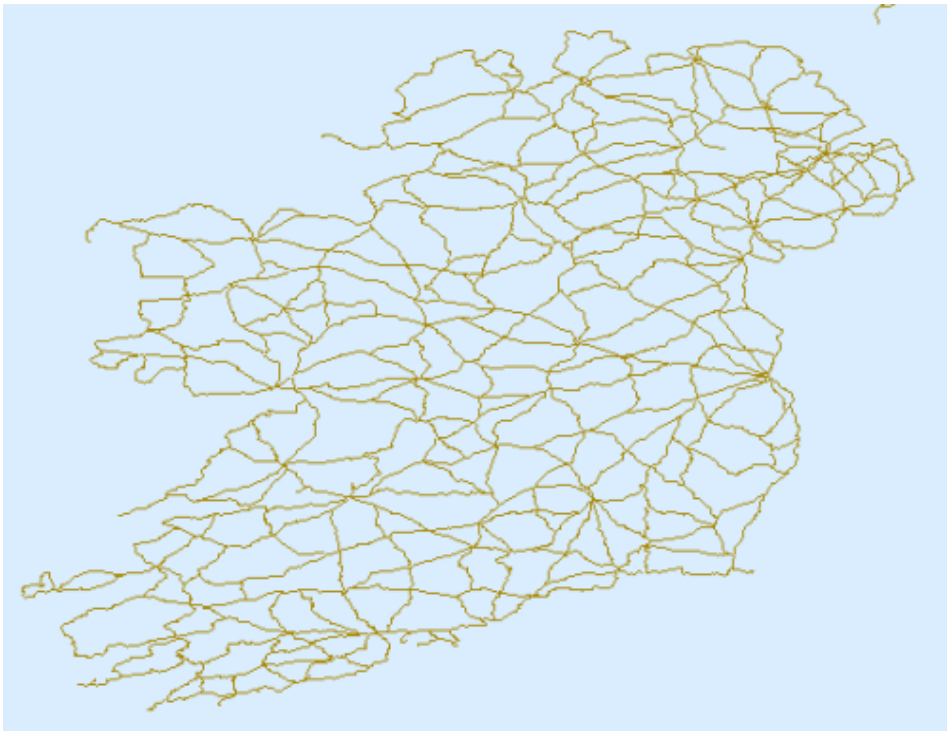
BBox: (dec. deg.) North Latitude West Longitude South Latitude East Longitude

Search Reset ?

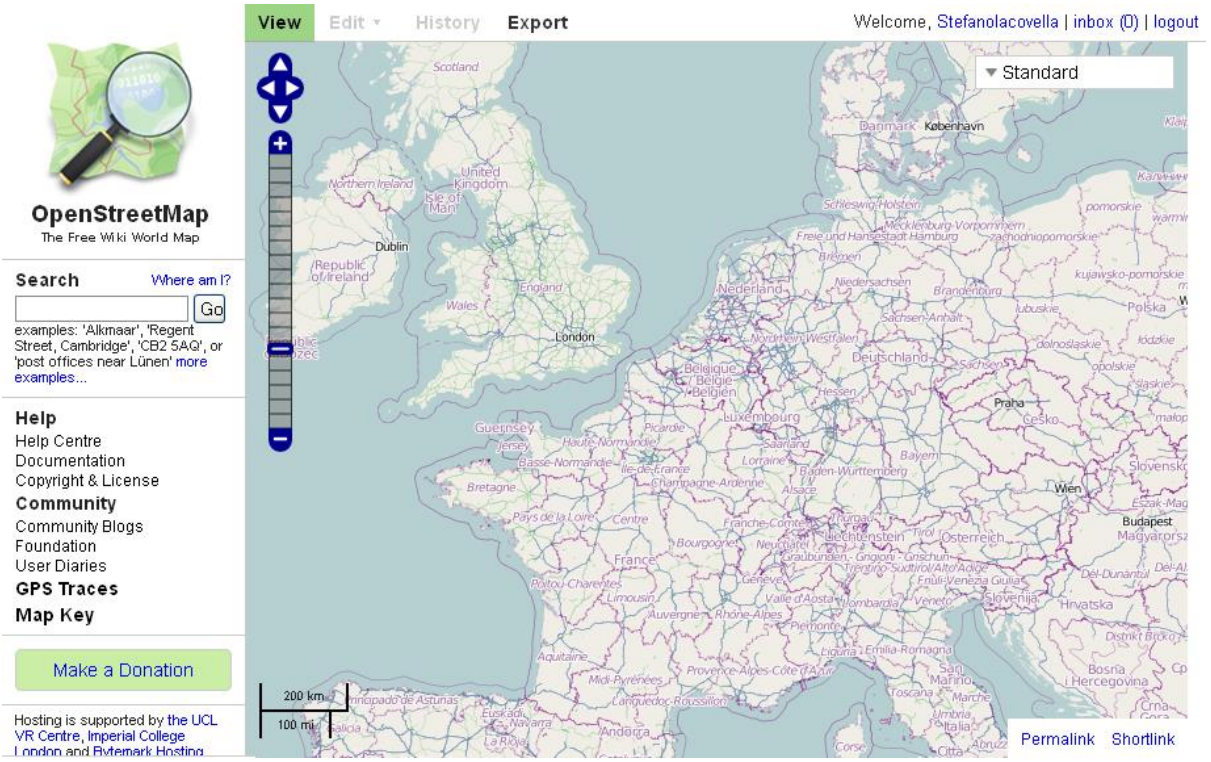


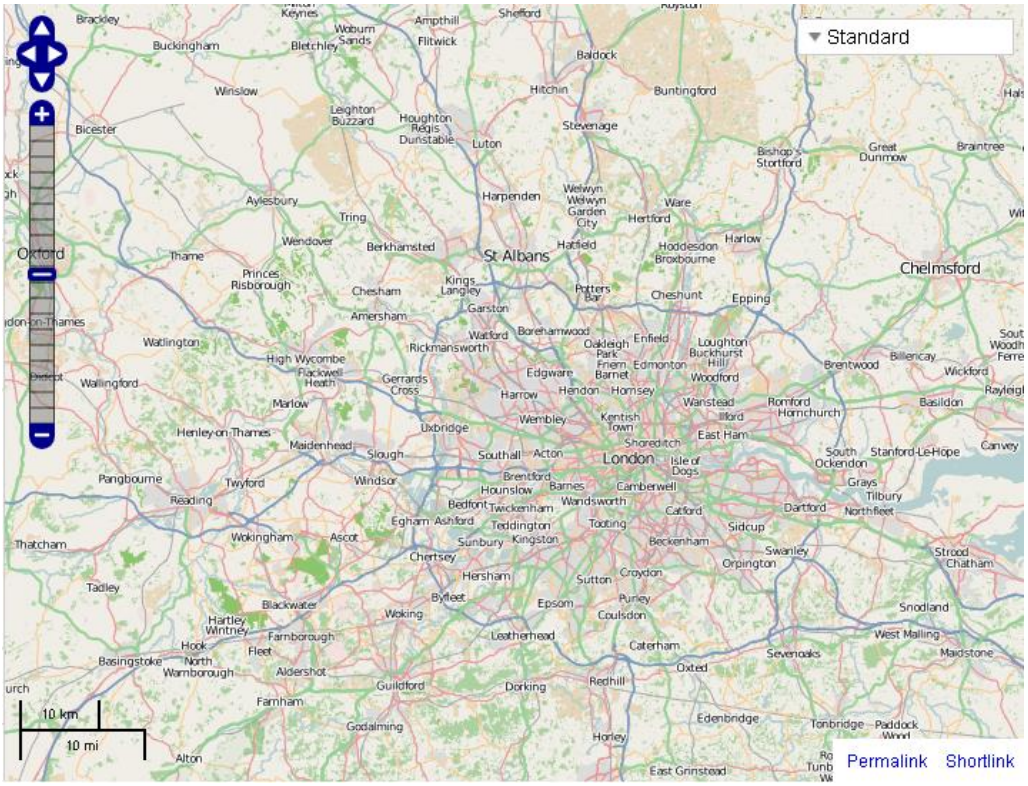
80	74	62	45	45	34	39	56
80	74	74	62	45	34	39	56
74	74	62	62	45	34	39	39
62	62	45	45	34	34	34	39
45	45	45	34	34	30	34	39





Londonderry
ULSTER
A26
A5
N15
Belfast
A5
N16
A4
Sligo
A1
A2
N2
N17
CONNAUGHT
N5
N4
M1
IRELAND
N59
M4
Dublin
Galway
N6
LEINSTER
N18
N7
N11
Kilkee
N8
Limerick
N24
M8
MUNSTER
Waterford
N25
R513
N22
Cork


View
Edit
History
Export
Welcome, Stefanolacovella | inbox (0) | logout
OpenStreetMap
The Free Wiki World Map
Search
Where am I?
Go
examples: 'Alkmaar', 'Regent Street, Cambridge', 'CB2 5AQ', or 'post offices near Lünen' more examples...
Help
Help Centre
Documentation
Copyright & License
Community
Community Blogs
Foundation
User Diaries
GPS Traces
Map Key
Make a Donation
Hosting is supported by the UCL VR Centre, Imperial College London and Bytemark Hosting
Standard
200 km
100 mi
Permalink
Shortlink


Standard
10 km
10 mi
Permalink
Shortlink

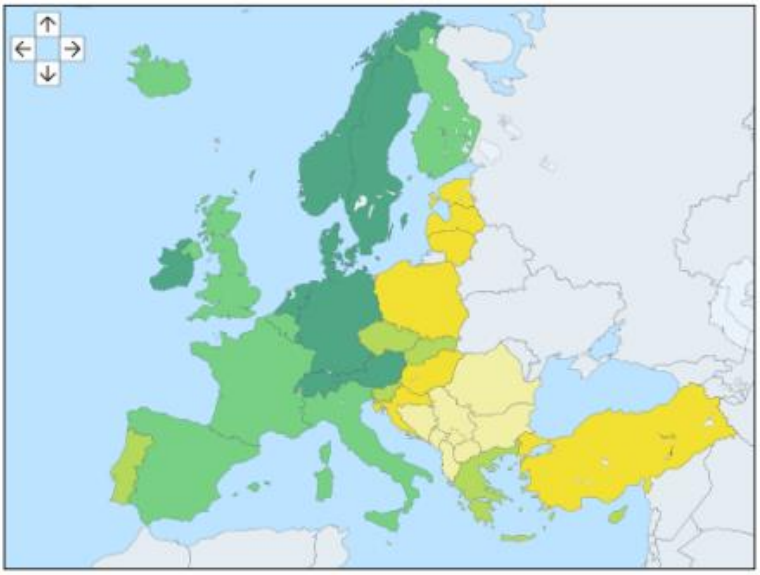
View
Edit
History
Export
Welcome, Stefanolacovella | inbox (0) | logout
Search Results
Close
Results from OpenStreetMap Nominatim
Secondary Road Piccadilly Circus, St. James's, City of Westminster, Greater London, London, England, SW1, United Kingdom
Primary Road Piccadilly Circus, St. James's, City of Westminster, Greater London, London, England, WC2H 8DP, United Kingdom
Bus Stop Piccadilly Circus, Regent Street, St. James's, City of Westminster, Greater London, London, England, W1B 5NB, United Kingdom
Subway Entrance Piccadilly Circus, Picadilly Circus, St. James's, City of Westminster, Greater London, London, England, W1D 7ES, United Kingdom
Bus Stop Piccadilly Circus, Piccadilly, St. James's, City of Westminster, Greater London, London, England, W1B 5AF, United Kingdom
Bus Stop Piccadilly Circus, Man in moon passage, St. James's, City of Westminster, Greater London, London, England, W1B 5AF, United Kingdom
Standard
Queen's Head
Sherwood Street
Glasshouse Street
Air Street
Shaftesbury Avenue
GAP
Regent Street
Piccadilly Circus
Coventry Str
Picadilly Circus
Shaftesbury Memorial
Starbucks Coffee
Meridian
Japan Centre Food Shop
Pizza Hut
Lillywhites
Criterion
Eagle Place
Getti
Caffe Nero
20 m
100 ft
Permalink
Shortlink

GDP per capita in PPS

Index (EU-27=100)

Code: tec00114

Data from 1st of June 2012 For most recent GDP data, consult dataset more



Open toolbox /web/empty.jsp

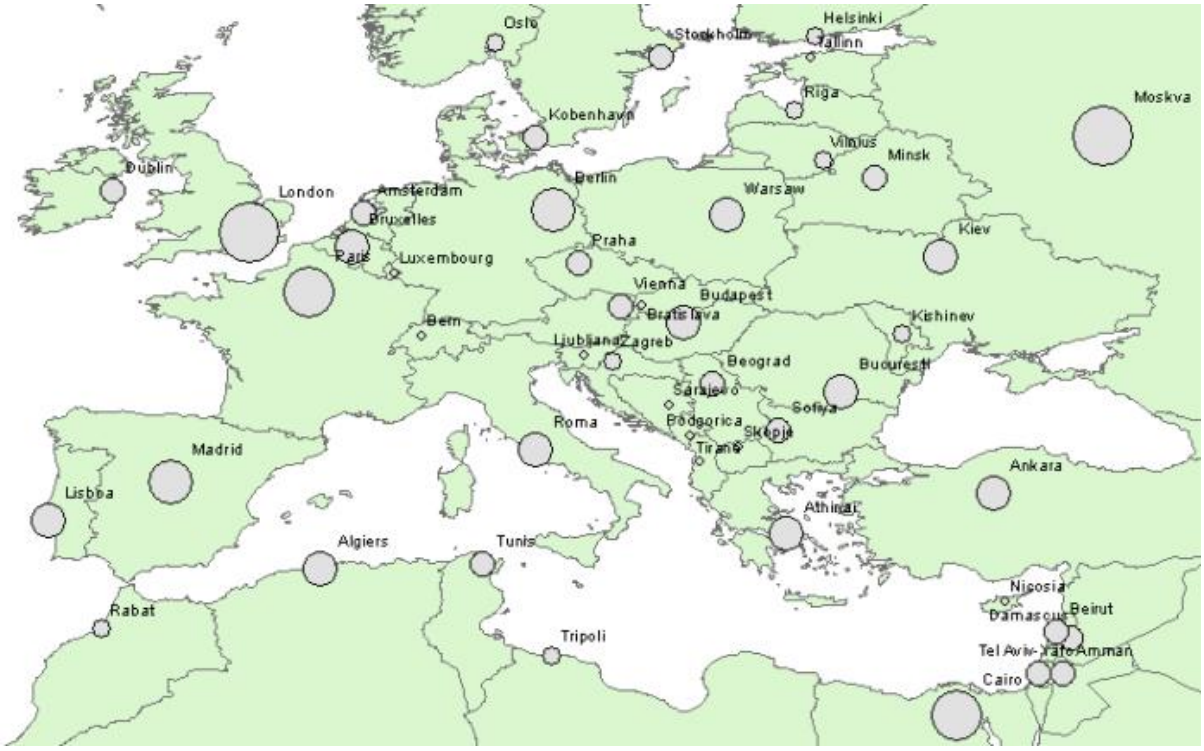
Legend	Cases
29.0 - 49.0	7
49.0 - 67.0	7
67.0 - 92.0	7
92.0 - 118.0	7
118.0 - 274.0	9
Data not available	0

Minimum value:29.0
Maximum value:274.0
eu15: 110.0

:=not available
b=break in series
p=provisional

Click on map to:
Recenter Zoom In/Recenter Zoom Out/Recenter

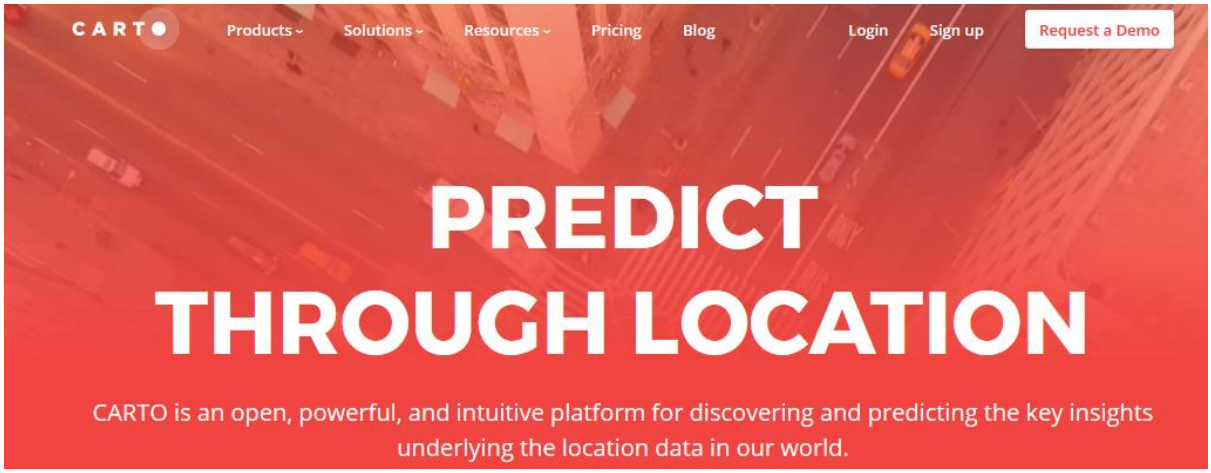
© EuroGeographics Association for the administrative boundaries

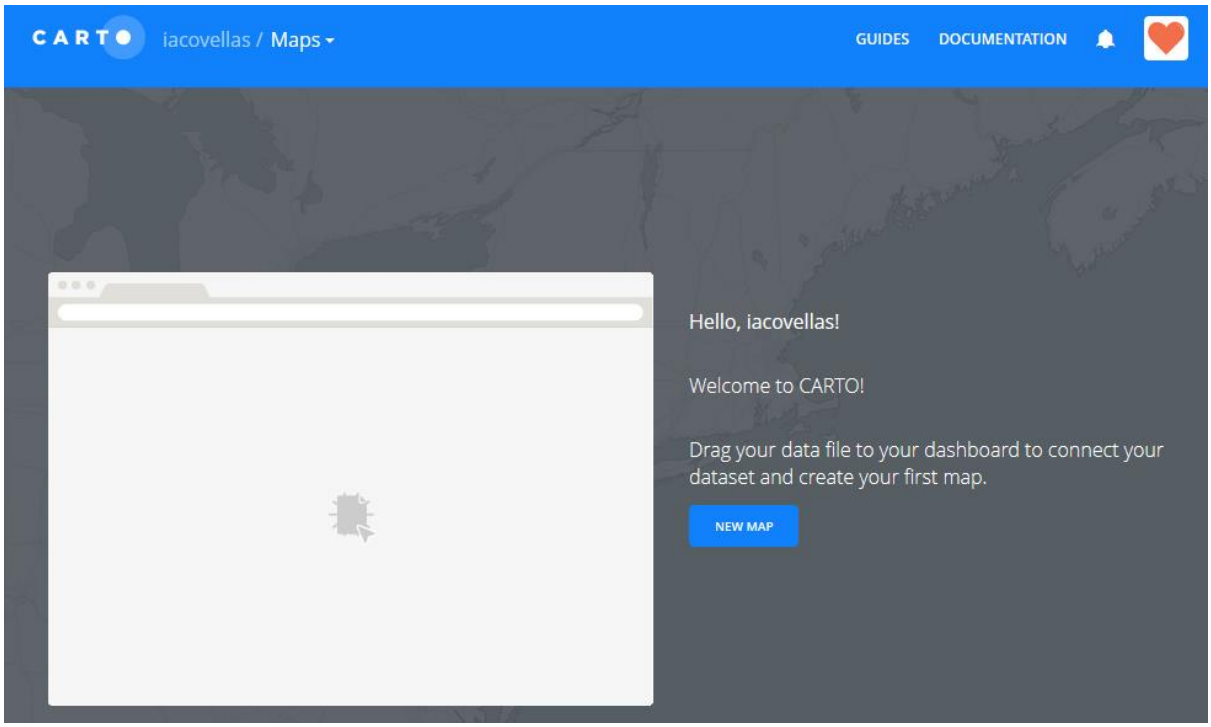


GDP ranking (GDP)

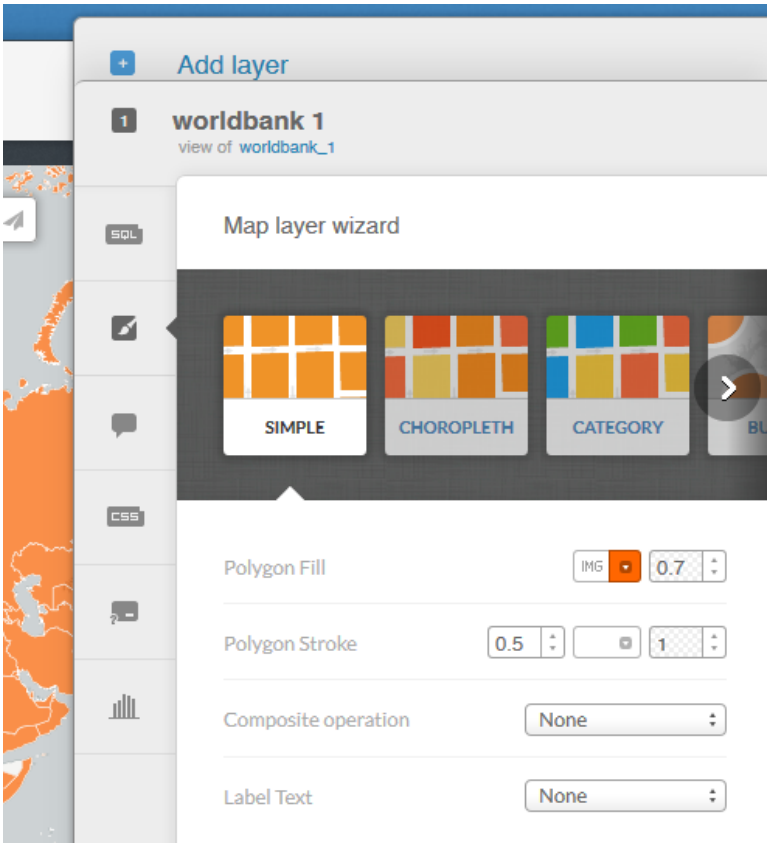
Gross domestic product ranking table.

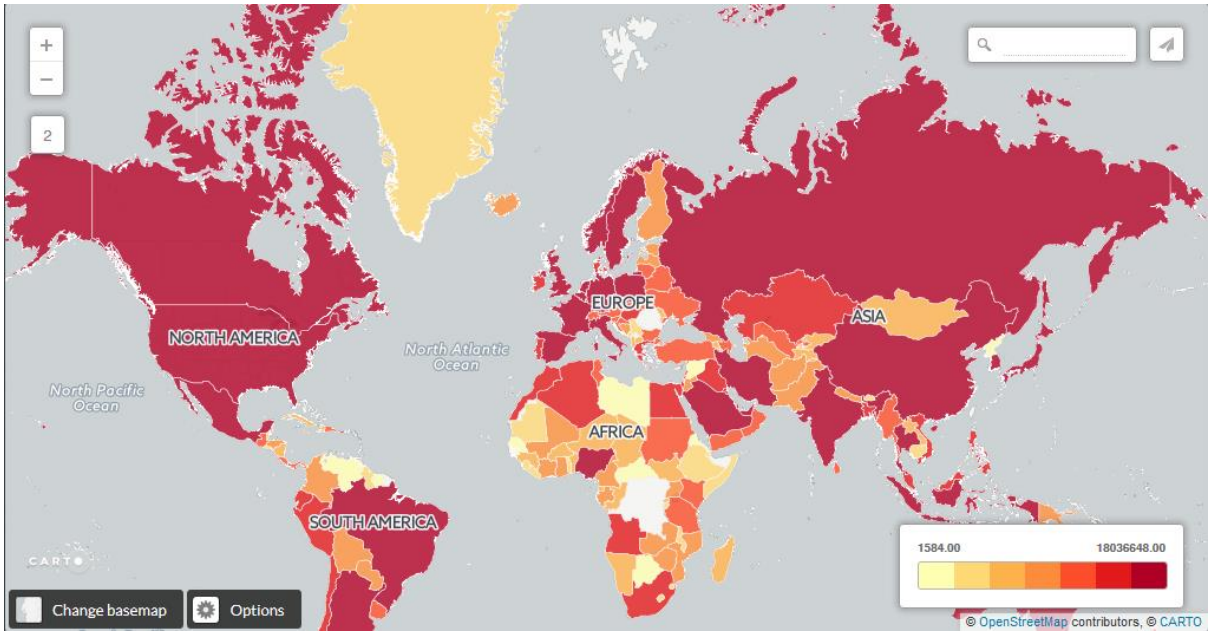
Type: Time series | **Periodicity:** Annual | **Last Updated:** 01-Feb-2017 See More +



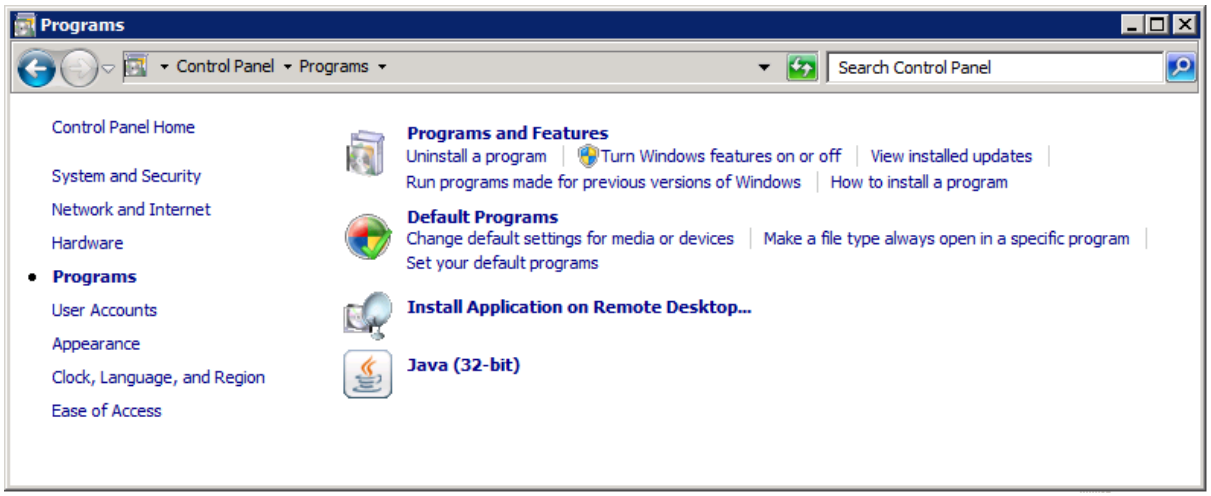


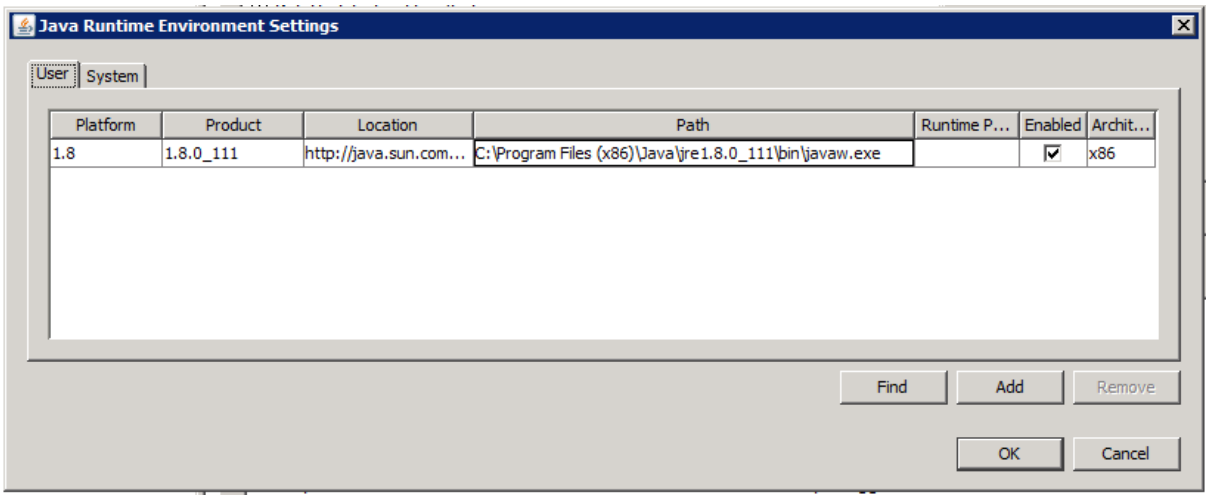
Untitled Map
Edit metadata...
DATA VIEW
MAP VIEW
Edit
PUBLISH
Add Element
Preview Map
Export Image
EUROPE
ASIA
NORTH AMERICA
North Atlantic Ocean
North Pacific Ocean
AFRICA
SOUTH AMERICA
AUSTRALIA
Change basemap
Options
© OpenStreetMap contributors, © CARTO


Add layer
worldbank 1
view of worldbank_1
Map layer wizard
SIMPLE
CHOROPLETH
CATEGORY
Polygon Fill
IMG
0.7
Polygon Stroke
0.5
1
Composite operation
None
Label Text
None


+
−
2
NORTH AMERICA
EUROPE
ASIA
AFRICA
SOUTH AMERICA
North Atlantic Ocean
North Pacific Ocean
1584.00
18036648.00
Change basemap
Options
© OpenStreetMap contributors, © CARTO

Chapter 2: Getting Started with GeoServer





Overview | **Downloads** | Documentation | Community | Technologies | Training

Java SE Runtime Environment 8 Downloads

Do you want to run Java™ programs, or do you want to develop Java programs? If you want to run Java programs, but not develop them, download the Java Runtime Environment, or JRE™.

If you want to develop applications for Java, download the Java Development Kit, or JDK™. The JDK includes the JRE, so you do not have to download both separately.

JRE 8u121 Checksum

Java SE Runtime Environment 8u121

You must accept the Oracle Binary Code License Agreement for Java SE to download this software.

○ **Accept License Agreement** ◉ **Decline License Agreement**

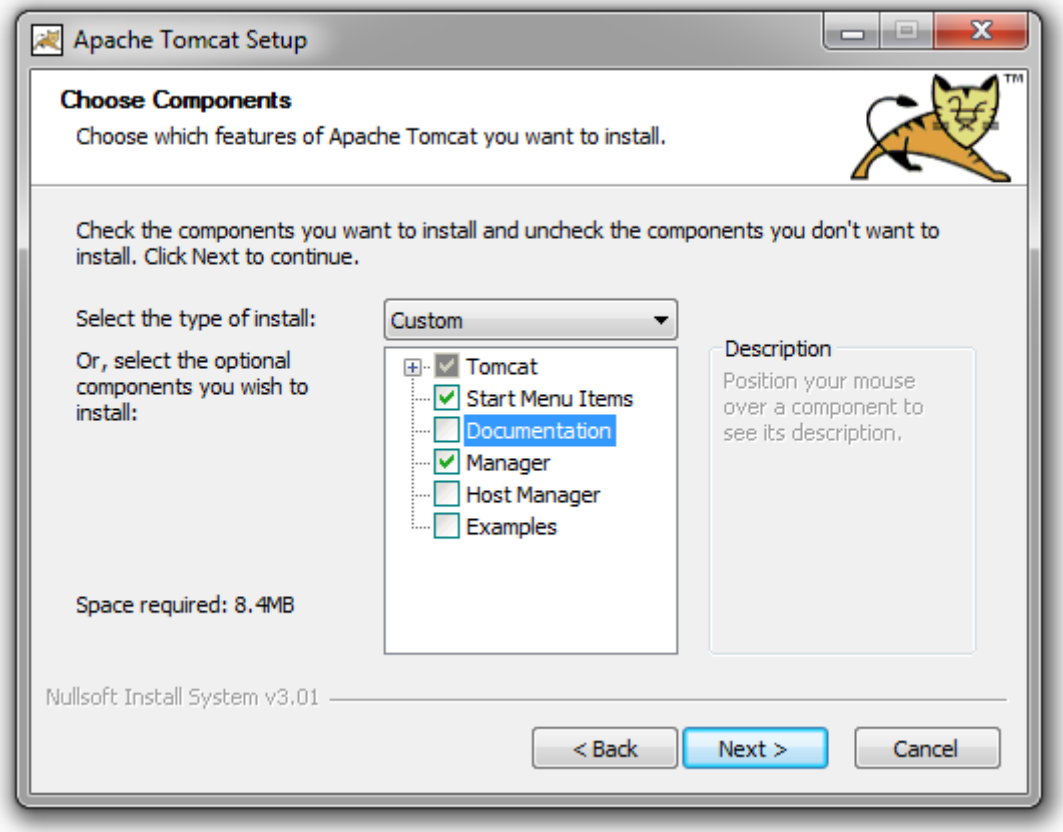
Product / File Description	File Size	Download
Linux x86	56.92 MB	jre-8u121-linux-i586.rpm
Linux x86	72.76 MB	jre-8u121-linux-i586.tar.gz
Linux x64	54.39 MB	jre-8u121-linux-x64.rpm
Linux x64	70.26 MB	jre-8u121-linux-x64.tar.gz
Mac OS X	62.28 MB	jre-8u121-macosx-x64.dmg
Mac OS X	53.91 MB	jre-8u121-macosx-x64.tar.gz
Solaris SPARC 64-bit	52.05 MB	jre-8u121-solaris-sparcv9.tar.gz
Solaris x64	49.9 MB	jre-8u121-solaris-x64.tar.gz
Windows x86 Online	0.7 MB	jre-8u121-windows-i586-iftw.exe
Windows x86 Offline	53.81 MB	jre-8u121-windows-i586.exe
Windows x86	59.17 MB	jre-8u121-windows-i586.tar.gz
Windows x64 Offline	61.18 MB	jre-8u121-windows-x64.exe
Windows x64	62.66 MB	jre-8u121-windows-x64.tar.gz

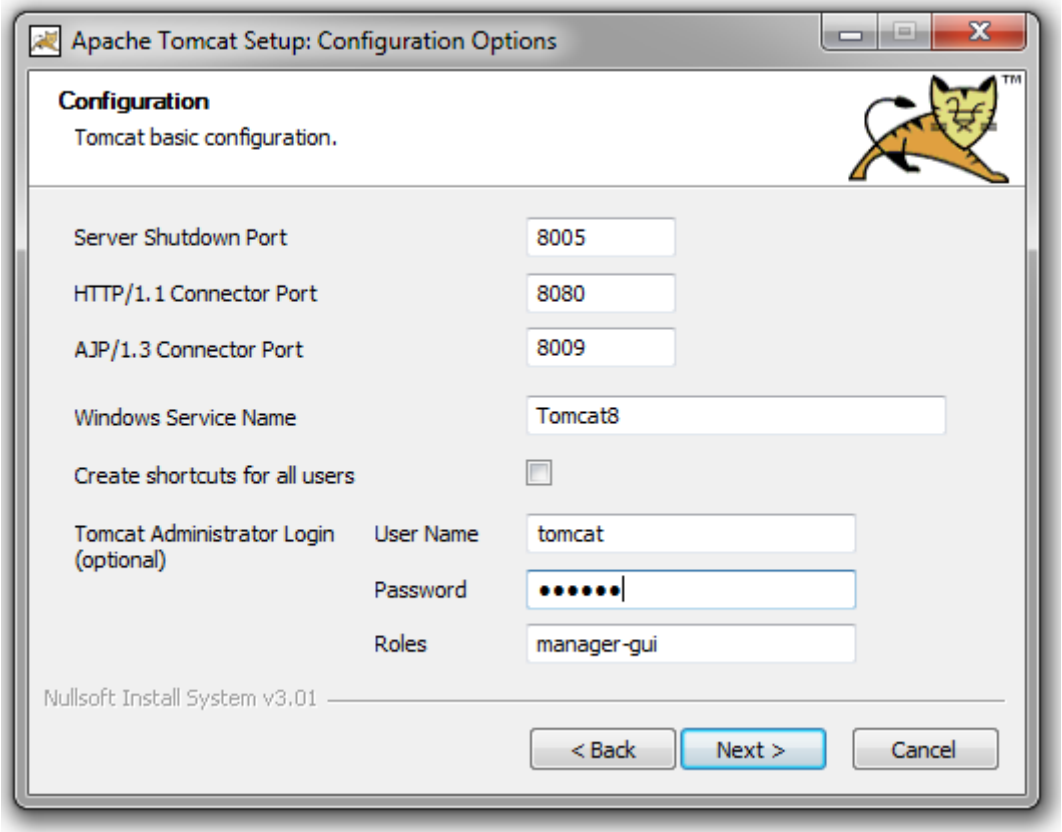
8.5.13

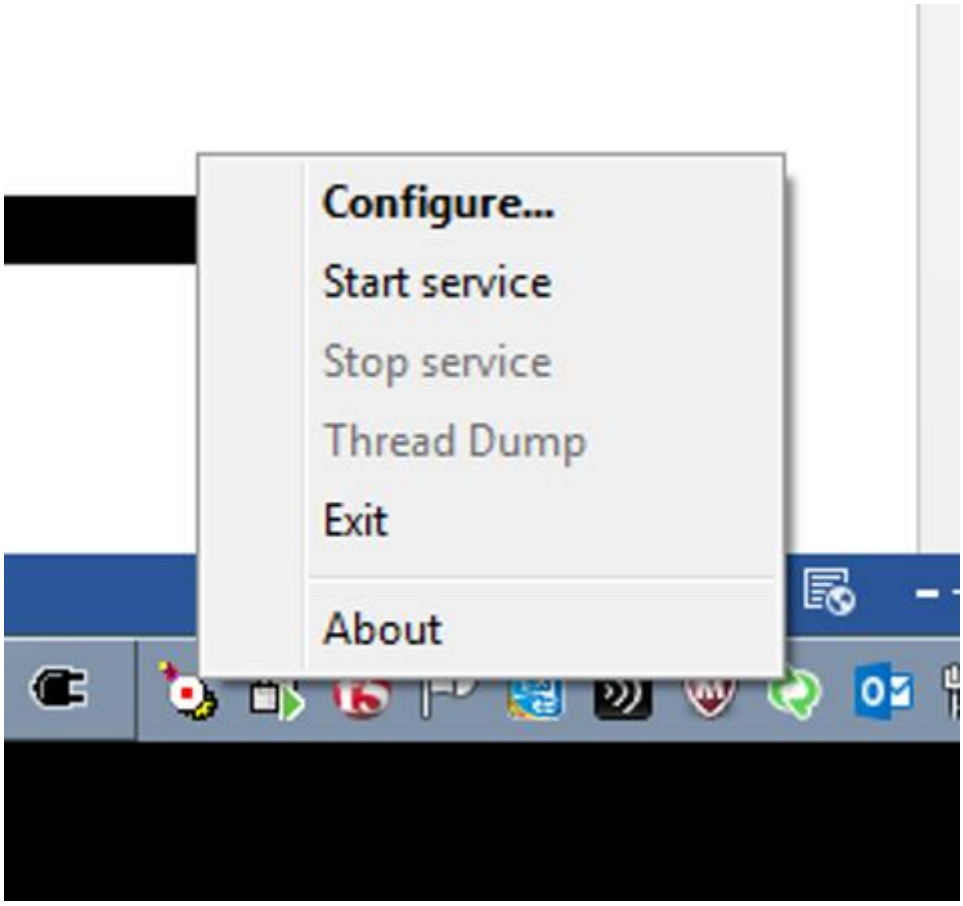
Please see the README file for packaging information. It explains what every distribution contains.

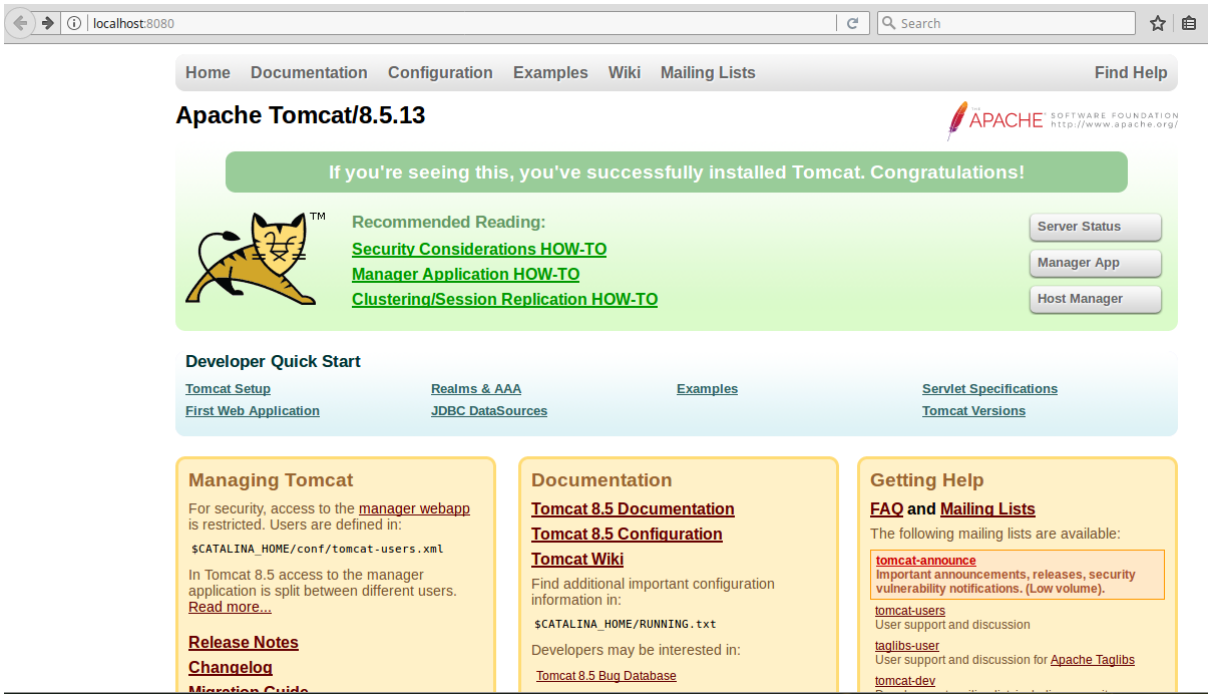
Binary Distributions

- Core:
  - zip (pgp, md5, sha1)
  - tar.gz (pgp, md5, sha1)
  - 32-bit Windows zip (pgp, md5, sha1)
  - 64-bit Windows zip (pgp, md5, sha1)
  - 32-bit/64-bit Windows Service Installer (pgp, md5, sha1)


Apache Tomcat Setup
Choose Components
Choose which features of Apache Tomcat you want to install.
Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.
Select the type of install:
Custom
Or, select the optional components you wish to install:
Tomcat
Start Menu Items
Documentation
Manager
Host Manager
Examples
Description
Position your mouse over a component to see its description.
Space required: 8.4MB
Nullsoft Install System v3.01
< Back
Next >
Cancel


Apache Tomcat Setup: Configuration Options
Configuration
Tomcat basic configuration.
Server Shutdown Port
8005
HTTP/1.1 Connector Port
8080
AJP/1.3 Connector Port
8009
Windows Service Name
Tomcat8
Create shortcuts for all users
Tomcat Administrator Login (optional)
User Name
tomcat
Password
Roles
manager-gui
Nullsoft Install System v3.01
< Back
Next >
Cancel


Configure...
Start service
Stop service
Thread Dump
Exit
About


localhost:8080
Search
Home
Documentation
Configuration
Examples
Wiki
Mailing Lists
Find Help
Apache Tomcat/8.5.13
APACHE SOFTWARE FOUNDATION http://www.apache.org/
If you're seeing this, you've successfully installed Tomcat. Congratulations!
Recommended Reading:
Security Considerations HOW-TO
Manager Application HOW-TO
Clustering/Session Replication HOW-TO
Server Status
Manager App
Host Manager
Developer Quick Start
Tomcat Setup
First Web Application
Realms & AAA
JDBC DataSources
Examples
Servlet Specifications
Tomcat Versions
Managing Tomcat
For security, access to the manager webapp is restricted. Users are defined in:
$CATALINA_HOME/conf/tomcat-users.xml
In Tomcat 8.5 access to the manager application is split between different users.
Read more...
Release Notes
Changelog
Documentation
Tomcat 8.5 Documentation
Tomcat 8.5 Configuration
Tomcat Wiki
Find additional important configuration information in:
$CATALINA_HOME/RUNNING.txt
Developers may be interested in:
Tomcat 8.5 Bug Database
Getting Help
FAQ and Mailing Lists
The following mailing lists are available:
tomcat-announce
Important announcements, releases, security vulnerability notifications. (Low volume).
tomcat-users
User support and discussion
taglibs-user
User support and discussion for Apache Taglibs
tomcat-dev

Choose a version of GeoServer to download.

Production | Development | Archived

Stable GeoServer 2.11.0

The recommended release of GeoServer, tested and supported by the community.

GeoServer 2.10 releases:
2.10.2 2.10.1 2.10.0
2.10-RC1 2.10-beta 2.10-M0

Nightly builds for the 2.11.x series can be found **here**.

Maintenance GeoServer 2.10.2

Long term support, so you have time to upgrade.

GeoServer 2.9 releases:
2.9.4 2.9.3 2.9.2 2.9.1 2.9.0 2.9-RC1
2.9-beta2 2.9-beta 2.9-M0

Nightly builds for the 2.10.x series can be found **here**.

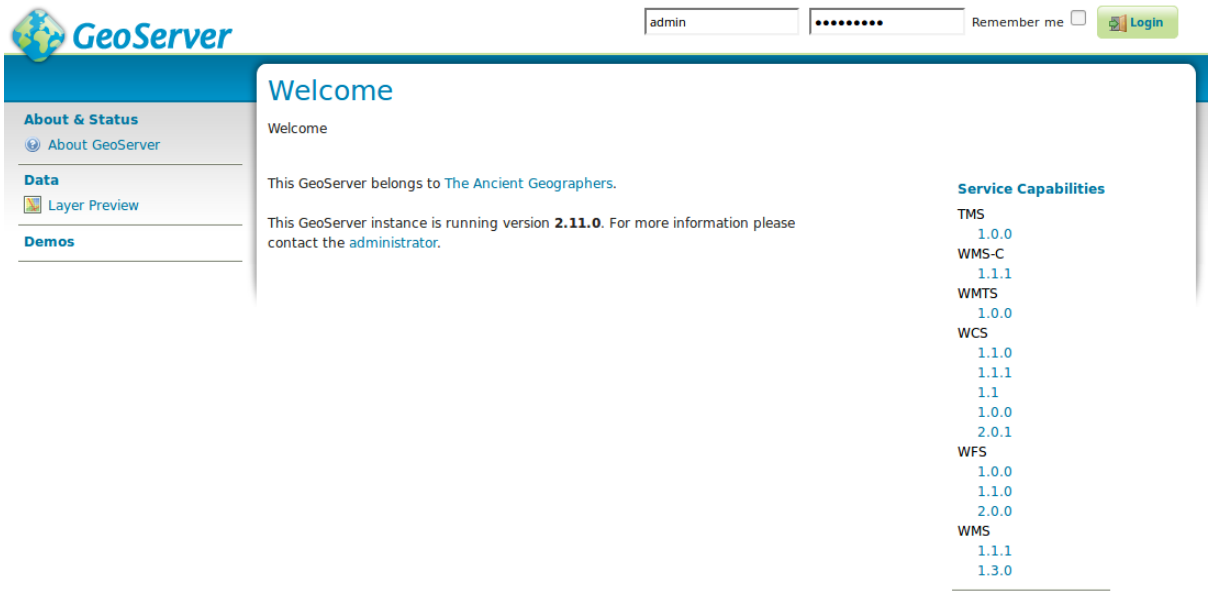
Development

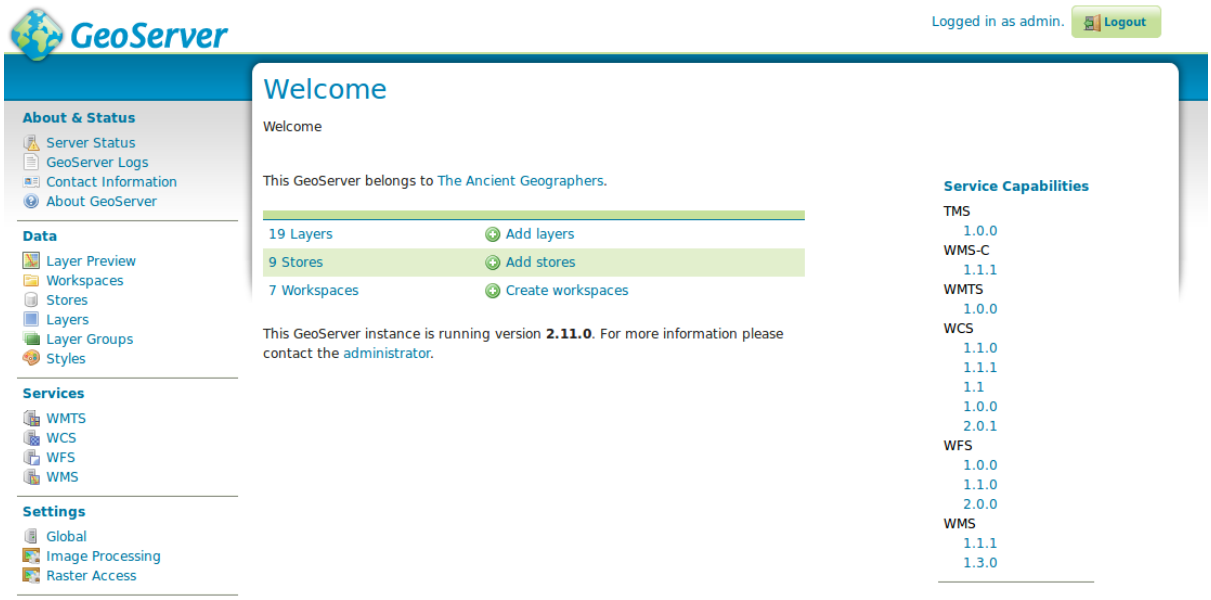
GitHub GeoServer master Development

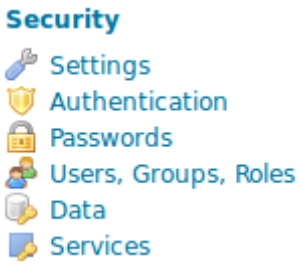
Watch this space for beta releases!

If you are working closely with our development team (on the user-list or commercial support) you may be asked to test a nightly build using one of the links below.

Nightly builds for the master branch can be found **here**.


GeoServer
admin
Remember me
Login
Welcome
About & Status
About GeoServer
Data
Layer Preview
Demos
Welcome
This GeoServer belongs to The Ancient Geographers.
This GeoServer instance is running version 2.11.0. For more information please contact the administrator.
Service Capabilities
TMS
1.0.0
WMS-C
1.1.1
WMTS
1.0.0
WCS
1.1.0
1.1.1
1.1
1.0.0
2.0.1
WFS
1.0.0
1.1.0
2.0.0
WMS
1.1.1
1.3.0


GeoServer
Logged in as admin.
Logout
Welcome
About & Status
Server Status
GeoServer Logs
Contact Information
About GeoServer
Data
Layer Preview
Workspaces
Stores
Layers
Layer Groups
Styles
Services
WMTS
WCS
WFS
WMS
Settings
Global
Image Processing
Raster Access
Welcome
This GeoServer belongs to The Ancient Geographers.
19 Layers
Add layers
9 Stores
Add stores
7 Workspaces
Create workspaces
This GeoServer instance is running version 2.11.0. For more information please contact the administrator.
Service Capabilities
TMS
1.0.0
WMS-C
1.1.1
WMTS
1.0.0
WCS
1.1.0
1.1.1
1.1
1.0.0
2.0.1
WFS
1.0.0
1.1.0
2.0.0
WMS
1.1.1
1.3.0


Security
Settings
Authentication
Passwords
Users, Groups, Roles
Data
Services

Passwords

Password settings

Active master password provider default Change password

Change Master Password

Change the GeoServer master password

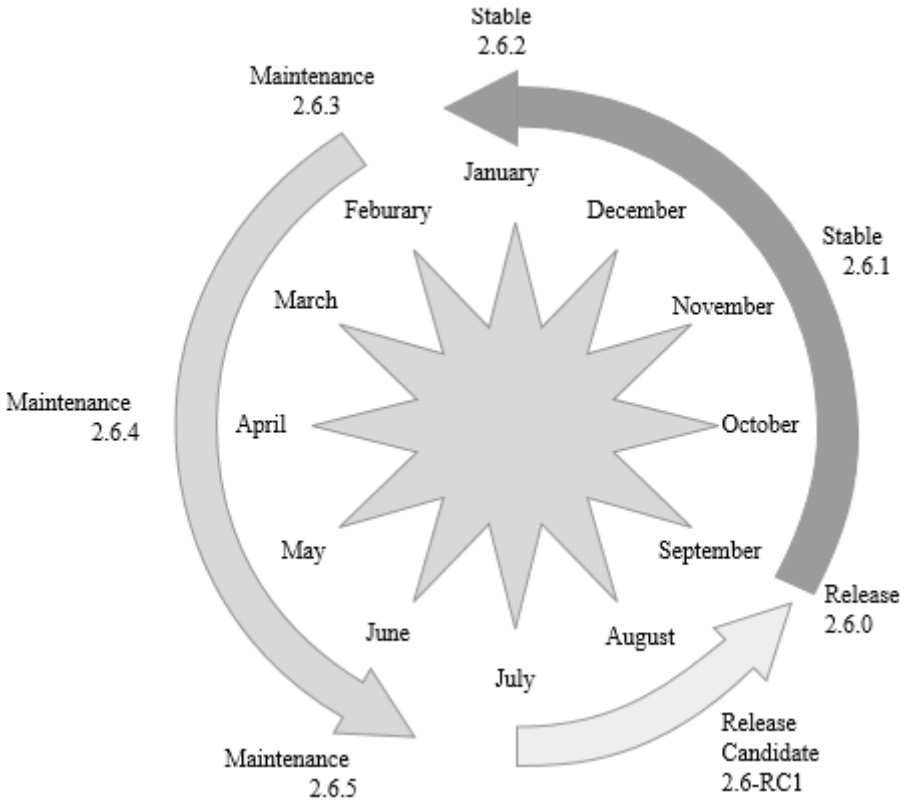
Master password provider
default

Current password
••••••••••

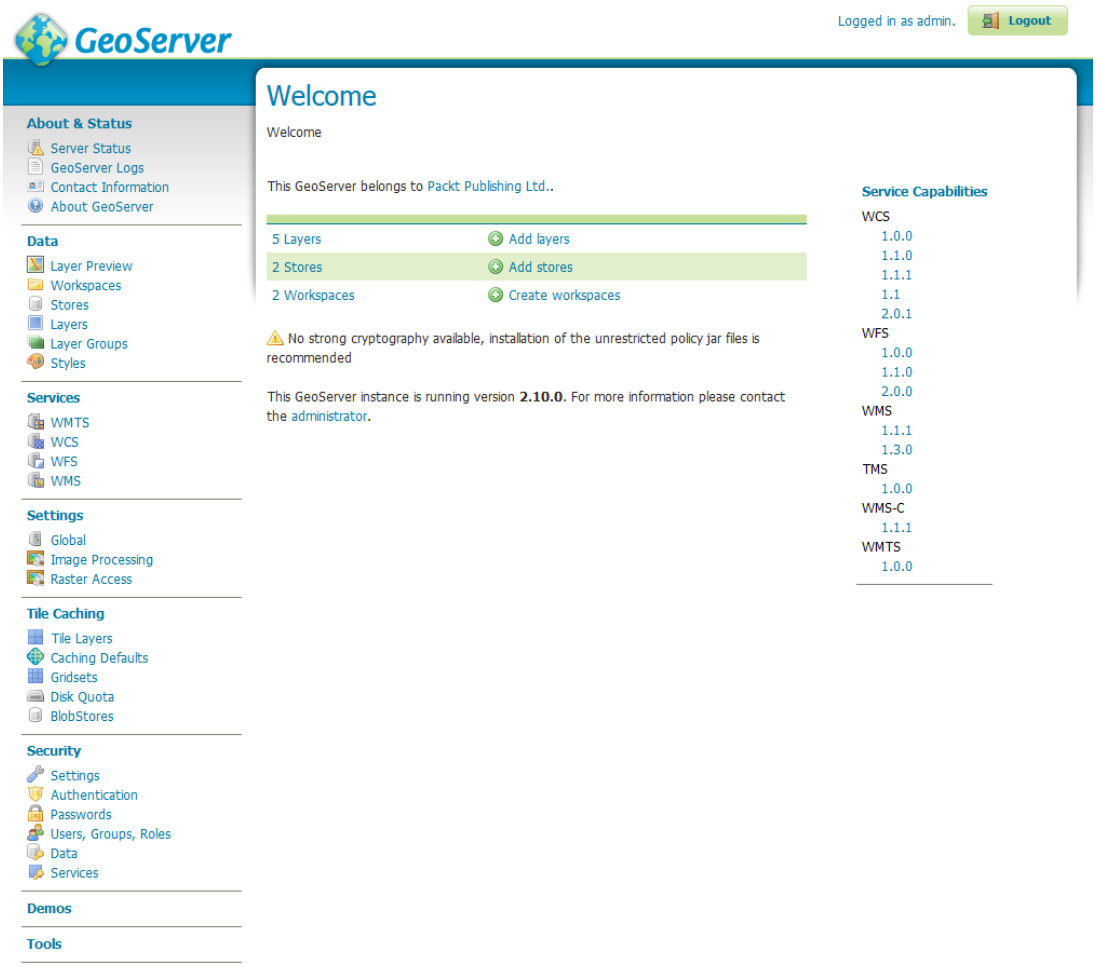
New password
••••••••••

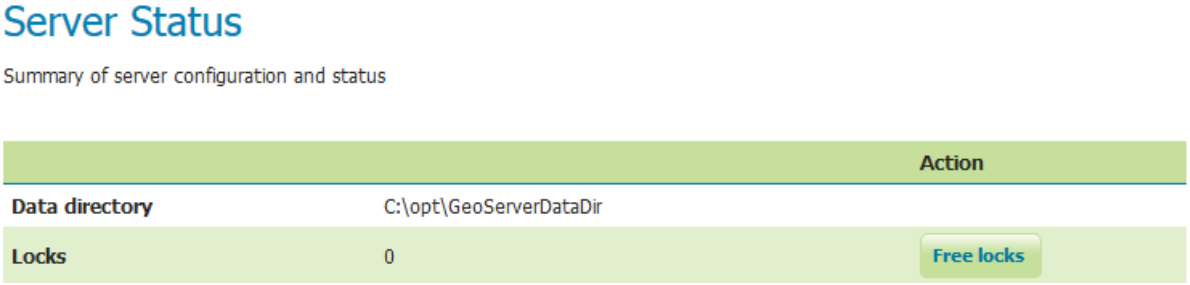
Confirmation
••••••••••

Change Password Cancel


Stable
2.6.2
Maintenance
2.6.3
January
Feburary
December
Stable
2.6.1
March
November
Maintenance
2.6.4
April
October
May
September
Release
2.6.0
June
August
July
Release
Candidate
2.6-RC1
Maintenance
2.6.5

Chapter 3: Exploring the Administrative Interface





Connections	0	
Memory Usage	137 MB / 1 GB	Free memory
JVM Version	Oracle Corporation: 1.8.0_121 (Java HotSpot(TM) 64-Bit Server VM)	
Java Rendering Engine	sun.dc.DuctusRenderingEngine	
Available Fonts	GeoServer can access 571 different fonts. Full list of available fonts	

Native JAI	false	
Native JAI ImageIO	false	
JAI Maximum Memory	1.007 MB	
JAI Memory Usage	0 KB	Free memory
JAI Memory Threshold	75%	
Number of JAI Tile Threads	7	
JAI Tile Thread Priority	5	
ThreadPoolExecutor Core Pool Size	5	
ThreadPoolExecutor Max Pool Size	10	
ThreadPoolExecutor Keep Alive Time (ms)	30000	
Update Sequence	471	

Resource Cache	Clear
Configuration and catalog	Reload

GeoServer Logs

Show the GeoServer log file contents

Maximum console lines 1000 Refresh

```
  PARAMETER["false_northing", 0.0],
  UNIT["m", 1.0],
  AXIS["Easting", EAST],
  AXIS["Northing", NORTH],
  AUTHORITY["EPSG","32632"]]
        Bbox = SRSEnvelope[47643.31161367567 : 775730.8429406164, 4600633.629156475 : 5538840.380933472]
        RemoteOwsType = null
        RemoteOwsURL = null
        Env = {}
        FormatOptions = {}
        Angle = 0.0
        CQLFilter = null
        Elevation = []
        FeatureId = null
        StartIndex = null
        ViewParams = null
        Tiled = false
        FeatureVersion = null
        Version = 1.1.1
        Request = GetMap
        BaseUrl = http://localhost:8080/geoserver/
        RequestCharset = UTF-8
        Get = true
        RawKvp = {REQUEST=GetMap, FORMAT=image/png, SRS=EPSG:32632, BBOX=47643.31161367567,4600633.629156475,775730.8429406164,5538840.380933472, VERSION=1.1.1, STYLES=,
SERVICE=WMS, WIDTH=596, HEIGHT=768, TRANSPARENT=true, LAYERS=istat:province}
2017-04-26 15:10:33,276 DEBUG [wms.map] - Writing png image ...
2017-04-26 15:10:33,276 DEBUG [config.impl] - Could not locate service of type interface org.geoserver.wms.WMSInfo in workspace WorkspaceInfoImpl[istat], available
services were [WMTSInfoImpl[WMTS], WCSInfoImpl[WCS], WFSInfoImpl[WFS], WMSInfoImpl[WMS]]
2017-04-26 15:10:33,276 DEBUG [geotools.styling] - number of fts set 1
2017-04-26 15:10:33,293 DEBUG [geoserver.filters] - Not compressing output for mimetype: image/png
2017-04-26 15:10:33,295 DEBUG [wms.map] - Writing png image ... done!
2017-04-26 15:10:33,296 DEBUG [filter.GeoServerSecurityContextPersistenceFilter$1] - SecurityContextHolder now cleared, as request processing completed
2017-04-26 15:10:35,572 DEBUG [security.IncludeQueryStringAntPathRequestMatcher] - Checking match of request : 'Path: /web/wicket/bookmarkable
/org.geoserver.web.admin.logpage, QueryString: null'; against '/web/**'
2017-04-26 15:10:35,573 DEBUG [security.IncludeQueryStringAntPathRequestMatcher] - Matched Path: /web/wicket/bookmarkable/org.geoserver.web.admin.logpage, QueryString:
null with /web/**
2017-04-26 15:10:35,573 TRACE [ows.OWSHandlerMapping] - No handler mapping found for [/web/wicket/bookmarkable/org.geoserver.web.admin.LogPage]
2017-04-26 15:10:35,574 TRACE [ows.OWSHandlerMapping] - No handler mapping found for [/web/wicket/bookmarkable/org.geoserver.web.admin.LogPage]
2017-04-26 15:10:35,574 TRACE [ows.OWSHandlerMapping] - No handler mapping found for [/web/wicket/bookmarkable/org.geoserver.web.admin.LogPage]
2017-04-26 15:10:35,575 TRACE [ows.OWSHandlerMapping] - No handler mapping found for [/web/wicket/bookmarkable/org.geoserver.web.admin.LogPage]
2017-04-26 15:10:35,576 DEBUG [org.geoserver] - Thread 50 locking in mode WRITE
2017-04-26 15:10:35,576 DEBUG [org.geoserver] - Thread 50 got the lock in mode WRITE
```

Download the full log file

About GeoServer

General information about GeoServer

Build Information

GeoServer Version

2.10.0

Git Revision

94615dac4a2056ed47e2e67fa823ea63325058cf

Build Date

28-Oct-2016 09:41

GeoTools Version

16.0 (rev ae16e116c58d9f4bc3fcec2566fca3dd8dd92120)

GeoWebCache Version

1.10.0 (rev 1.10.x/8908bc23e322f84849517758e5134167e4feb73d)

More Information

GeoServer publishes data from any major spatial data source using open standards. GeoServer implements several Open Geospatial Consortium protocols including Web Map Service (WMS), Web Feature Service (WFS), Web Coverage Service (WCS) and Web Map Tile Service (WMTS). Additional extensions are available for Catalogue Service (CSW) and Web Processing Service (WPS).

This web administration interface allows for easy configuration of GeoServer. After logging in, please use the menus on the left to navigate through the interface.

The About and Status menu lists technical details about the running GeoServer instance.
The Data menu is used to configure data sources and styling.
The Service menu provides configuration for web services.
The Settings menu provides configurations options that apply to all services (i.e. server-wide).
The Tile Caching menu allows configuration of the embedded tile cache.
The Security menu allows configuration of access controls (authentication and authorization).
The Demos menu provides examples of using web services, and request builders to help you assemble your own examples.

Useful Links:

- Documentation
- Wiki
- Issue Tracker

Layer Preview

List of all layers configured in GeoServer and provides previews in various formats for each.

<< < 1 > >> Results 1 to 22 (out of 22 items) Search

Type	Title	Name	Common Formats	All Formats
	A sample ArcGrid file	nurc:Arc_Sample	OpenLayers KML	Select one
	Pk50095	nurc:Pk50095	OpenLayers KML	
	mosaic	nurc:mosaic	OpenLayers KML	
	North America sample imagery	nurc:Img_Sample	OpenLayers KML	
	Spearfish archeological sites	sf:archsites	OpenLayers KML GML	
	Spearfish bug locations	sf:bugsites	OpenLayers KML GML	
	Spearfish restricted areas	sf:restricted	OpenLayers KML GML	
	Spearfish roads	sf:roads	OpenLayers KML GML	
	Spearfish streams	sf:streams	OpenLayers KML GML	

Select one
WMS
AtomPub
GIF
GeoRSS
GeoTiff
GeoTiff 8-bits
JPEG
JPEG-PNG
KML (compressed)
KML (network link)
KML (plain)
OpenLayers
PDF
PNG
PNG 8bit
SVG
Tiff
Tiff 8-bits
UTFGrid

Workspaces

Manage GeoServer workspaces

Add new workspace

Remove selected workspace(s)

<< < 1 > >> Results 1 to 7 (out of 7 items) Search

Workspace Name	Default
cite	✓
it.geosolutions	
nurc	
sde	

Stores

Manage the stores providing data to GeoServer

Add new Store
Remove selected Stores

<< < 1 > >> Results 1 to 9 (out of 9 items) Search

Data Type	Workspace	Store Name	Type	Enabled?
	nurc	arcGridSample	ArcGrid	✓
	nurc	img_sample2	WorldImage	✓
	nurc	mosaic	ImageMosaic	✓
	tiger	nyc	Directory of spatial files (shapefiles)	✓

Layers

Manage the layers being published by GeoServer

Add a new layer
Remove selected layers

<< < 1 > >> Results 1 to 19 (out of 19 items) Search

Type	Title	Name	Store	Enabled	Native SRS
	A sample ArcGrid file	nurc:Arc_Sample	arcGridSample	✓	EPSG:4326
	Pk50095	nurc:Pk50095	img_sample2	✓	EPSG:32633
	mosaic	nurc:mosaic	mosaic	✓	EPSG:4326
	North America sample imagery	nurc:Img_Sample	worldImageSample	✓	EPSG:4326
	Spearfish archeological sites	sf:archsites	sf	✓	EPSG:26713

Styles

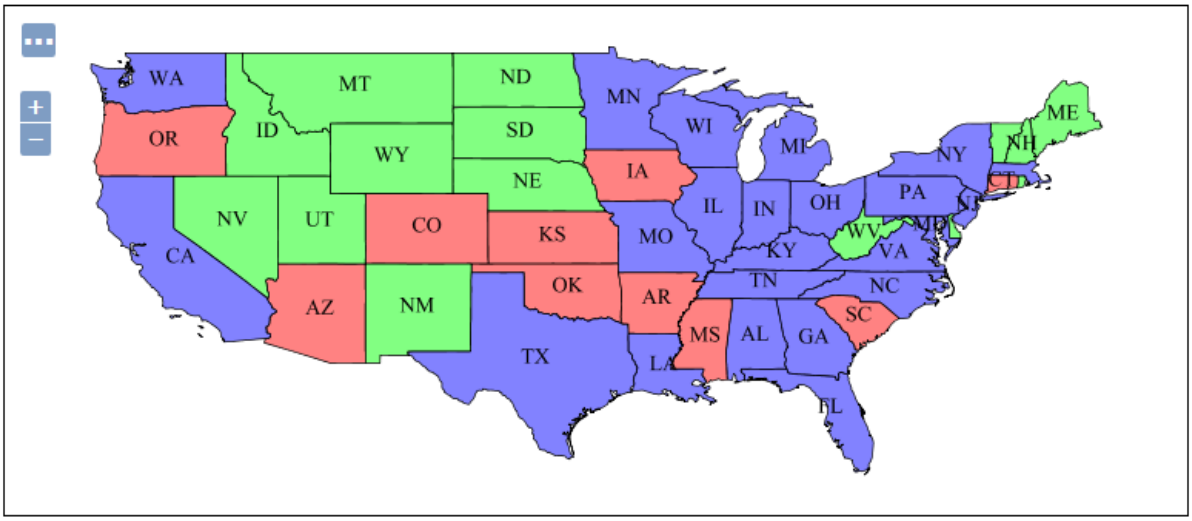
Manage the Styles published by GeoServer

Add a new style
Removed selected style(s)

<< < 1 > >> Results 1 to 21 (out of 21 items) Search

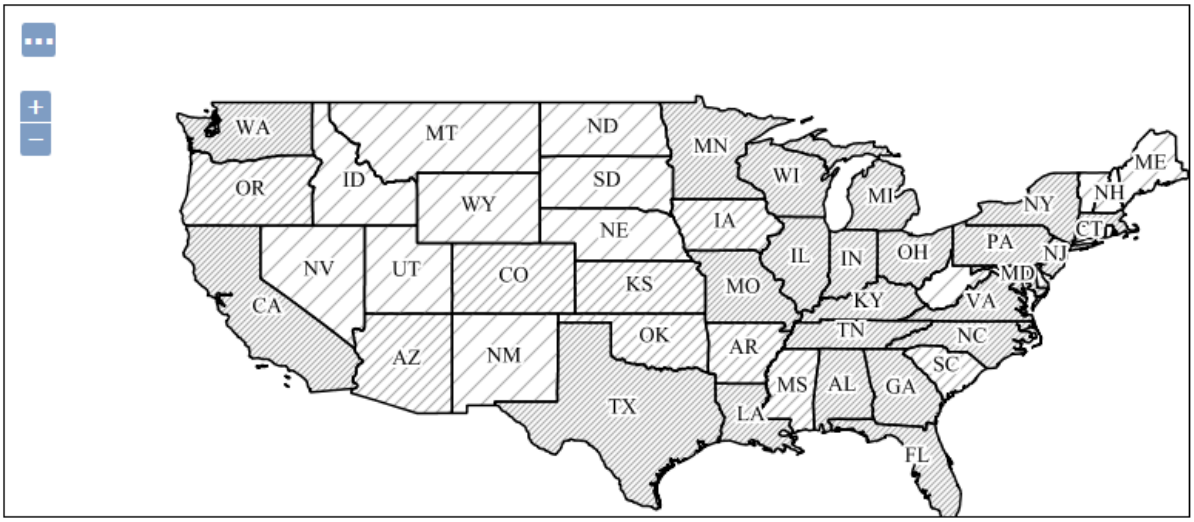
Style Name	Workspace
burg	
capitals	
cite_lakes	
dem	

	USA Population	topp:states	OpenLayers KML GML



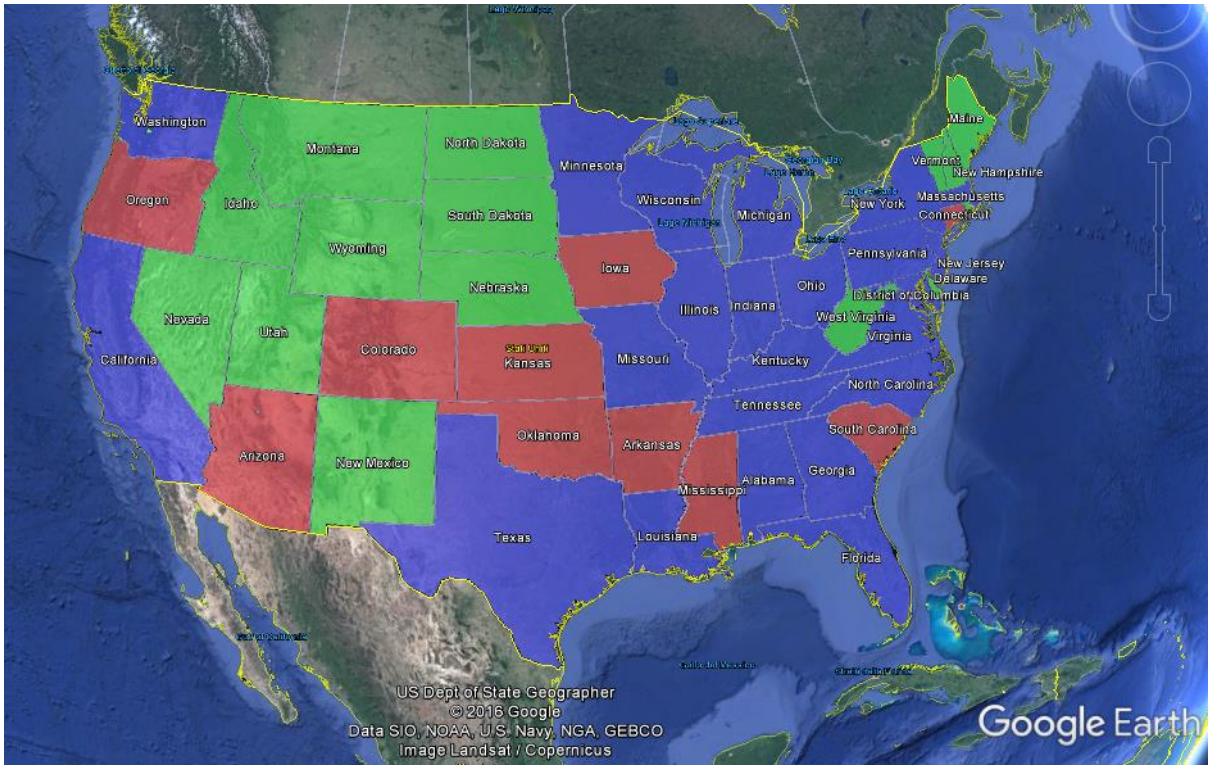
Scale = 1 : 35M

Click on the map to get feature info



Scale = 1 : 35M

Click on the map to get feature info



Services

- WMTS
- WCS
- WFS
- WMS

Resource consumption limits

Max rendering memory (KB)

65536

Max rendering time (s)

60

Max rendering errors (count)

1000

Watermark Settings

Enable watermark

Watermark URL

Browse

Watermark Transparency (0 - 100)

0

Watermark Position

Bottom right

PNG Options

Compression level (0-100, default 25)

25

JPEG Options

Compression level (0-100, default 25)

25

Features

Maximum number of features

1000000

Maximum number of features for preview (Values <= 0 use the maximum number of features)

50

Service Level

- Basic
- Transactional
- Complete

WMS

1.1.1

1.3.0

```
- <Layer>
    <Title>GeoServer Web Map Service</Title>
  - <Abstract>
      A compliant implementation of WMS plus most of the SLD extension (dynamic styling). Can also generate PDF, SVG, KML, GeoRSS
    </Abstract>
    <!--All supported EPSG projections:-->
    <CRS>AUTO:42001</CRS>
    <CRS>AUTO:42002</CRS>
    <CRS>AUTO:42003</CRS>
    <CRS>AUTO:42004</CRS>
    <CRS>AUTO:97001</CRS>
    <CRS>AUTO:97002</CRS>
    <CRS>EPSG:WGS84(DD)</CRS>
```

Limited SRS list

4326, 3857, 4269

☐ Output bounding box for every supported CRS

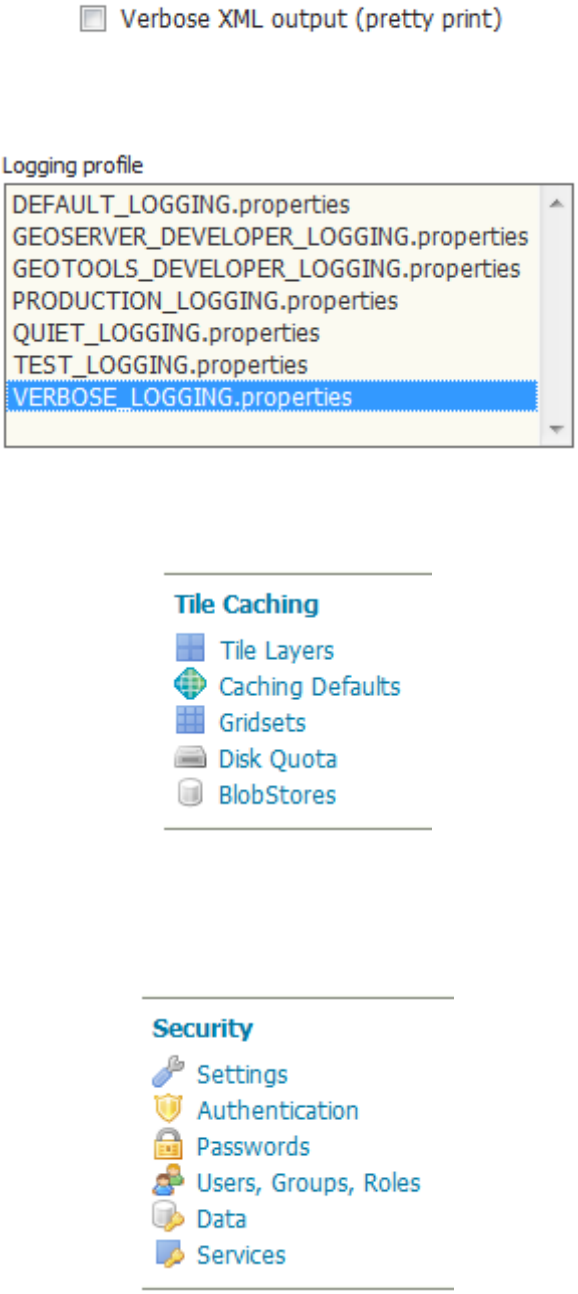
```
    <!--Limited list of EPSG projections:-->
    <CRS>EPSG:3857</CRS>
    <CRS>EPSG:4269</CRS>
    <CRS>EPSG:4326</CRS>
    <CRS>CRS:84</CRS>
  - <EX_GeographicBoundingBox>
      <westBoundLongitude>-180.0</westBoundLongitude>
      <eastBoundLongitude>180.0</eastBoundLongitude>
      <southBoundLatitude>-90.0</southBoundLatitude>
      <northBoundLatitude>90.0</northBoundLatitude>
    </EX_GeographicBoundingBox>
    <BoundingBox CRS="CRS:84" minx="-180.0" miny="-90.0" maxx="180.0" maxy="90.0"/>
```

Settings

Global

Image Processing

Raster Access


Verbose XML output (pretty print)
Logging profile
DEFAULT_LOGGING.properties
GEOSERVER_DEVELOPER_LOGGING.properties
GEOTOOLS_DEVELOPER_LOGGING.properties
PRODUCTION_LOGGING.properties
QUIET_LOGGING.properties
TEST_LOGGING.properties
VERBOSE_LOGGING.properties
Tile Caching
Tile Layers
Caching Defaults
Gridsets
Disk Quota
BlobStores
Security
Settings
Authentication
Passwords
Users, Groups, Roles
Data
Services

Security Settings

Configure security settings

Active role service

default

Encryption

Encrypt web admin URL parameters

Password encryption

Weak PBE

No strong cryptography available, installation of the unrestricted policy jar files is recommended

Users, Groups, and Roles

Manage user group and role services

Services | Users/Groups | Roles

default

Edit

Add new user

Remove Selected

Remove Selected and remove role associations

Search

Username	Enabled	Has Attributes
admin	✓	

<< < 1 > >> Results 1 to 1 (out of 1 items)

Add new group

Remove Selected

Remove Selected and remove role associations

Search

Groupname	Enabled

<< < > >> Results 0 to 0 (out of 0 items)

Data Security

Manage data security: edit, add and remove access rules

Add new rule
Remove Selected(s)

<< < 1 > >> Results 1 to 2 (out of 2 items) Search

Rule path	Roles
..r	*
..w	GROUP_ADMIN,ADMIN

<< < 1 > >> Results 1 to 2 (out of 2 items)

Catalog Mode

- (•) HIDE
- ( ) MIXED
- ( ) CHALLENGE

GeoServer Demos

Collection of GeoServer demo applications

- Demo requests Example requests for GeoServer (using the TestServlet).
- SRS List List of all SRS known to GeoServer
- Reprojection console Simple coordinate reprojection tool
- WCS request builder Step by step WCS GetCoverage request builder

Request: WFS_getCapabilities-1.1.xml

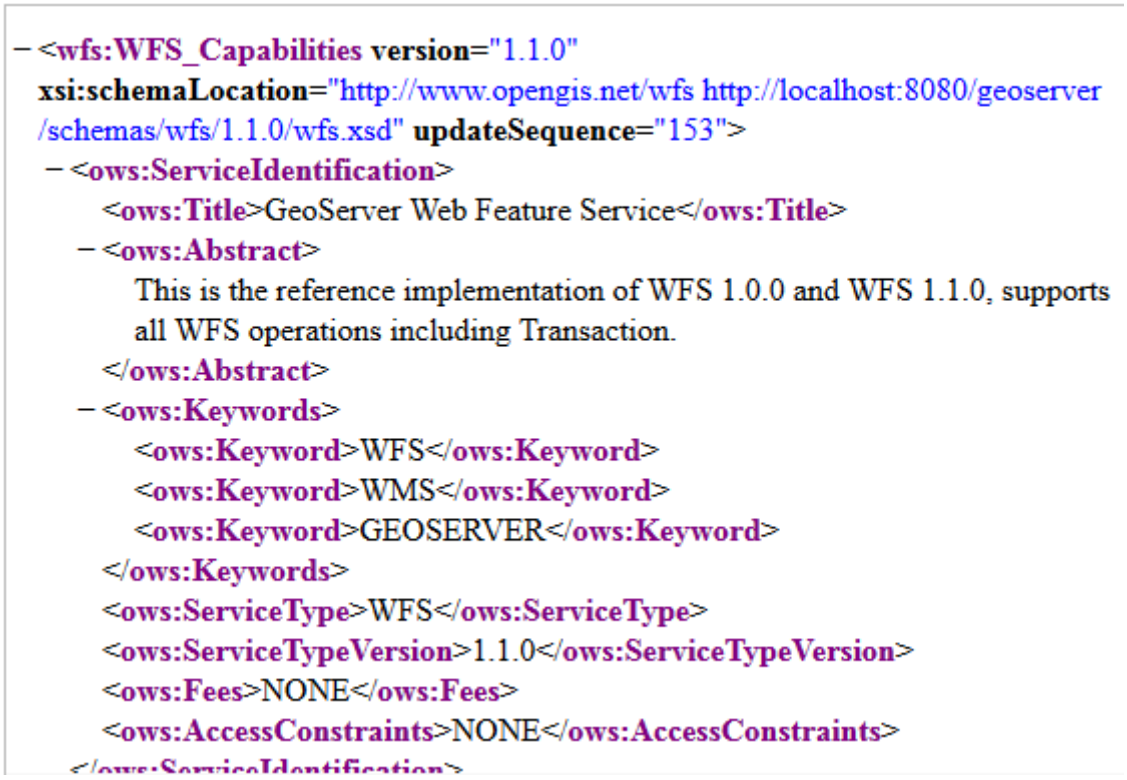
URL: http://localhost:8080/geoserver/wfs

12pt

Body:

```
<!-- Gets the WFS capabilities. For WMS capabilities, see WMS_getCapabilities demo-->
<!--

     This will briefly describe all the layers (FeatureTypes) in that you have
     in your WFS server, plus more generic information about what your server
     supports.

     For more information about a particular FeatureType, use the
     WFS_describeFeatureType.xml demo!

  -->
<GetCapabilities
  service="WFS"
  xmlns="http://www.opengis.net/wfs"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opengis.net/wfs http://schemas.opengis.net/wfs/1.1.0/wfs.xsd"/>

```

```
- <wfs:WFS_Capabilities version="1.1.0"
  xsi:schemaLocation="http://www.opengis.net/wfs http://localhost:8080/geoserver
  /schemas/wfs/1.1.0/wfs.xsd" updateSequence="153">
  - <ows:ServiceIdentification>
      <ows:Title>GeoServer Web Feature Service</ows:Title>
    - <ows:Abstract>
        This is the reference implementation of WFS 1.0.0 and WFS 1.1.0, supports
        all WFS operations including Transaction.
      </ows:Abstract>
    - <ows:Keywords>
        <ows:Keyword>WFS</ows:Keyword>
        <ows:Keyword>WMS</ows:Keyword>
        <ows:Keyword>GEOSERVER</ows:Keyword>
      </ows:Keywords>
      <ows:ServiceType>WFS</ows:ServiceType>
      <ows:ServiceTypeVersion>1.1.0</ows:ServiceTypeVersion>
      <ows:Fees>NONE</ows:Fees>
      <ows:AccessConstraints>NONE</ows:AccessConstraints>
    </ows:ServiceIdentification>
```

Request WFS_getFeature-2.0.xml

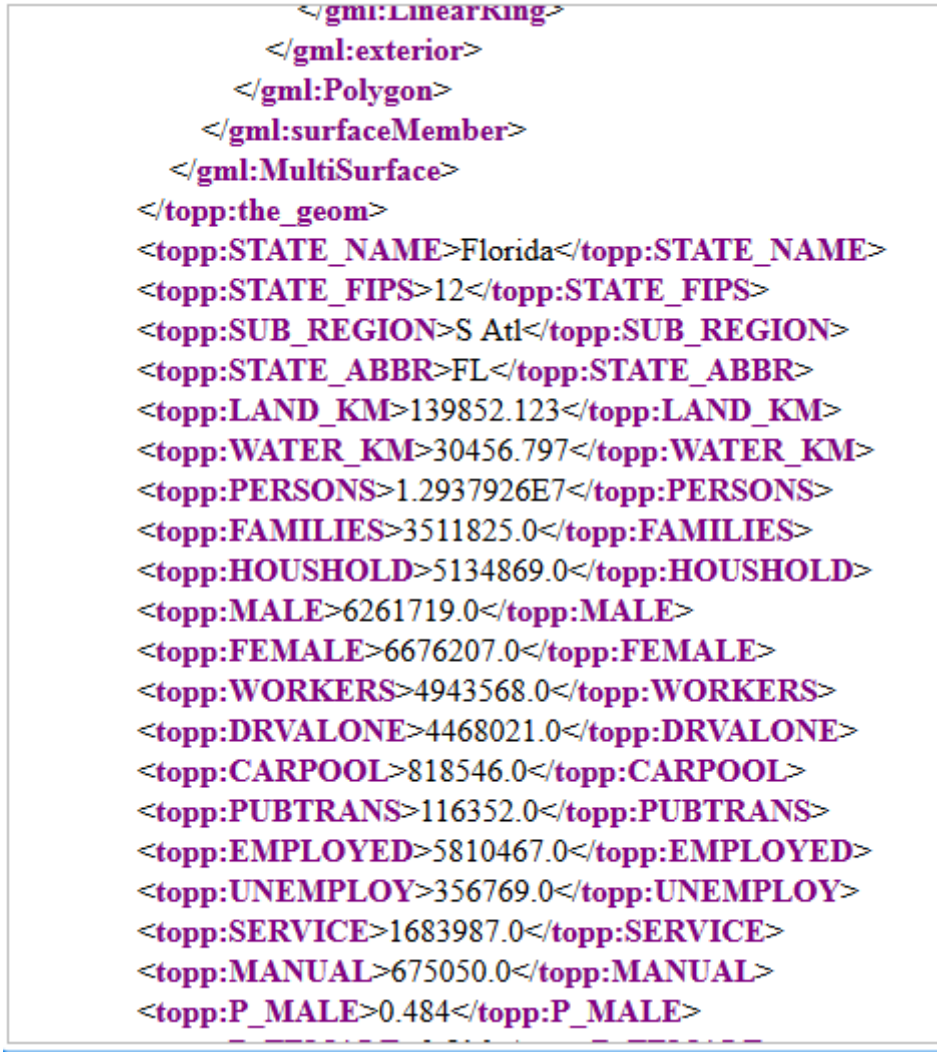
URL http://localhost:8080/geoserver/wfs

12pt

Body


```
<?xml version="1.0" encoding="UTF-8"?>
<!--
    This example demonstrates a WFS 2.0 GetFeature POST request.

    This filter selects a single feature with id "bugsites.3".

    See also:
    WFS Standard: http://www.opengeospatial.org/standards/wfs
    Filter Encoding Standard: http://www.opengeospatial.org/standards/filter
-->
<wfs:GetFeature service="WFS" version="2.0.0"
    xmlns:wfs="http://www.opengis.net/wfs/2.0" xmlns:fes="http://www.opengis.net/fes/2.0"
    xmlns:sf="http://www.openplans.org/spearfish" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance"
    xsi:schemaLocation="http://www.opengis.net/wfs/2.0 http://schemas.opengis.net/wfs/2.0/wfs.xsd">
    <wfs:Query typeNames="topp:states">
        <fes:Filter>
            <fes:ResourceId rid="states.11"/>
        </fes:Filter>
    </wfs:Query>
</wfs:GetFeature>
```

```
- <wfs:FeatureCollection numberMatched="1" numberReturned="1" timeStamp="2017-06-09T15:49:41.266Z" xsi:schemaLocation="http://www.opengis.net/wfs/2.0 http://localhost:8080/geoserver/schemas/wfs/2.0
  /wfs.xsd http://www.openplans.org/topp http://localhost:8080/geoserver/wfs?service=WFS&version=2.0.0&request=DescribeFeatureType&typeName=topp%3Astates http://www.opengis.net/gml/3.2 http://localhost:8080
  /geoserver/schemas/gml/3.2.1/gml.xsd">
  - <wfs:member>
    - <topp:states gml:id="states.11">
      - <topp:the_geom>
        - <gml:MultiSurface srsName="urn:ogc:def:crs:EPSG::4326" srsDimension="2">
          - <gml:surfaceMember>
            - <gml:Polygon>
              - <gml:exterior>
                - <gml:LinearRing>
                  - <gml:posList>
                      33.027668 -114.519844 33.036743 -114.558304 33.026962 -114.609138 33.033527 -114.633179 33.044373 -114.644371 33.038883 -114.663162 33.095345 -114.710564 33.122337 -114.708672
                      33.167213 -114.67733 33.22456 -114.67926 33.239223 -114.68692 33.267982 -114.676903 33.305676 -114.734634 33.352386 -114.702812 33.41103 -114.724144 33.419086 -114.644302 33.439396
                      -114.629784 33.468571 -114.6203 33.486099 -114.597298 33.509418 -114.586273 33.560047 -114.528633 33.580482 -114.539459 33.622112 -114.526382 33.665482 -114.524475 33.682713
                      -114.535645 33.708347 -114.494888 33.743179 -114.509499 33.771694 -114.503769 33.826012 -114.520332 33.841946 -114.510933 33.862907 -114.520172 33.925018 -114.497398 33.952396
                      -114.524841 33.965046 -114.517418 34.029827 -114.428192 34.078316 -114.423241 34.102638 -114.409378 34.141281 -114.322014 34.171215 -114.284584 34.186207 -114.234993 34.266964
                      -114.149132 34.272606 -114.124451 34.314533 -114.133347 34.336433 -114.152634 34.365192 -114.181297 34.405476 -114.257057 34.412056 -114.282608 34.435741 -114.302078 34.454861
                      -114.331848 34.459667 -114.375717 34.477074 -114.383072 34.536552 -114.376038 34.583714 -114.408951 34.598953 -114.43351 34.610886 -114.421478 34.709866 -114.464844 34.744751
                      -114.497009 34.748905 -114.524757 34.759953 -114.541245 34.831856 -114.56942 34.87553 -114.626465 34.919498 -114.629677 34.943607 -114.620209 34.99765 -114.631477 34.998913
                      -114.62027 35.041862 -114.63298 35.076057 -114.594833 35.118656 -114.635109 35.133907 -114.625641 35.132561 -114.581818 35.140068 -114.571457 35.174347 -114.560242 35.220184
                      -114.558784 35.304771 -114.58709 35.358383 -114.588783 35.450768 -114.644592 35.515762 -114.67141 35.546646 -114.648987 35.584843 -114.652328 35.611359 -114.639061 35.646595
                      -114.653259 35.65641 -114.667679 35.693111 -114.664284 35.732609 -114.688011 35.764717 -114.681931 35.847458 -114.689056 35.870975 -114.661652 35.880489 -114.660789 35.911629
                      -114.698463 35.987667 -114.735397 36.036777 -114.716858 36.058773 -114.728149 36.085983 -114.727333 36.105202 -114.711945 36.141987 -114.620796 36.138355 -114.598122 36.155109
                      -114.529762 36.124729 -114.465805 36.121071 -114.443138 36.151009 -114.379997 36.137497 -114.34343 36.111454 -114.315292 36.087124 -114.303055 36.062248 -114.306786 36.018345
                      -114.232674 36.017269 -114.205971 36.041744 -114.128227 36.121105 -114.106979 36.193993 -114.044312 36.216038 -114.036598 36.841873 -114.042915 36.996563 -114.043137 36.996243
                      -112.899216 36.998009 -112.541763 36.995506 -112.236511 37.00172 -111.355453 37.002491 -110.739372 37.003929 -110.483398 36.991749 -110.451546 36.992065 -109.996399 36.996643
                      -109.047821 35.996655 -109.047195 34.954613 -109.045998 34.59174 -109.048012 33.783249 -109.049721 33.205101 -109.049904 32.77948 -109.050728 32.441967 -109.048882 31.343348
                      -109.045006 31.337559 -110.451942 31.335535 -111.07132 31.431438 -111.368866 32.04356 -113.328377 32.487114 -114.820969 32.615993 -114.808601 32.72081 -114.72126 32.734966
                      -114.711906 32.741379 -114.693253 32.726238 -114.603157 32.73584 -114.602737 32.737392 -114.571175 32.748783 -114.571426 32.74889 -114.559967 32.760708 -114.560799 32.760704
```

SRS List

List of SRS known to GeoServer. You can choose the authority, filter based on the code and description, and gather details on each code

<< < 1 2 3 4 5 > >> Results 1 to 25 (out of 5.846 items) Search

Code	Description
2000	Anguilla 1957 / British West Indies Grid
2001	Antigua 1943 / British West Indies Grid
2002	Dominica 1945 / British West Indies Grid
2003	Grenada 1953 / British West Indies Grid
2004	Montserrat 1958 / British West Indies Grid
2005	St. Kitts 1955 / British West Indies Grid

SRS List

List of SRS known to GeoServer. You can choose the authority, filter based on the code and description, and gather details on each code

<< < 1 > >> Results 1 to 25 (out of 1 matches from 5.846 items) 4326

Code	Description
4326	WGS 84

<< < 1 > >> Results 1 to 25 (out of 1 matches from 5.846 items)

WKT

```
GEOGCS["WGS 84",
  DATUM["World Geodetic System 1984",
    SPHEROID["WGS 84", 6378137.0, 298.257223563, AUTHORITY["EPSG","7030"]],
    AUTHORITY["EPSG","6326"]],
  PRIMEM["Greenwich", 0.0, AUTHORITY["EPSG","8901"]],
  UNIT["degree", 0.017453292519943295],
  AXIS["Geodetic longitude", EAST],
  AXIS["Geodetic latitude", NORTH],
  AUTHORITY["EPSG","4326"]]
```

Area of validity

```
90°00'00,0"N, 180°00'00,0"W - 90°00'00,0"S, 180°00'00,0"E
```

World.

Chapter 4: Adding Your Data

Vector Data Sources

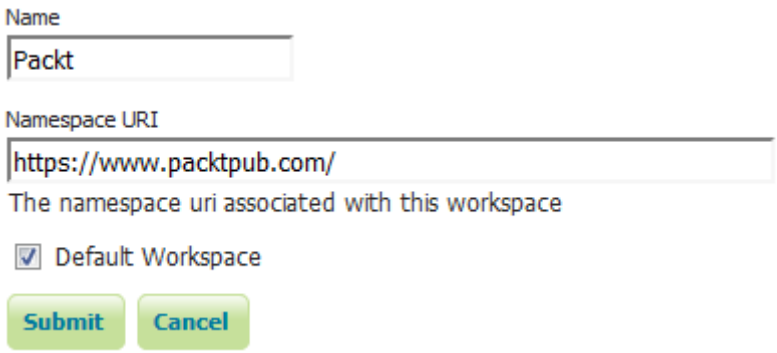
Directory of spatial files (shapefiles) - Takes a directory of shapefiles and exposes it as a data store
PostGIS - PostGIS Database
PostGIS (JNDI) - PostGIS Database (JNDI)
Properties - Allows access to Java Property files containing Feature information
Shapefile - ESRI(tm) Shapefiles (*.shp)
Web Feature Server (NG) - Provides access to the Features published a Web Feature Service, and the ability to perform transactions on the server (when supported / allowed).

Raster Data Sources

ArcGrid - ARC/INFO ASCII GRID Coverage Format
GeoTIFF - Tagged Image File Format with Geographic information
Gtopo30 - Gtopo30 Coverage Format
ImageMosaic - Image mosaicking plugin
WorldImage - A raster file accompanied by a spatial data file

Other Data Sources

WMS - Cascades a remote Web Map Service



Properties

Allows access to Java Property files containing Feature information

Basic Store Info

Workspace *

Packt

Data Source Name *

Places

Description

Location of famous places around the world

Enabled

Connection Parameters

directory *

C:\opt\Data

Namespace *

https://www.packtpub.com/

Save Cancel

<< < 1 > >> Results 1 to 1 (out of 1 items) Search

Published	Layer name	Action
	places	Publish

<< < 1 > >> Results 1 to 1 (out of 1 items)

Coordinate Reference Systems

Native SRS

EPSG:4326 EPSG:WGS 84...

Declared SRS

EPSG:4326 Find... EPSG:WGS 84...

SRS handling

Force declared

Bounding Boxes

Native Bounding Box

Min X	Min Y	Max X	Max Y
-112,122	-25,688	131,036	48,858

Compute from data

Compute from SRS bounds

Lat/Lon Bounding Box

Min X	Min Y	Max X	Max Y
-112,122	-25,688	131,036	48,858

Compute from native bounds

WMS Settings

Layer Settings

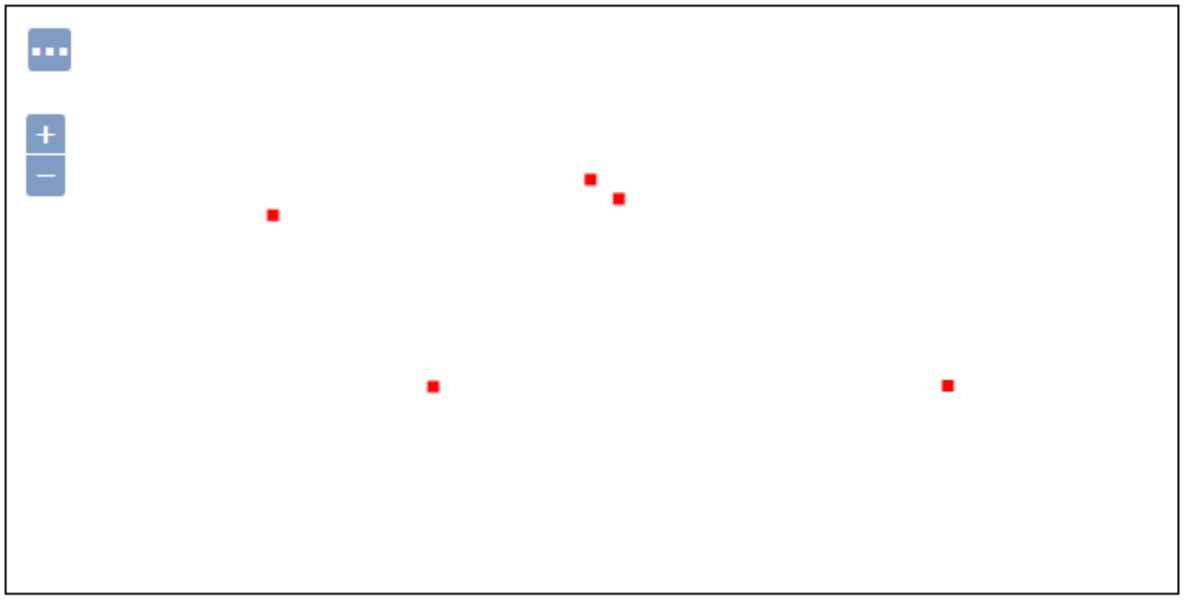
☑ Queryable

☐ Opaque

Default Style

point

	Tasmania water bodies	topp:tasmania_water_bodies	OpenLayers KML GML	Select one
	places	Packt:places	OpenLayers KML GML	Select one
	Spearfish	spearfish	OpenLayers KML	Select one



Scale = 1 : 279M -74.53125, 104.76563

Click on the map to get feature info

Directory of spatial files (shapefiles)

Takes a directory of shapefiles and exposes it as a data store

Basic Store Info

Workspace *

Packt

Data Source Name *

Natural Earth

Description

Shapefiles from Natural Earth

☑ Enabled

Connection Parameters

Directory of shapefiles *

file://C:\opt\Data Browse...

DBF files charset

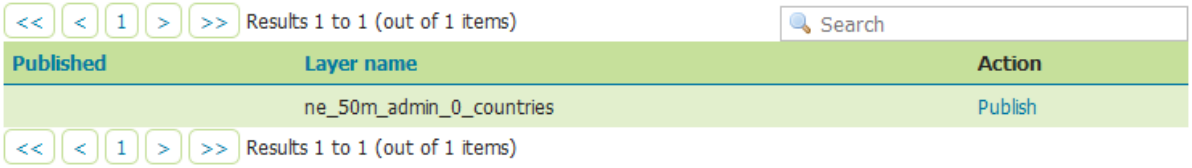
ISO-8859-1

☑ Create spatial index if missing/outdated

☐ Use memory mapped buffers (Disable on Windows)

☑ Cache and reuse memory maps (Requires 'Use Memory mapped buffers' to be enabled)

Save Cancel



Coordinate Reference Systems

Native SRS

UNKNOWN GCS_WGS_1984...

Declared SRS

EPSG:4326 Find... EPSG:WGS 84...

SRS handling

Force declared

Bounding Boxes

Native Bounding Box

Min X	Min Y	Max X	Max Y
-180	-89,99892578124	180,00000000000	83,59960937500

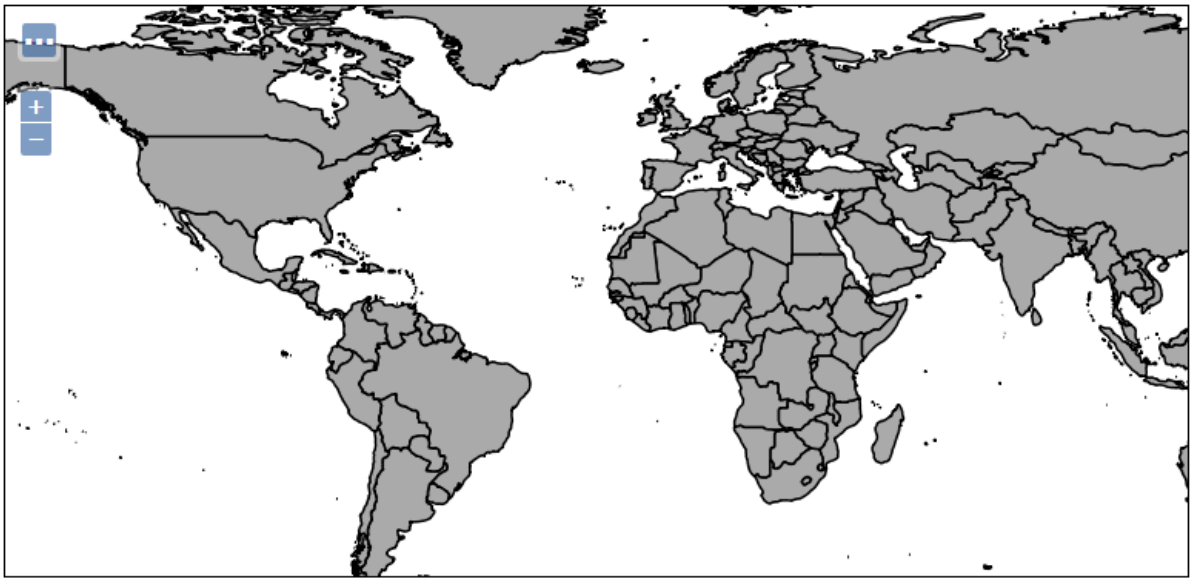
Compute from data

Compute from SRS bounds

Lat/Lon Bounding Box

Min X	Min Y	Max X	Max Y
-180	-89,99892578124	180,00000000000	83,59960937500

Compute from native bounds

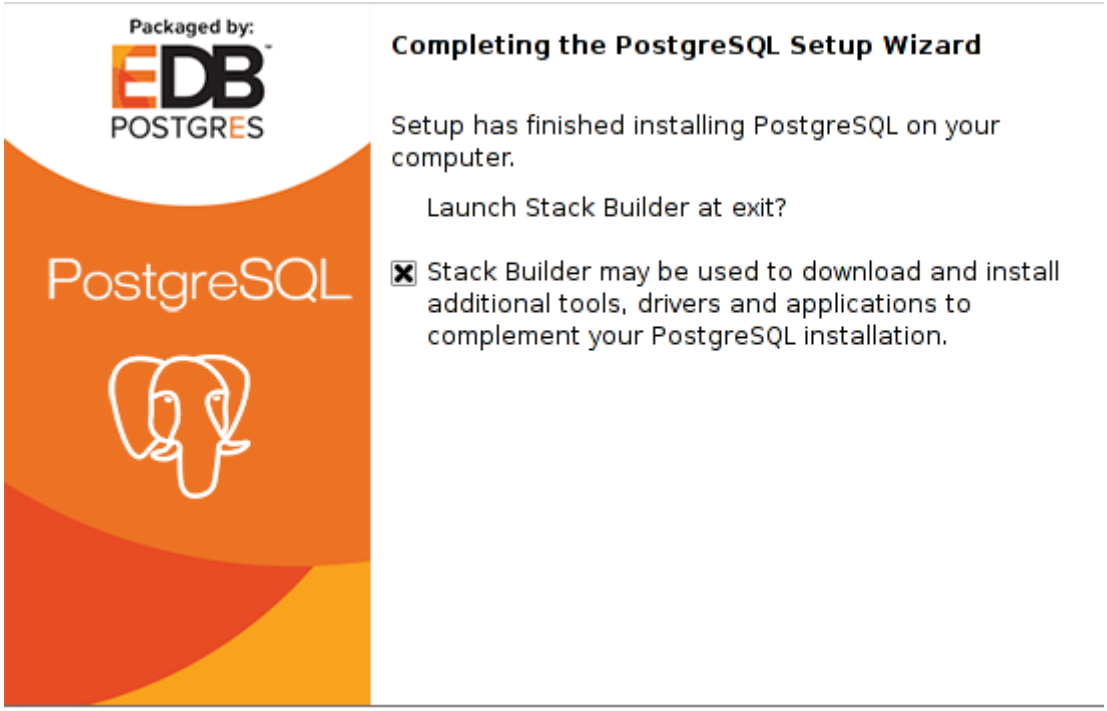


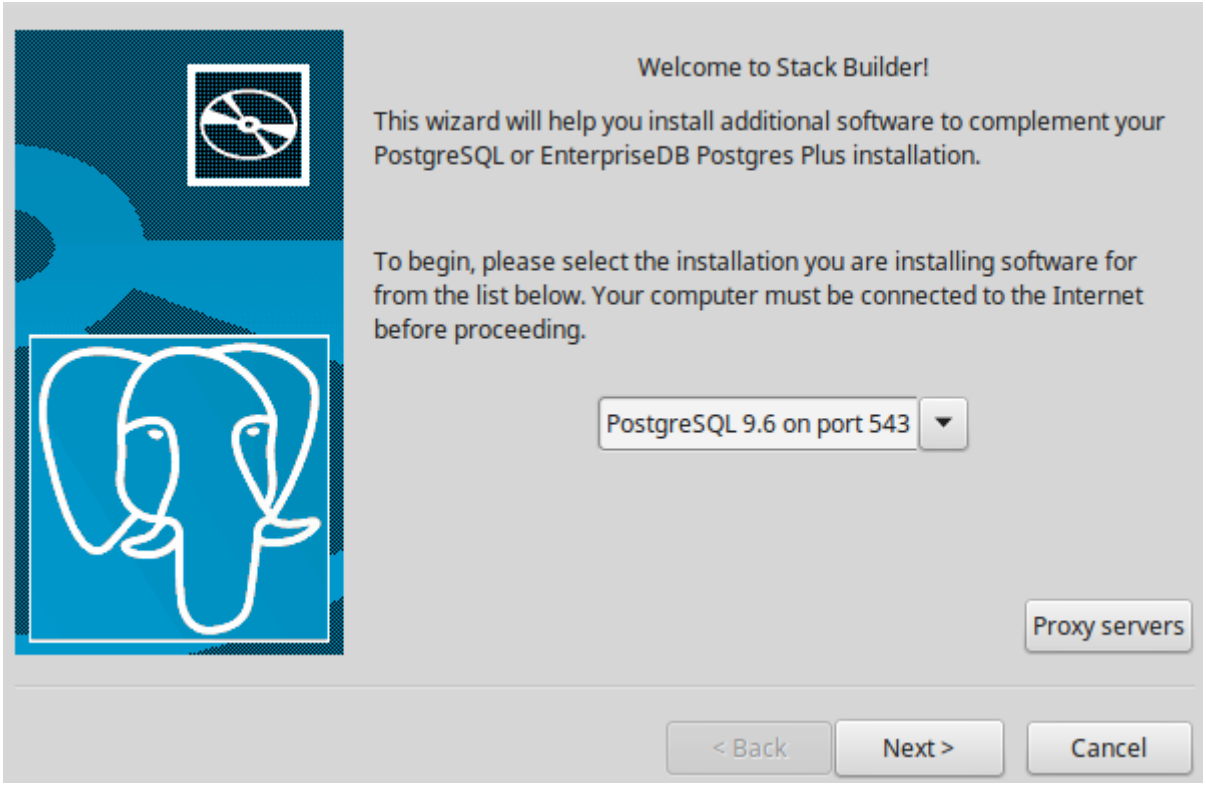
Scale = 1 : 140M -104.06250, 36.91406

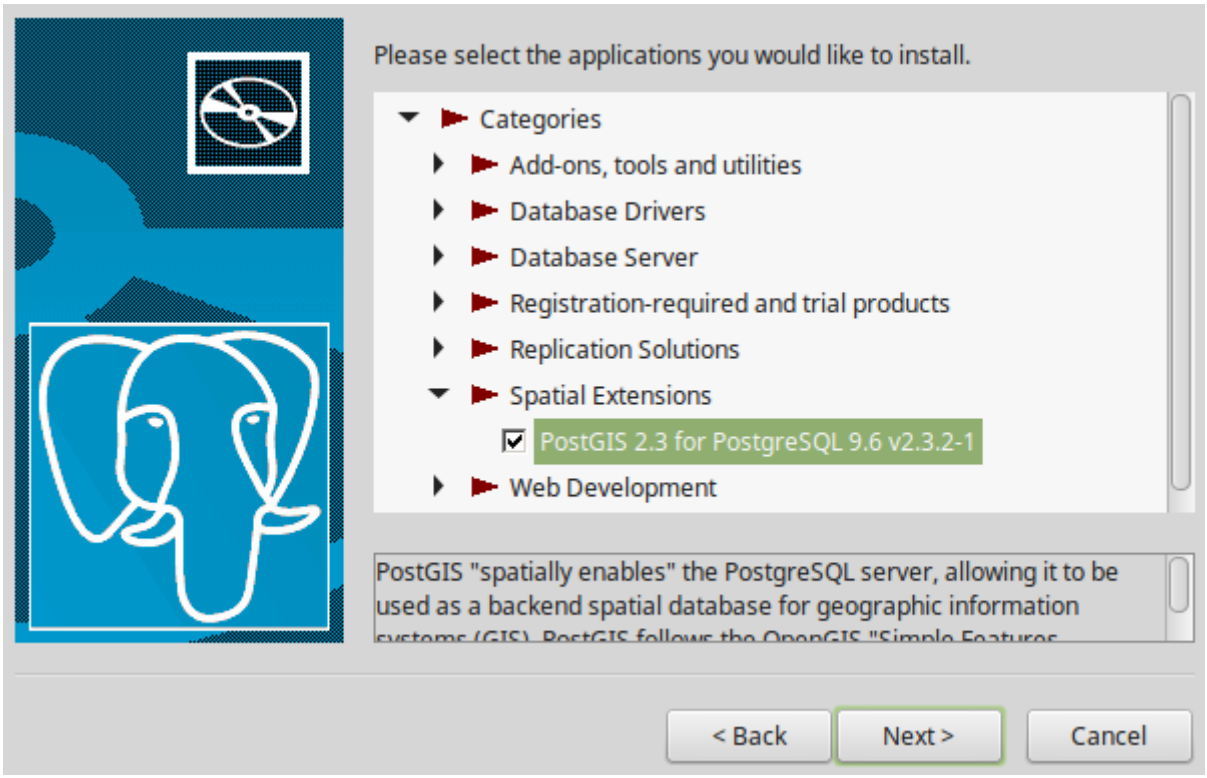
Click on the map to get feature info

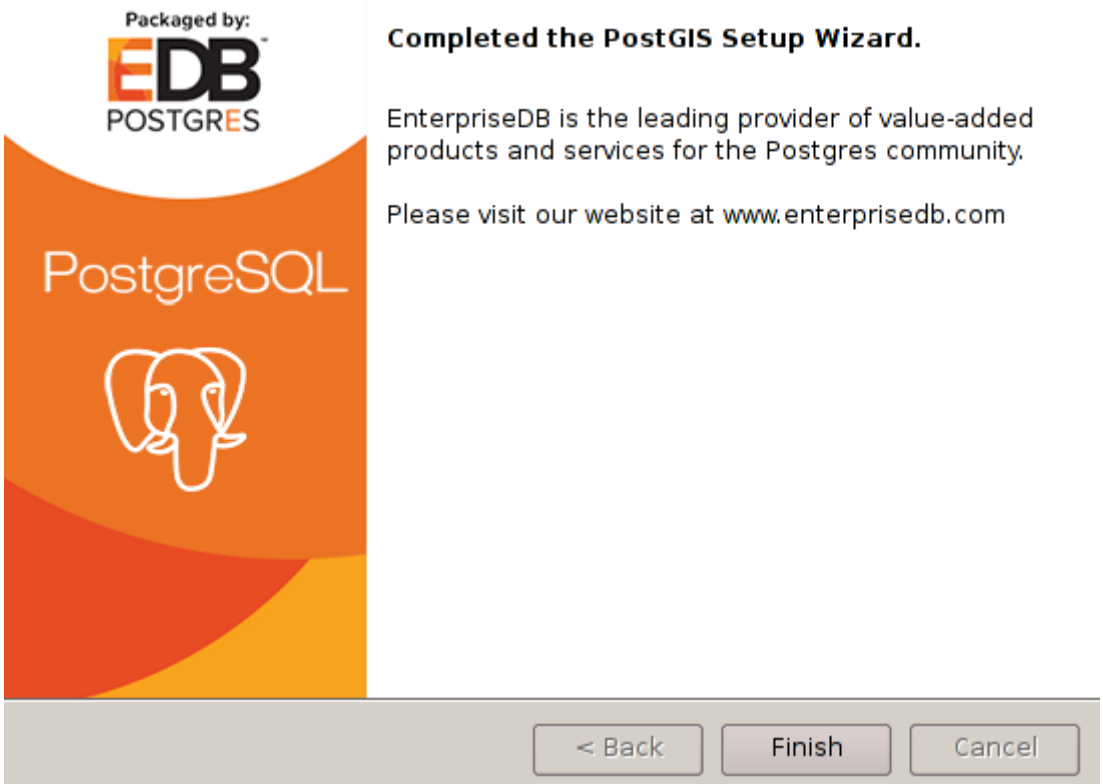
OPTION B - POSTGRESQL

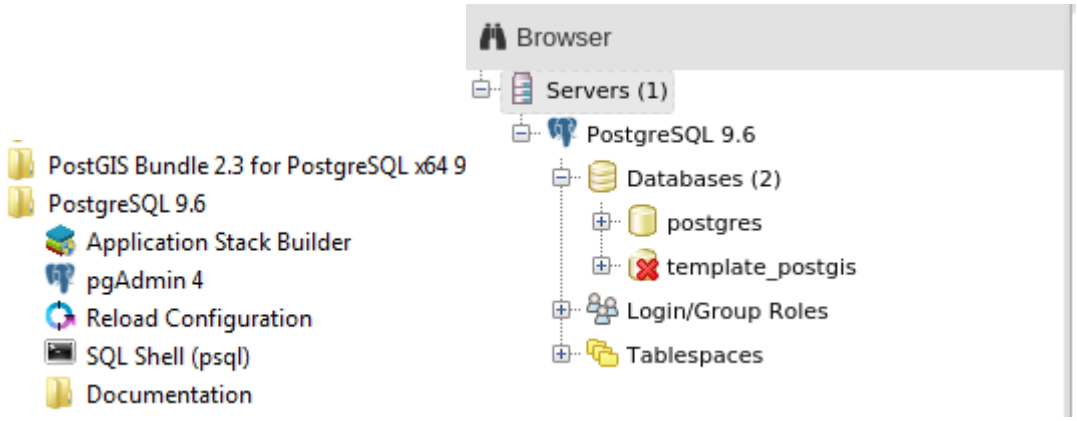
Component Version	*Operating System*	*Type*	*How to Access*
v9.6	Linux x86-64	Interactive Installer	Download
v9.6	Linux x86-32	Interactive Installer	Download
v9.6	Windows-64	Interactive Installer	Download
v9.6	Windows-32	Interactive Installer	Download

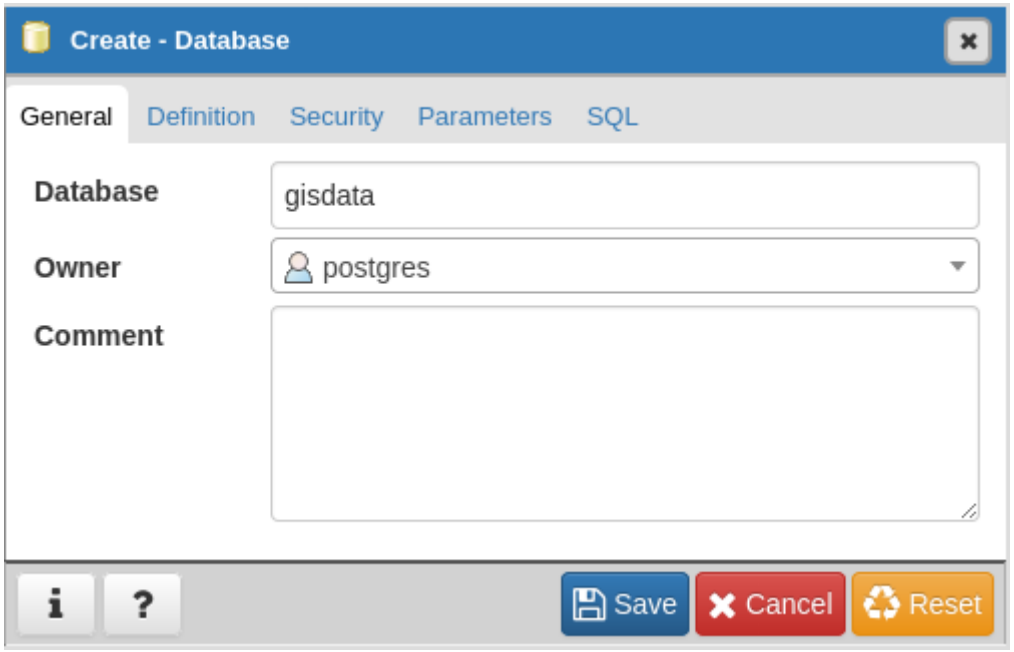

Packaged by:
EDB
POSTGRES
PostgreSQL
Completing the PostgreSQL Setup Wizard
Setup has finished installing PostgreSQL on your computer.
Launch Stack Builder at exit?
Stack Builder may be used to download and install additional tools, drivers and applications to complement your PostgreSQL installation.

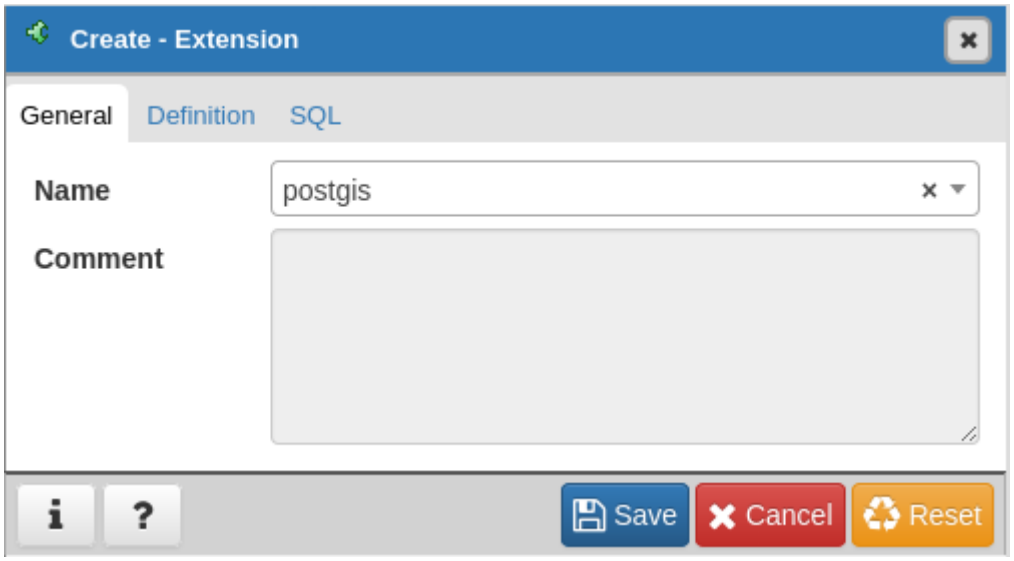

Welcome to Stack Builder!
This wizard will help you install additional software to complement your PostgreSQL or EnterpriseDB Postgres Plus installation.
To begin, please select the installation you are installing software for from the list below. Your computer must be connected to the Internet before proceeding.
PostgreSQL 9.6 on port 543
Proxy servers
< Back
Next >
Cancel

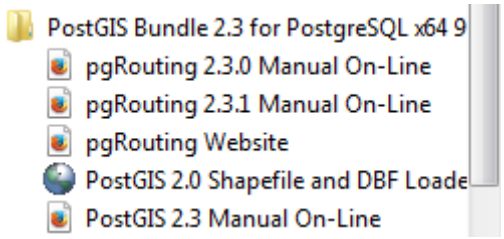

Please select the applications you would like to install.
Categories
Add-ons, tools and utilities
Database Drivers
Database Server
Registration-required and trial products
Replication Solutions
Spatial Extensions
PostGIS 2.3 for PostgreSQL 9.6 v2.3.2-1
Web Development
PostGIS "spatially enables" the PostgreSQL server, allowing it to be used as a backend spatial database for geographic information
< Back
Next >
Cancel

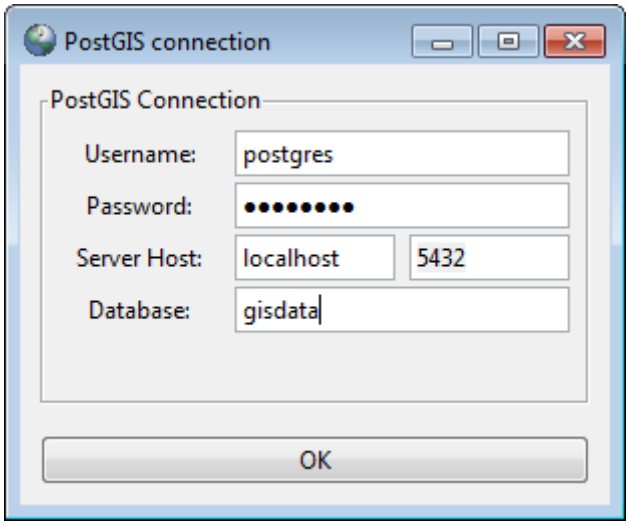

Packaged by:
EDB
POSTGRES
PostgreSQL
Completed the PostGIS Setup Wizard.
EnterpriseDB is the leading provider of value-added products and services for the Postgres community.
Please visit our website at www.enterprisedb.com
< Back
Finish
Cancel

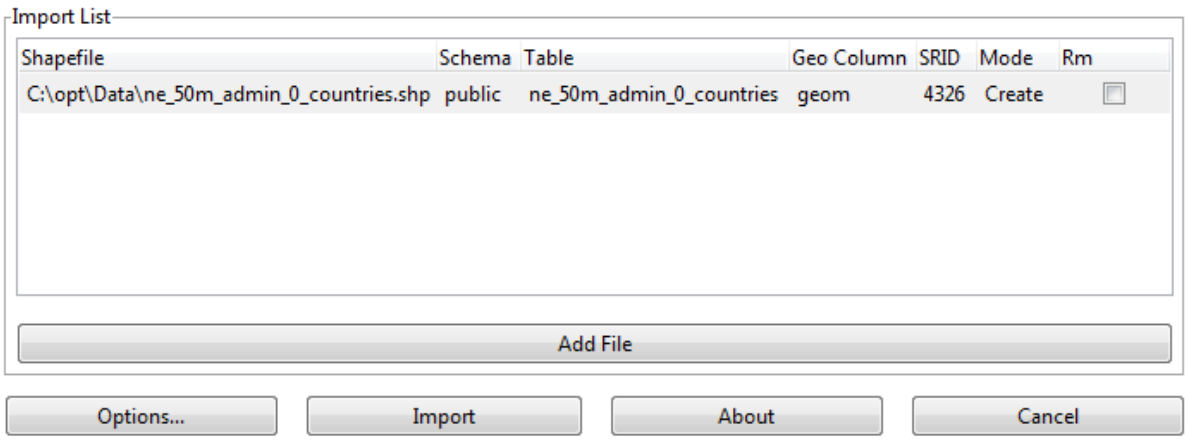

PostGIS Bundle 2.3 for PostgreSQL x64 9
PostgreSQL 9.6
Application Stack Builder
pgAdmin 4
Reload Configuration
SQL Shell (psql)
Documentation
Browser
Servers (1)
PostgreSQL 9.6
Databases (2)
postgres
template_postgis
Login/Group Roles
Tablespaces


Create - Database
General
Definition
Security
Parameters
SQL
Database
gisdata
Owner
postgres
Comment
Save
Cancel
Reset


Create - Extension
General
Definition
SQL
Name
postgis
Comment
Save
Cancel
Reset








```
==============================
Importing with configuration: ne_50m_admin_0_countries, public, geom, C:\opt\Data\ne_50m_admin_0_countries.shp,
mode=c, dump=1, simple=0, geography=0, index=1, shape=1, srid=4326
Shapefile type: Polygon
PostGIS type: MULTIPOLYGON[2]
Shapefile import completed.
```

Basic Store Info

Workspace *

Packt

Data Source Name *

gisdata

Description

gisdata

Enabled

Connection Parameters

dbtype *

postgis

host *

localhost

port *

5432

database

gisdata

schema

public

user *

postgres

passwd

••••••••

<< < 1 > >> Results 0 to 0 (out of 0 items)

Search

Published	Layer name	Action
	ne_50m_admin_0_countries	Publish

<< < 1 > >> Results 0 to 0 (out of 0 items)

Edit Layer

Basic Resource Info

Name

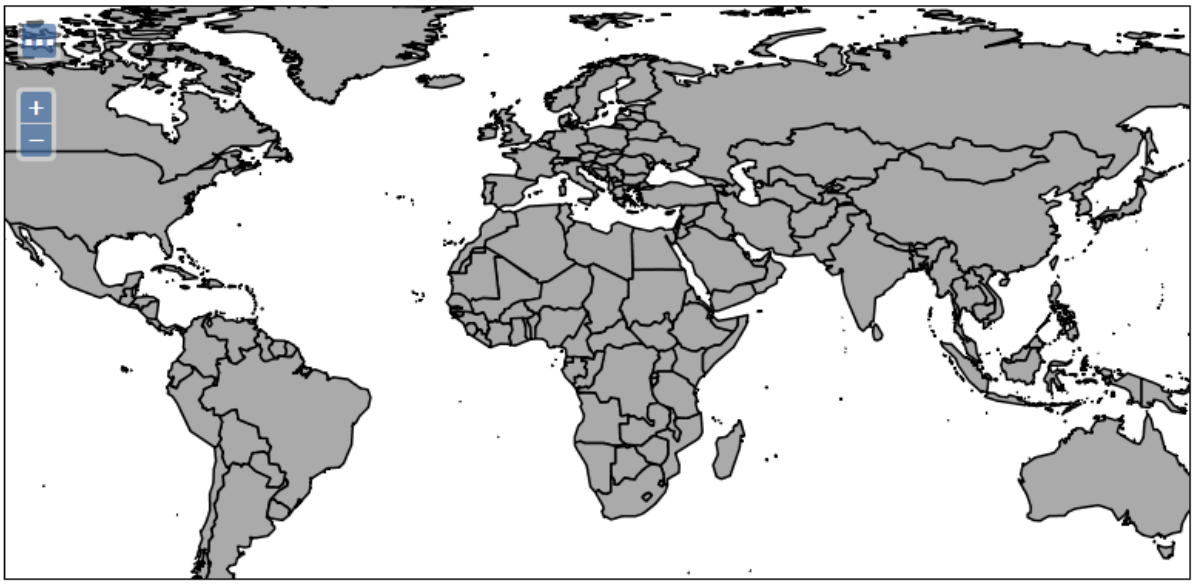
NaturalEarthCountries

Enabled

Advertised

Title

NaturalEarthCountries



Scale = 1 : 140M -58.00781, 21.09375

Click on the map to get feature info

Cross Blended Hypso with Relief, Water, Drains, and Ocean Bottom

Shaded Relief, Water, Drainages, and Ocean Bottom

Land coloring based on elevation.

Download large size (385.56 MB) version 3.2.0

Download medium size (228.81 MB) version 3.2.0

About | Issues | Version History »

Stores

Manage the stores providing data to GeoServer

Add new Store

Remove selected Stores

Raster Data Sources

- ArcGrid - ARC/INFO ASCII GRID Coverage Format
- GeoTIFF - Tagged Image File Format with Geographic information
- Gtopo30 - Gtopo30 Coverage Format
- ImageMosaic - Image mosaicking plugin
- WorldImage - A raster file accompanied by a spatial data file

Add Raster Data Source

Description

GeoTIFF
Tagged Image File Format with Geographic information

Basic Store Info

Workspace *

Packt

Data Source Name *

EarthRaster

Description

Enabled

Connection Parameters

URL *

file://C:\opt\Data\HYP_LR_SR_OB_DR\HYP_LR_SR_OB Browse...

Save Cancel

<< < 1 > >> Results 1 to 1 (out of 1 items) Search

Published	Layer name	Action
	HYP_LR_SR_OB_DR	Publish

<< < 1 > >> Results 1 to 1 (out of 1 items)

Coordinate Reference Systems

Native SRS

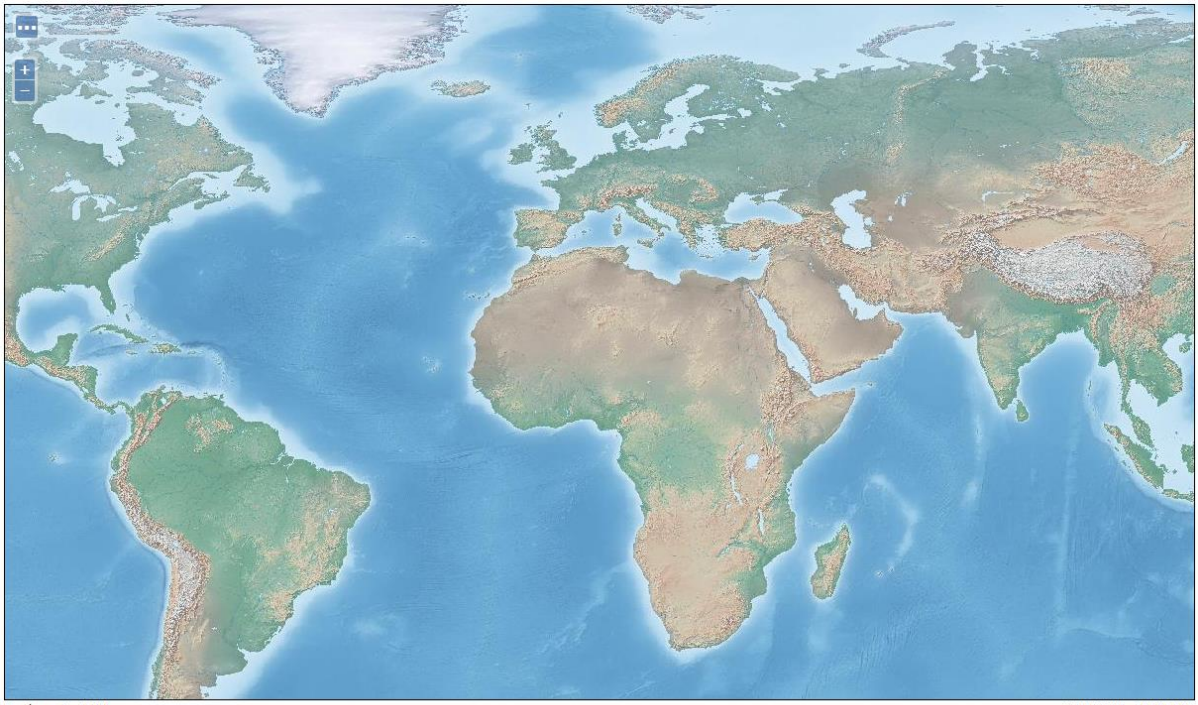
UNKNOWN GCS_WGS_1984...

Declared SRS

EPSG:4326 Find... EPSG:WGS 84...

SRS handling

Force declared



Scale = 1 : 70M -37.96875, 60.99609

Click on the map to get feature info

Vector Formats

- App Schema
- ArcSDE
- DB2
- H2
- MySQL
- Oracle
- Pregeneralized Features
- SQL Server
- Teradata

Vector Data Sources

Directory of spatial files (shapefiles) - Takes a directory of shapefiles and exposes it as a data store
Oracle NG - Oracle Database
Oracle NG (JNDI) - Oracle Database (JNDI)
Oracle NG (OCI) - Oracle Database (OCI)
PostGIS - PostGIS Database

Basic Store Info

Workspace *

Packt

Data Source Name *

Oracle11G

Description

Oracle Spatial

Enabled

Connection Parameters

dbtype *

oracle

host

vmOra11Gsrv

port

1521

database *

GISDATA

schema

GISUSER

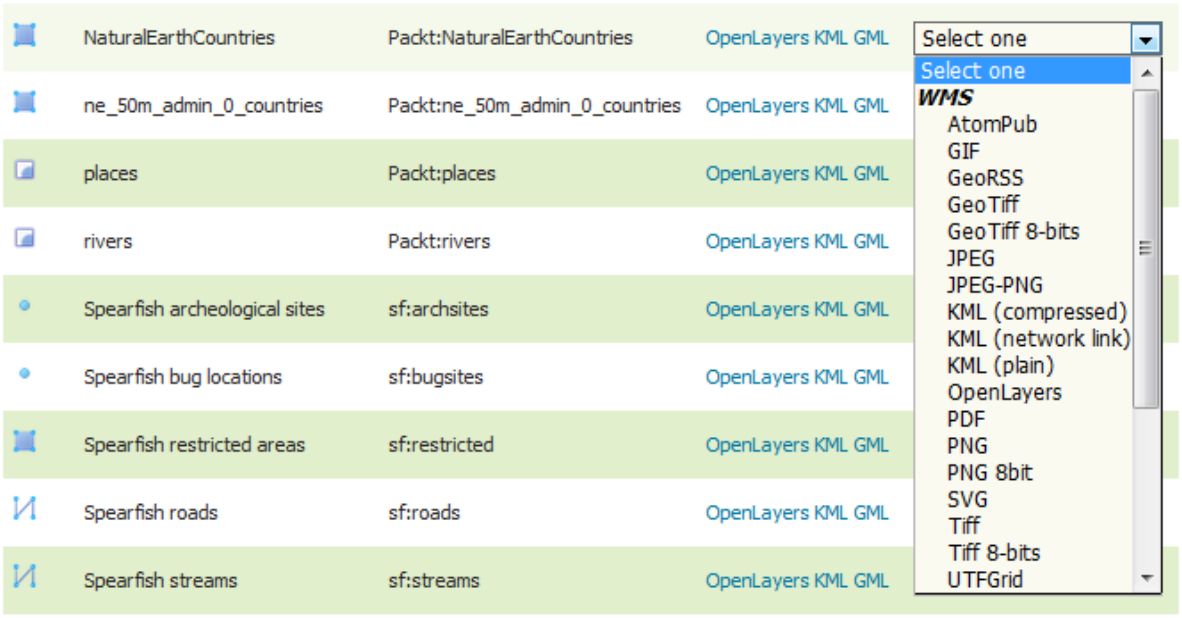
user *

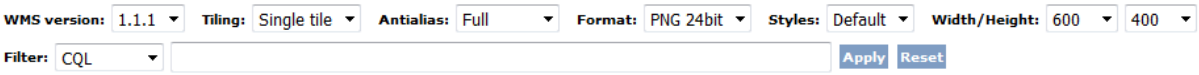
gisuser

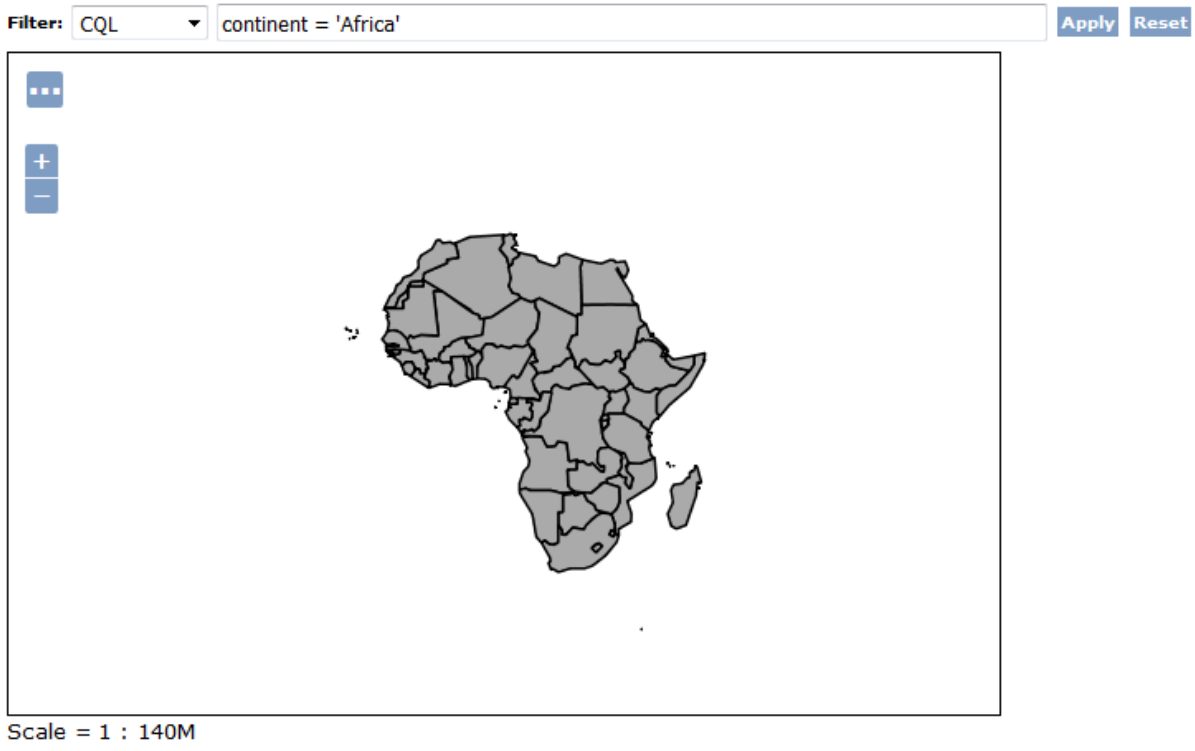
passwd

••••••••••

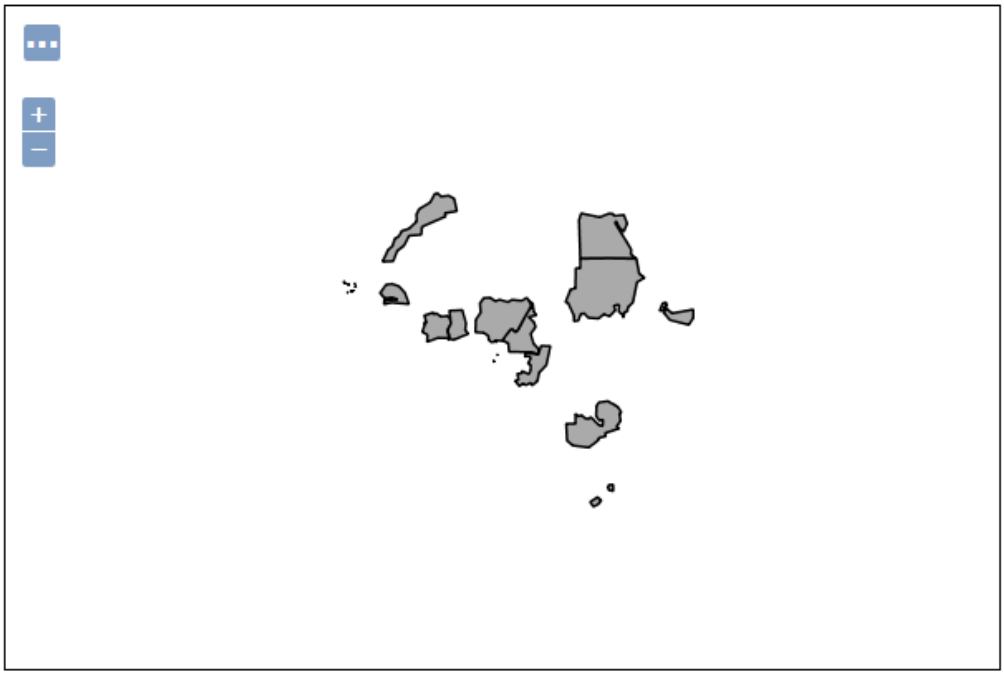
Chapter 5: Accessing Layers





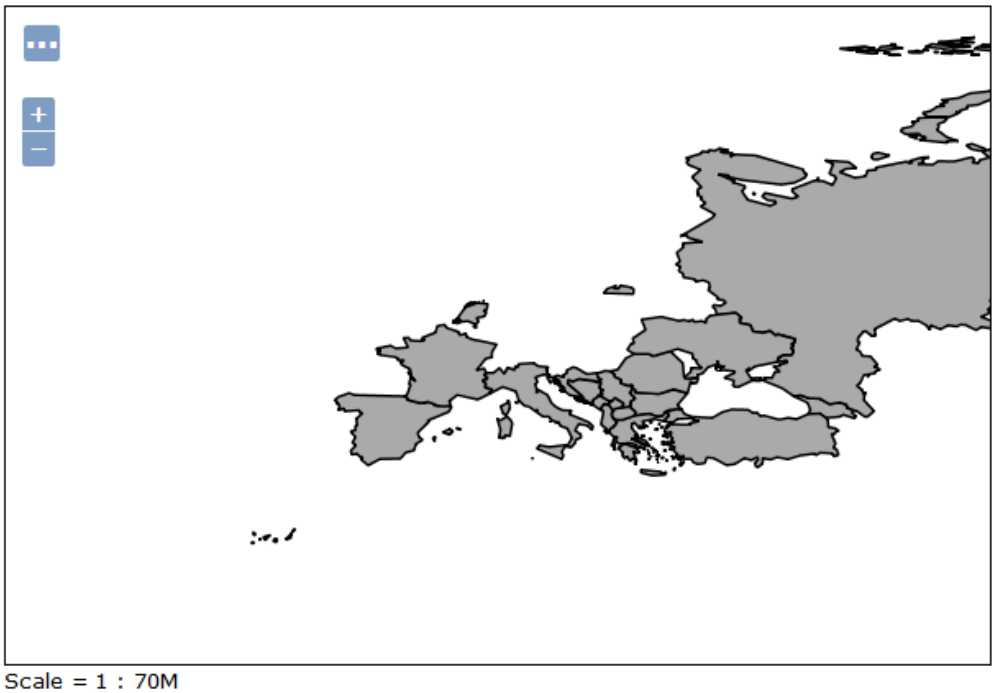


Filter: CQL continent = 'Africa' AND income_grp = '4. Lower middle income' Apply Reset



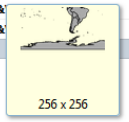
Scale = 1 : 140M

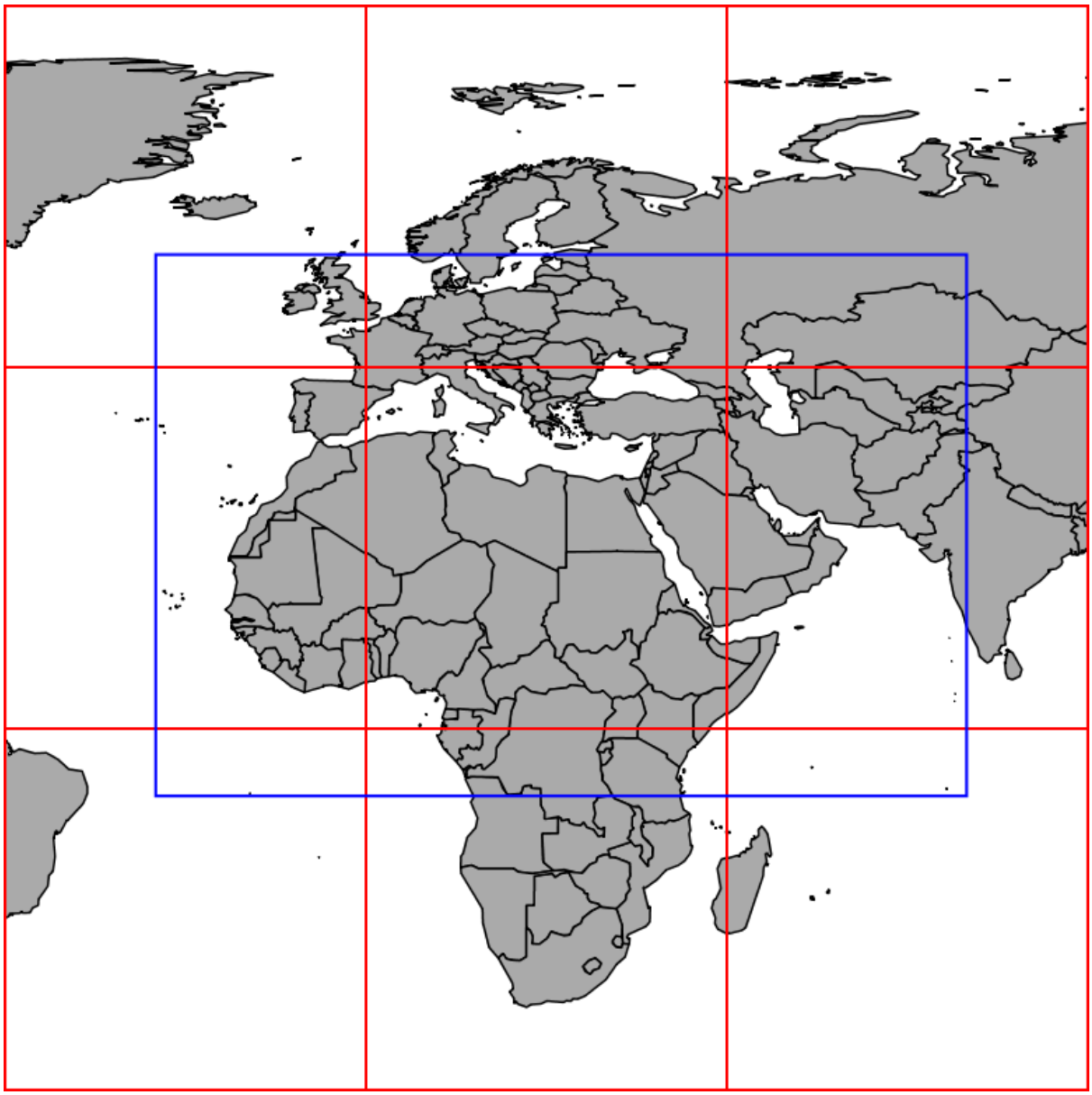
Filter: CQL BBOX(geom, 0, 40, 40, 45) Apply Reset



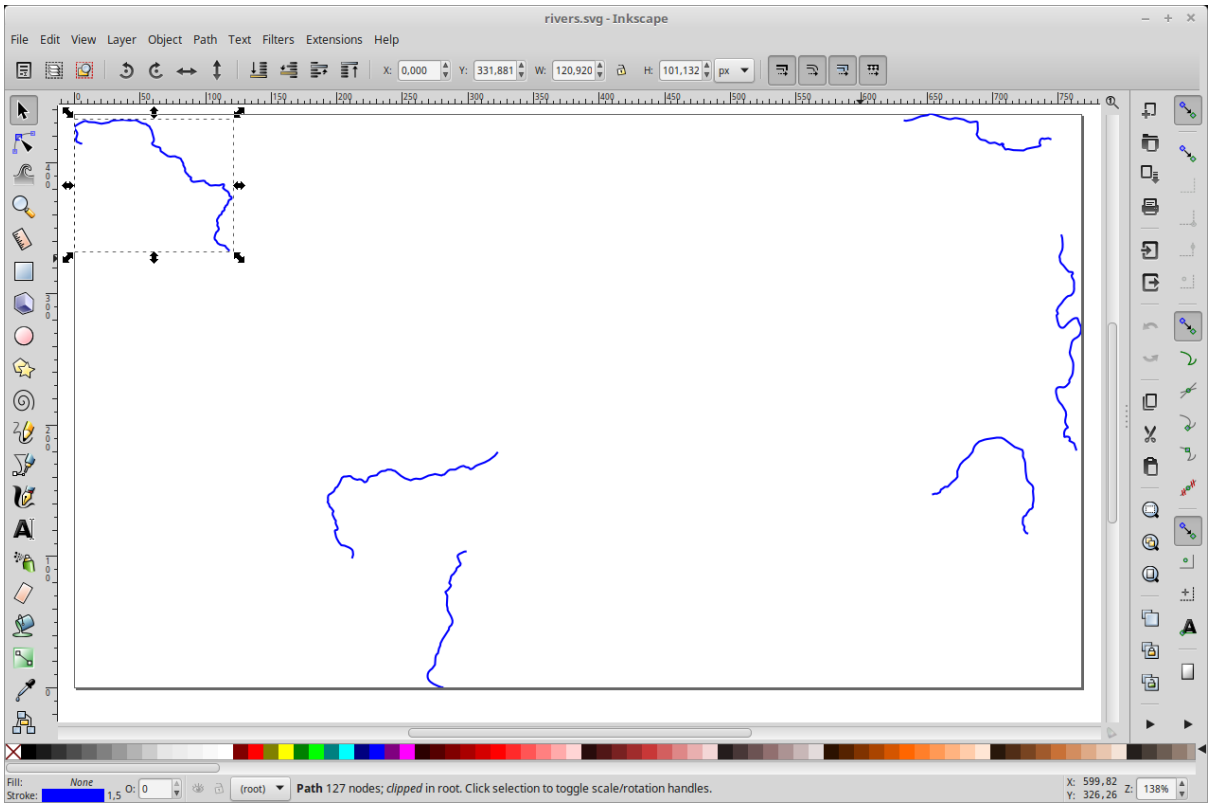
Scale = 1 : 70M

GET wms?SERVICE=WMS&VI	200	localhost:8080	51,9 KB	[::1]:8080	123ms
GET wms?SERVICE=WMS&VI	200	localhost:8080	14,0 KB	[::1]:8080	150ms
http://localhost:8080/geoserver/Packt/wms?SERVICE=WMS&VERSION=1.1.1&REQUEST=GetMap&FORMAT=image%2Fpng&TRANSPARENT=true&tiled=true&STYLES&LAYERS=Packt%3ANatura...					
GET wms?SERVICE=WMS&		localhost:8080	18,8 KB	[::1]:8080	109ms
GET wms?SERVICE=WMS&		localhost:8080	11,0 KB	[::1]:8080	116ms
5 richieste			104,8 KB		273ms





```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE svg PUBLIC '-//W3C//DTD SVG 1.0//EN'
          'http://www.w3.org/TR/2001/REC-SVG-20010904/DTD/svg10.dtd'>
<svg color-interpolation="auto" color-rendering="auto" fill="black" fill-opacity="1" font-family="&apos;Dia
><!--Generated by the Batik Graphics2D SVG Generator--><defs id="genericDefs"
  /><g
  ><defs id="defs1"
    ><clipPath clipPathUnits="userSpaceOnUse" id="clipPath1"
      ><path d="M0 0 L768 0 L768 437 L0 437 L0 0 Z"
      /></clipPath
    ></defs
    ><g fill="blue" stroke="blue" stroke-linecap="butt" stroke-miterlimit="1" stroke-width="1.5" text-rende
    ><path clip-path="url(#clipPath1)" d="M632.6951 5.1621 L634.4517 5.5094 L638.9845 4.6802 L645.8612 1.99
      /><path clip-path="url(#clipPath1)" d="M299.3682 333.4405 L297.4872 333.6404 L293.8634 335.3867 L292.
      /><path clip-path="url(#clipPath1)" d="M727.6427 319.8786 L726.0049 319.408 L724.4319 316.946 L724.8(
      /><path clip-path="url(#clipPath1)" d="M764.2831 256.6906 L764.1797 255.8133 L762.6307 251.1641 L761.
      /><path clip-path="url(#clipPath1)" d="M211.9831 338.7936 L212.8656 335.9299 L212.5687 333.2694 L212.
      /><path clip-path="url(#clipPath1)" d="M6.2051 22.6381 L5.2271 22.8897 L4.3304 22.4813 L3.227 21.8921
    /></g
  ></g
></svg
>
```



states.cst	07/07/2017 15:34	File CST	1 KB
states.dbf	07/07/2017 15:34	File DBF	19 KB
states.prj	07/07/2017 15:34	File PRJ	1 KB
states.shp	07/07/2017 15:34	File SHP	183 KB
states.shx	07/07/2017 15:34	File SHX	1 KB

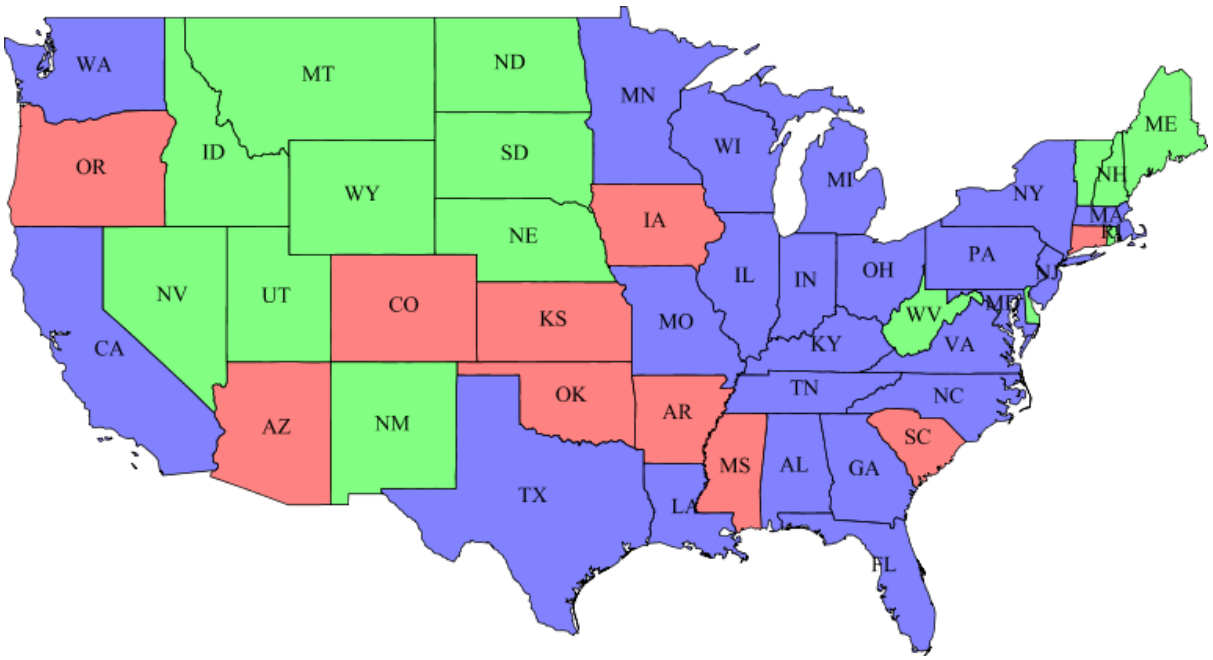
Output Formats

- DXF
- Excel
- Image Map
- JPEG Turbo
- NetCDF
- OGR (WFS, WPS)
- XSLT

states

fid	STATE_NAME	STATE_FIPS	SUB_REGION	STATE_ABBR	LAND_KM	WATER_KM	PERSONS	FAMILIES	HOUSHOL
states.17	Alabama	01	E S Cen	AL	131443.119	4332.268	4040587.0	1103835.0	1506790.0

Update Sequence	261	
Resource Cache		Clear
Configuration and catalog		Reload



Chapter 6: Styling Your Layers

Miscellaneous

- Chart Symbolizer
- Control Flow
- Cross Layer Filtering
- CSS Styling
- CAS
- Monitor (Core, Hibernate)
- Importer (Core, BDB Backend)
- INSPIRE
- Printing
- YSLD Styling

Styles

Manage the Styles published by GeoServer

Add a new style

Removed selected style(s)

<< < 1 > >> Results 1 to 21 (out of 21 items) Search

Style Name	Workspace
burg	
capitals	
cite_lakes	
dem	
generic	

Style Editor

12pt

```
<?xml version="1.0" encoding="UTF-8"?>
<StyledLayerDescriptor version="1.0.0"
  xsi:schemaLocation="http://www.opengis.net/sld http://schemas.opengis.net/sld/1.0.0
/StyledLayerDescriptor.xsd" xmlns="http://www.opengis.net/sld"
  xmlns:ogc="http://www.opengis.net/ogc" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <NamedLayer>
    <Name>capitals</Name>
    <UserStyle>
      <Name>capitals</Name>
      <Title>Capital cities</Title>
      <FeatureTypeStyle>
        <Rule>
          <Title>Capitals</Title>
          <PointSymbolizer>
            <Graphic>
              <Mark>
                <WellKnownName>circle</WellKnownName>
                <Fill>
                  <CssParameter name="fill">
                    <ogc:Literal>#FFFFFF</ogc:Literal>
                  </CssParameter>
                </Fill>
                <Stroke>
                  <CssParameter name="stroke">
```

Validate | Apply | Submit | Cancel

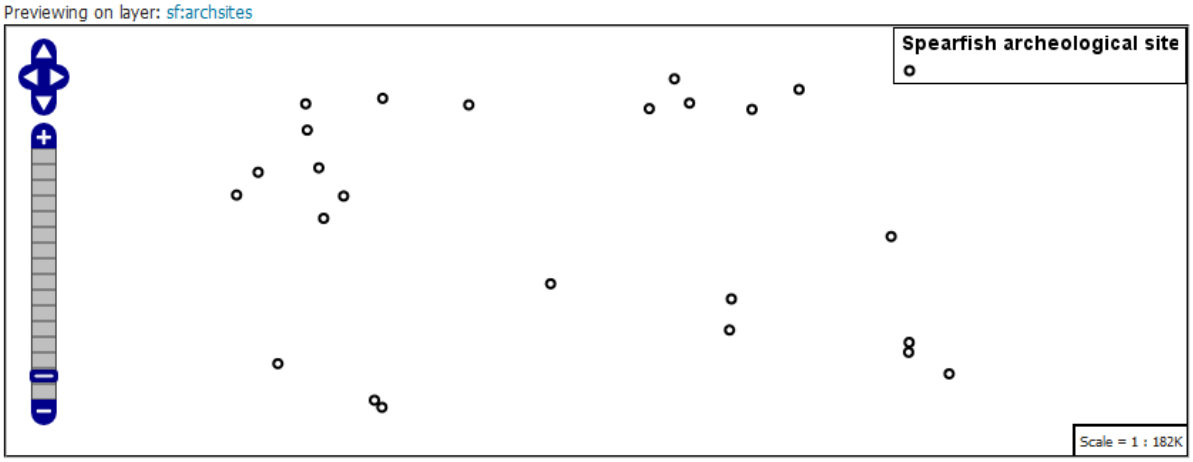
Data | Publishing | Layer Preview | Layer Attributes

<< < 1 > >> Results 1 to 23 (out of 23 items) Search

Workspace	Layer	Default	Associated
nurc	Arc_Sample	☐	☐
nurc	Pk50095	☐	☐
nurc	mosaic	☐	☐
nurc	Img_Sample	☐	☐
Packt	NaturalEarthCountries	☐	☐
Packt	ne_50m_admin_0_countries	☐	☐
Packt	places	☐	☐
Packt	rivers	☐	☐
sf	archsites	☐	☑
sf	bugsites	☑	☐

Data | Publishing | Layer Preview | Layer Attributes

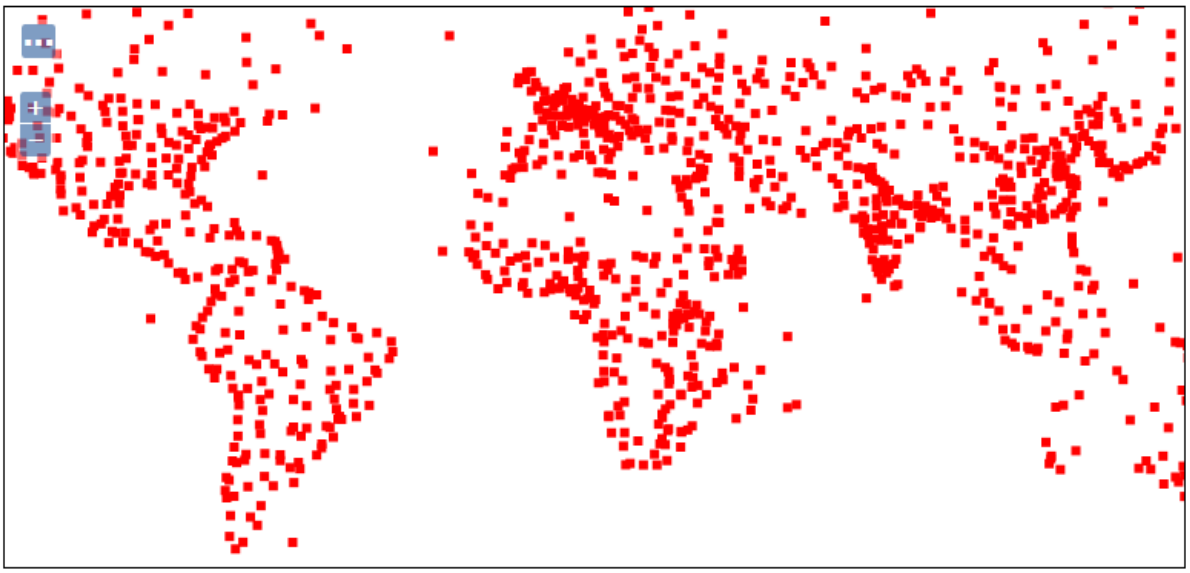
Previewing on layer: sf:archsites



Data | Publishing | Layer Preview | **Layer Attributes**

Previewing on layer: sf:archsites
For reference, here is a listing of the attributes in this data set.

name	type	sample	min	max	computeStats
the_geom	Point	POINT (593493 4914730)			Compute
cat	Long	1	1	25	Compute
str1	String	Signature Rock	Bob Miller	Whitewood Flats	Compute

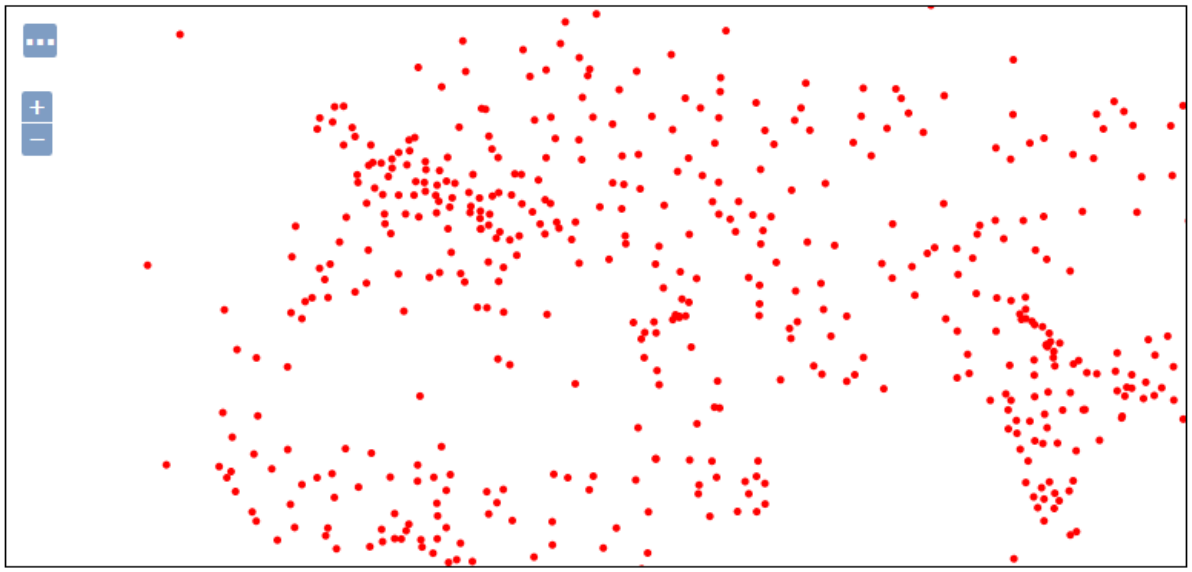


Scale = 1 : 140M -66.09375, 42.89063
Click on the map to get feature info

Styles

Manage the Styles published by GeoServer
Add a new style
Removed selected style(s)

Packt	ne_50m_admin_0_countries	☐	☐
Packt	ne_50m_populated_places	☑	☐
Packt	places	☐	☐



Scale = 1 : 70M -31.28906, 67.32422

Click on the map to get feature info

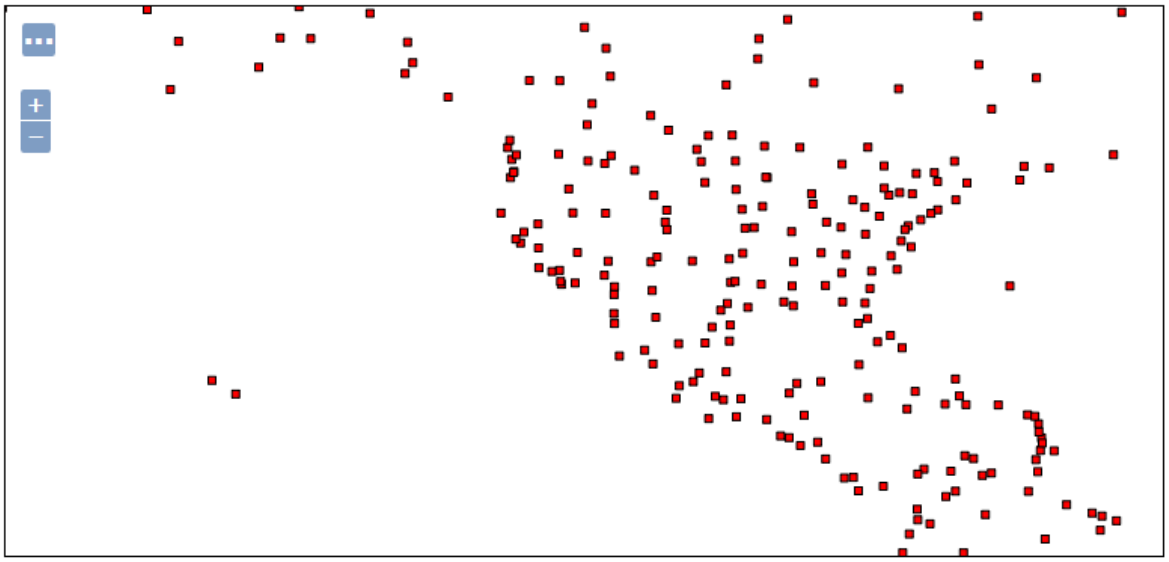
Data | **Publishing** | Layer Preview | Layer Attributes

<< < 1 > >> Results 1 to 24 (out of 24 items) Search

Workspace	Layer	Default	Associated
nurc	Arc_Sample	☐	☐
nurc	Pk50095	☐	☐
nurc	mosaic	☐	☐
nurc	Img_Sample	☐	☐
Packt	NaturalEarthCountries	☐	☐
Packt	ne_50m_admin_0_countries	☐	☐
Packt	ne_50m_populated_places	☐	☑

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: PopulatedPlacesStroke

Filter: CQL Apply Reset

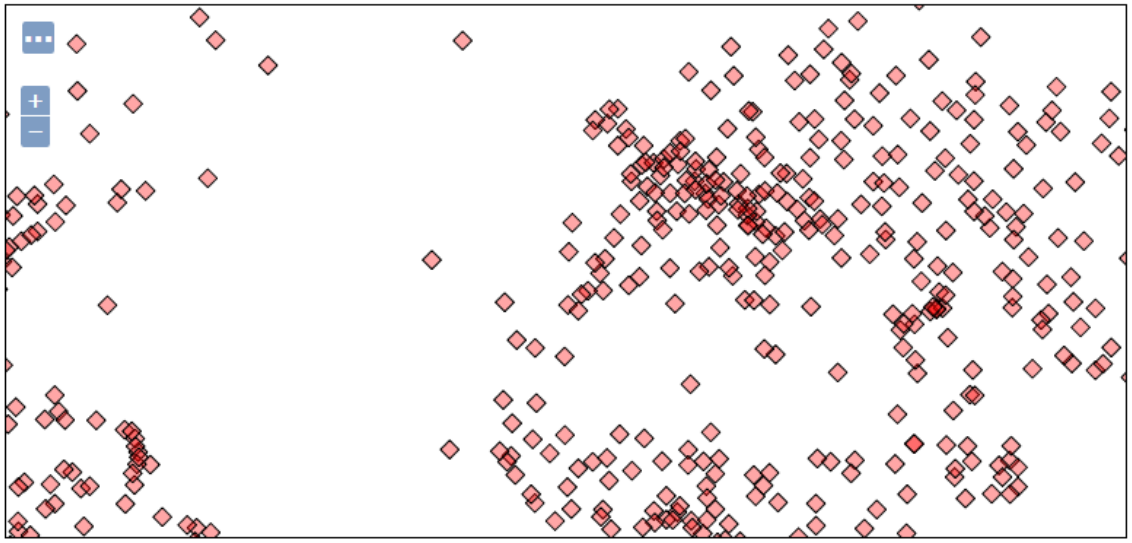


Scale = 1 : 70M

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: PopulatedRotateTransparent

Filter: CQL Apply Reset

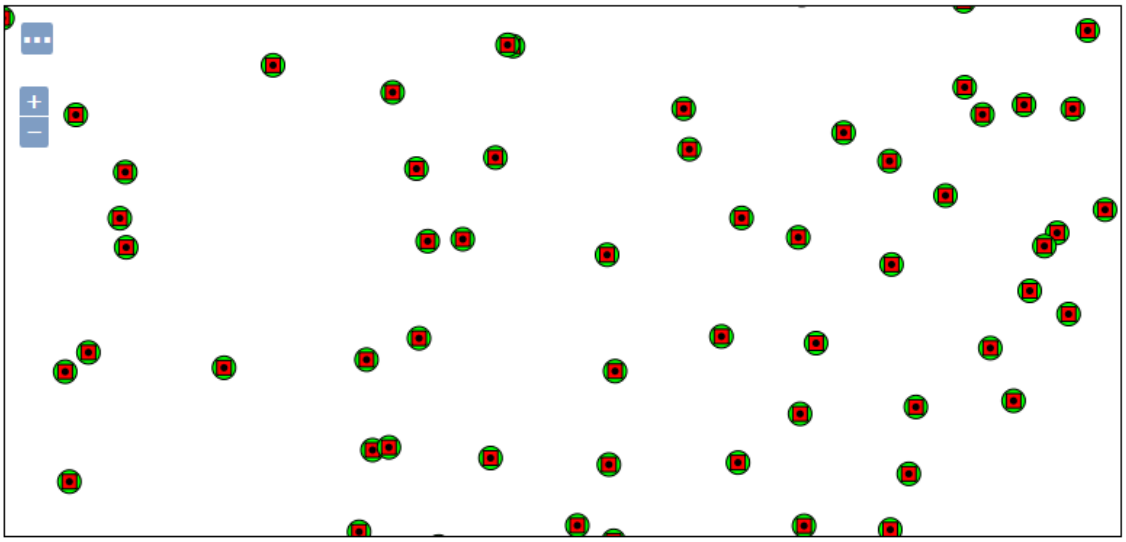


Scale = 1 : 70M

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: PopulatedPlacesComplex

Filter: CQL Apply Reset

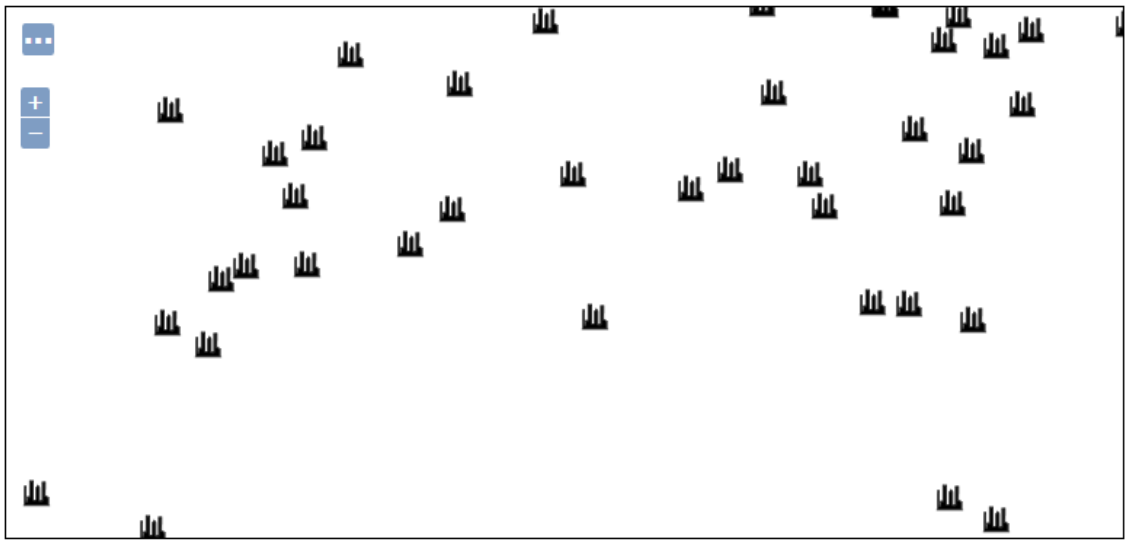


Scale = 1 : 17M

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: PopulatedPlacesGraphics

Filter: CQL Apply Reset

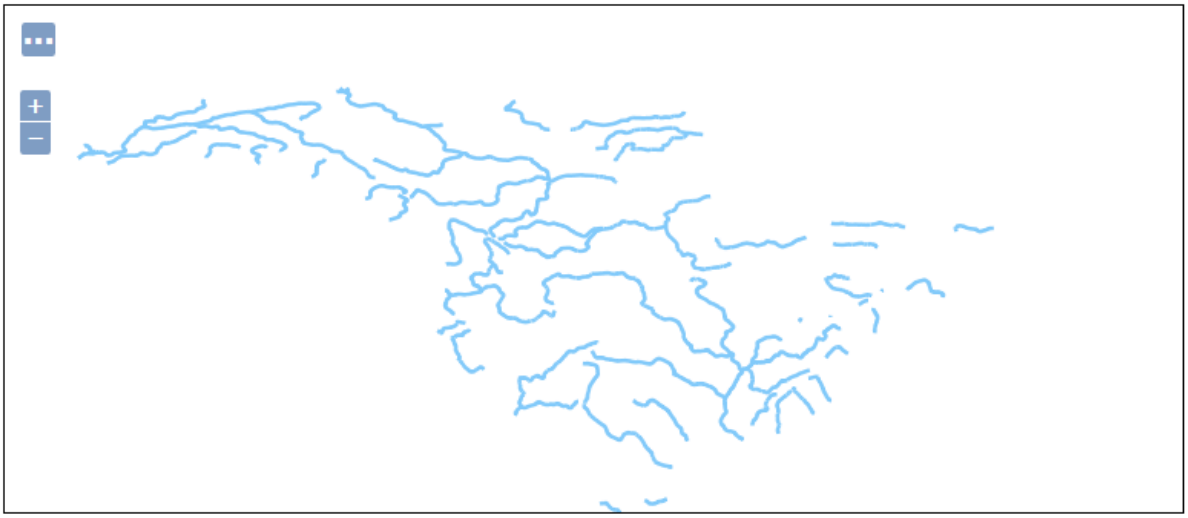


Scale = 1 : 17M

Click on the map to get feature info

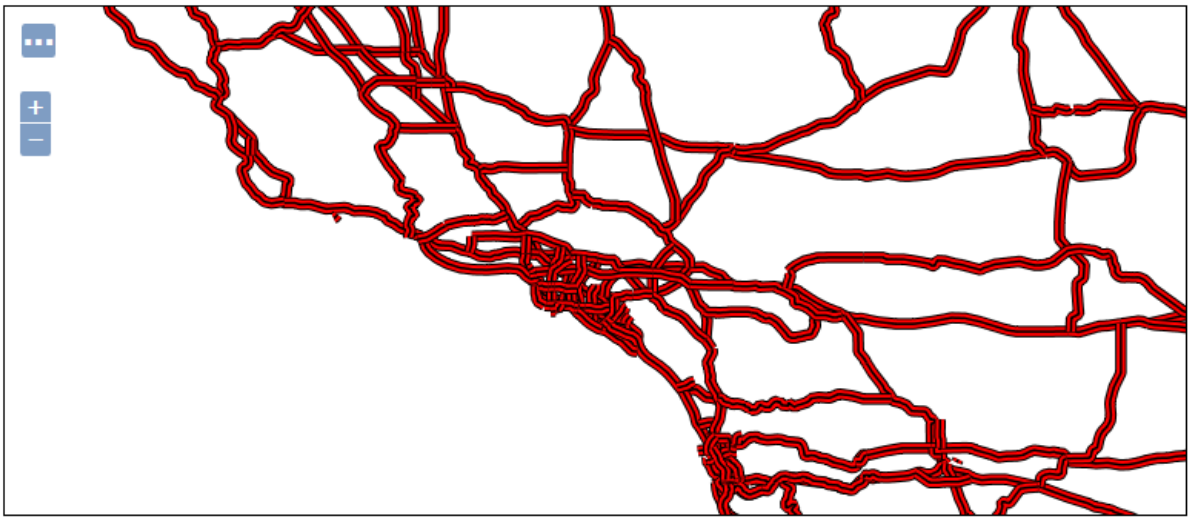
topp	tasmania_state_boundaries	☐	☐
topp	tasmania_water_bodies	☐	☐
Packt	ne_50m_rivers_lake_centerlines	☑	☐

<< < 1 > >> Results 1 to 25 (out of 25 items)



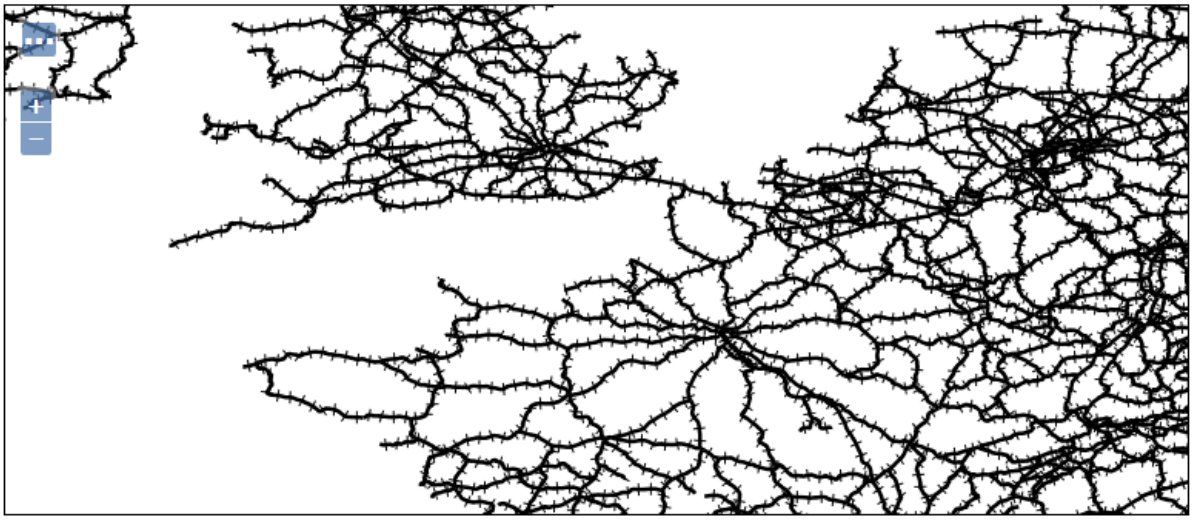
Scale = 1 : 70M -139.21875, 47.46094

Click on the map to get feature info



Scale = 1 : 4M

Click on the map to get feature info

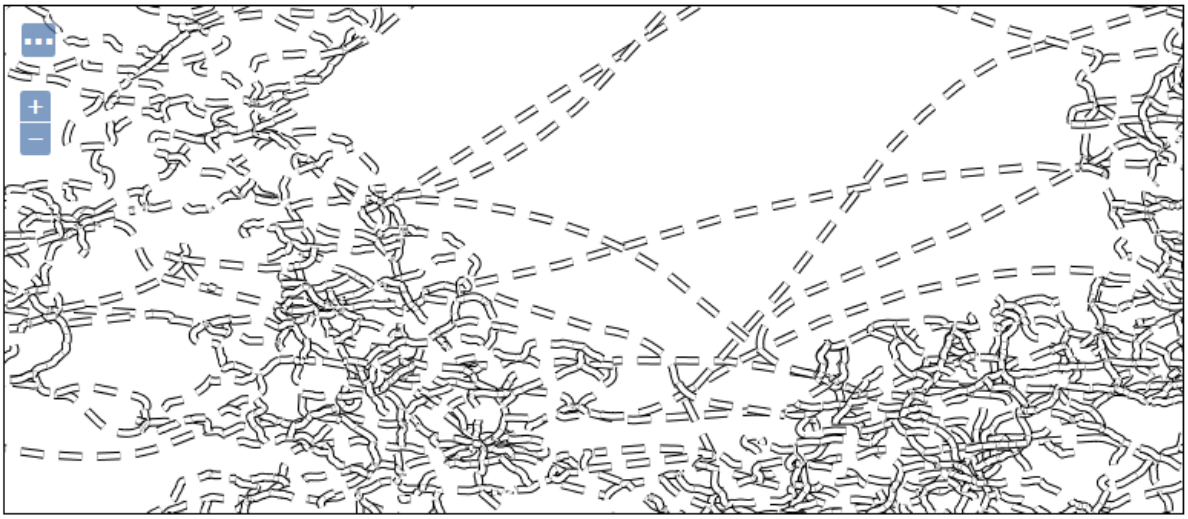


Scale = 1 : 9M

Click on the map to get feature info

WMS version: 1.1.1 **Tiling:** Single tile **Antialias:** Full **Format:** PNG 24bit **Styles:** DashedRoads **Width,**

Filter: CQL Apply Reset

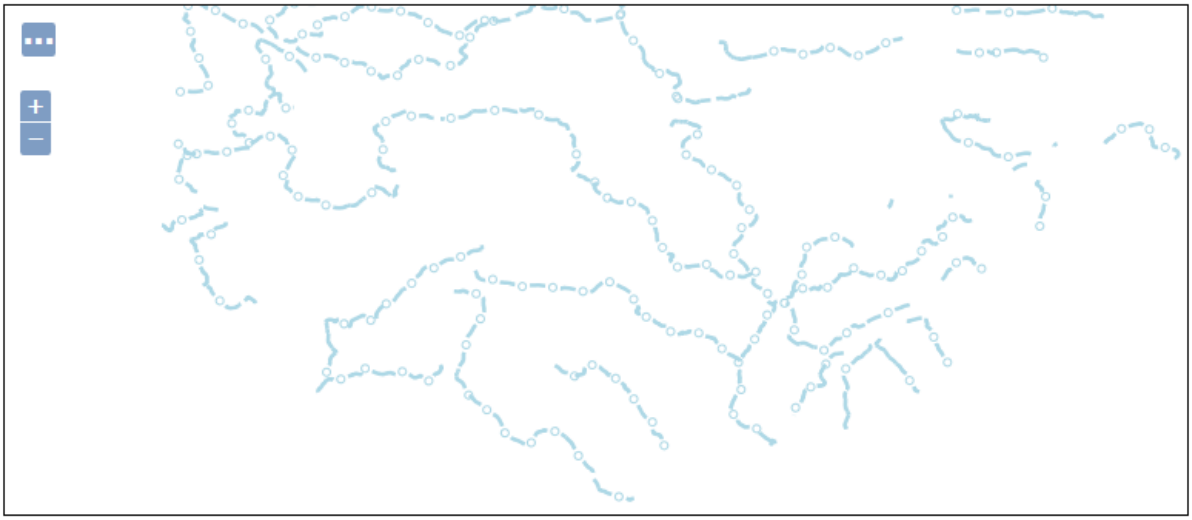


Scale = 1 : 9M

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: DashingAndMarkers

Filter: CQL Apply Reset

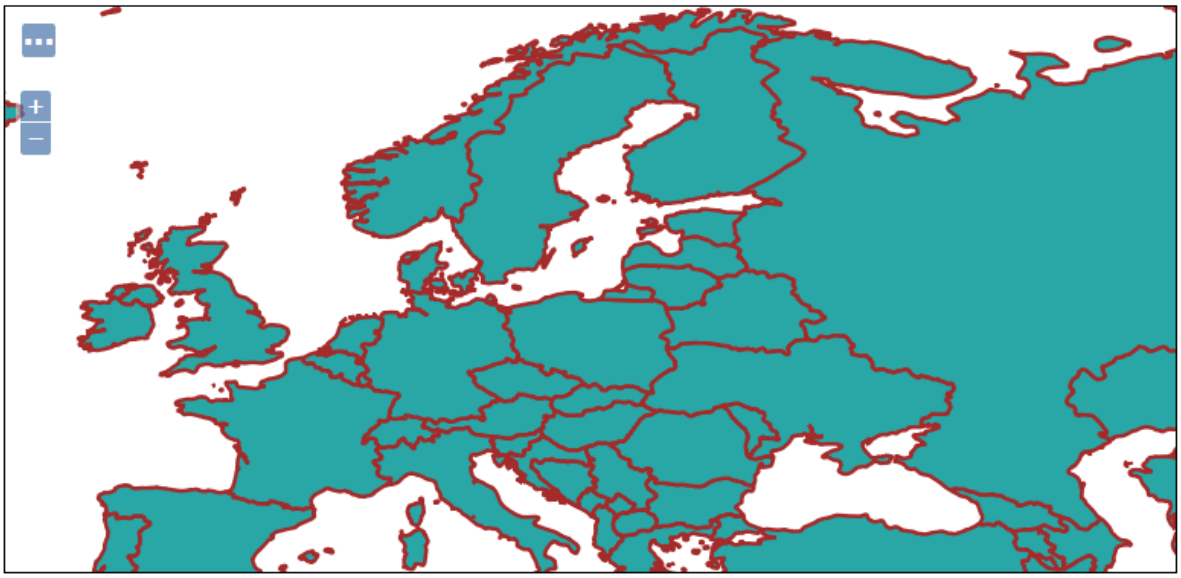


Scale = 1 : 35M -88.94531, 50.44922

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: Countries Width/Heig

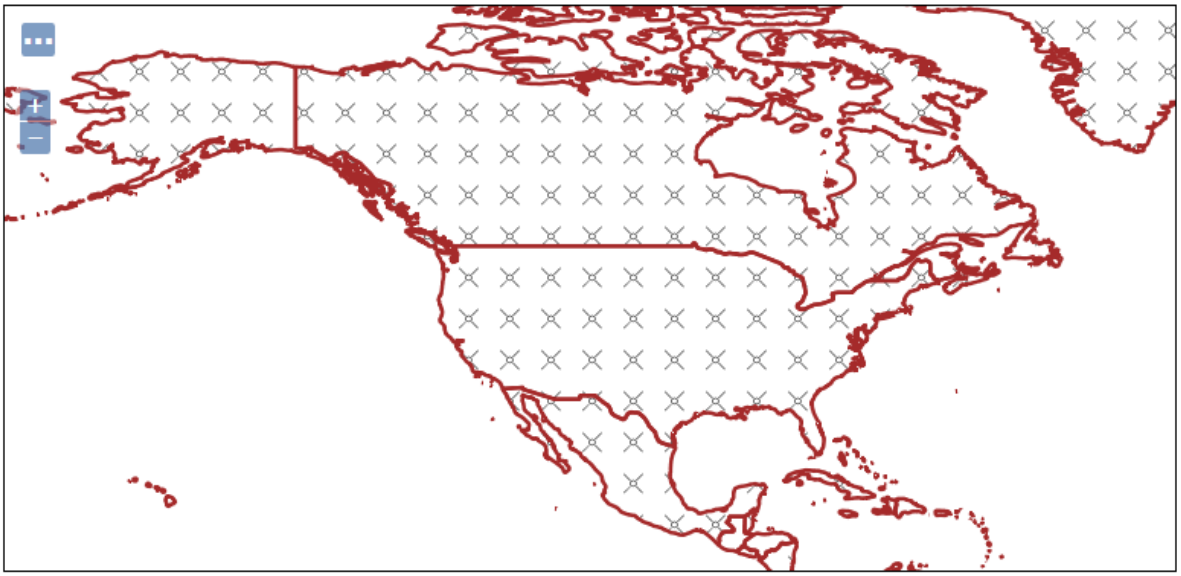
Filter: CQL Apply Reset



Scale = 1 : 35M

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: CountriesGraphics W

Filter: CQL Apply Reset

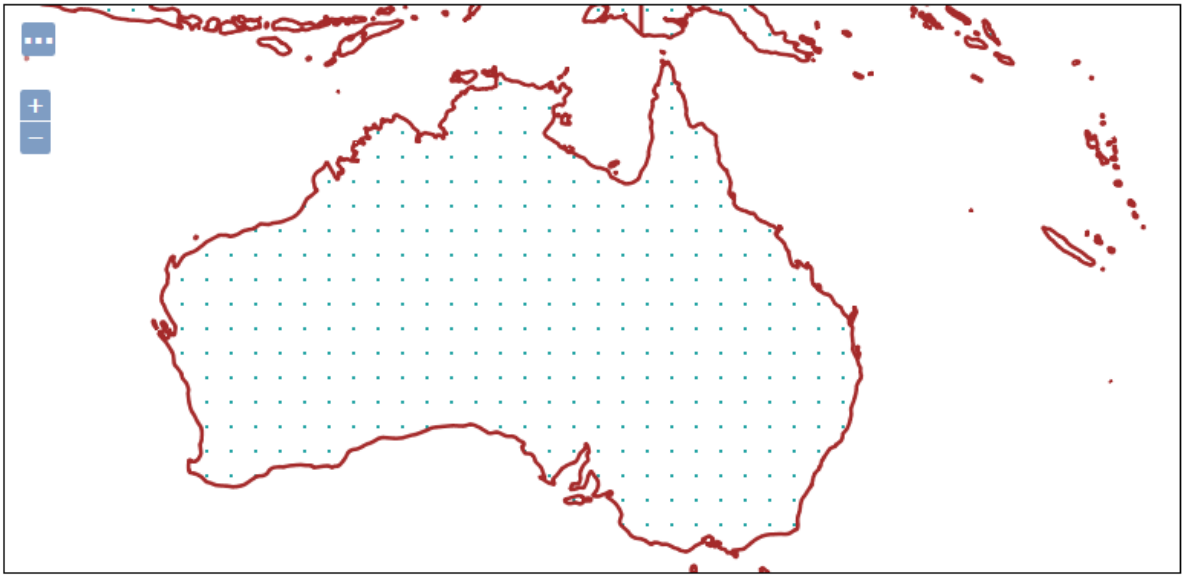


Scale = 1 : 70M

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: CountriesHatching W

Filter: CQL Apply Reset

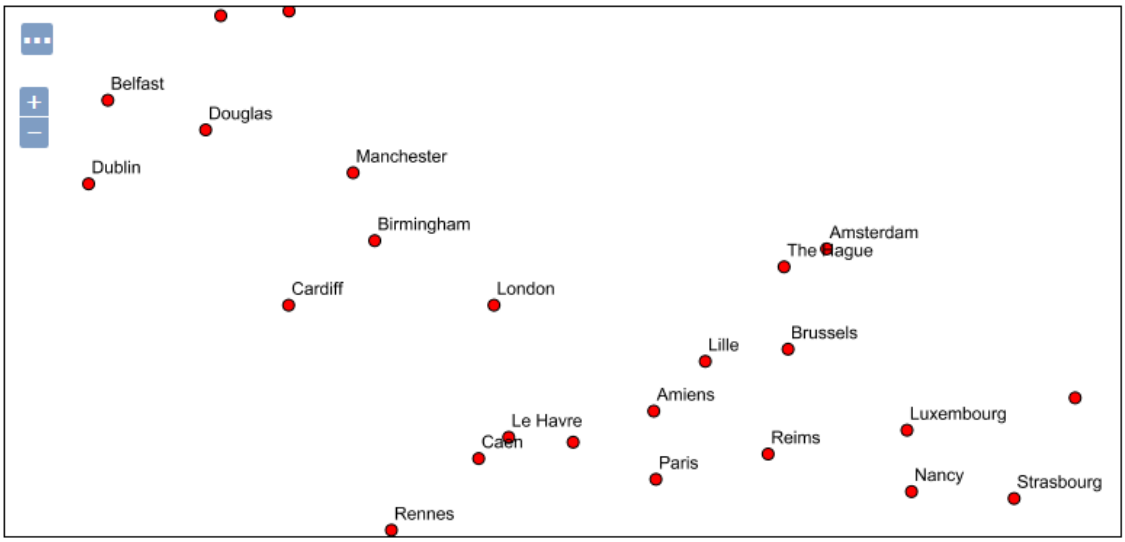


Scale = 1 : 35M

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: PopulatedPlacesLabeled

Filter: CQL Apply Reset

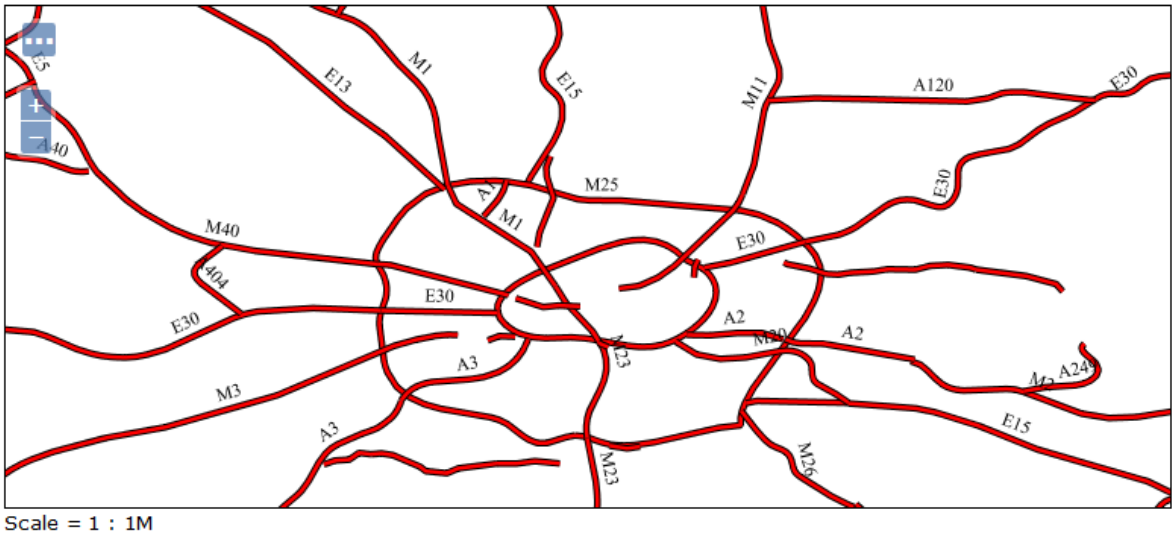


Scale = 1 : 9M

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: RoadsLabeled Width/

Filter: CQL Apply Reset

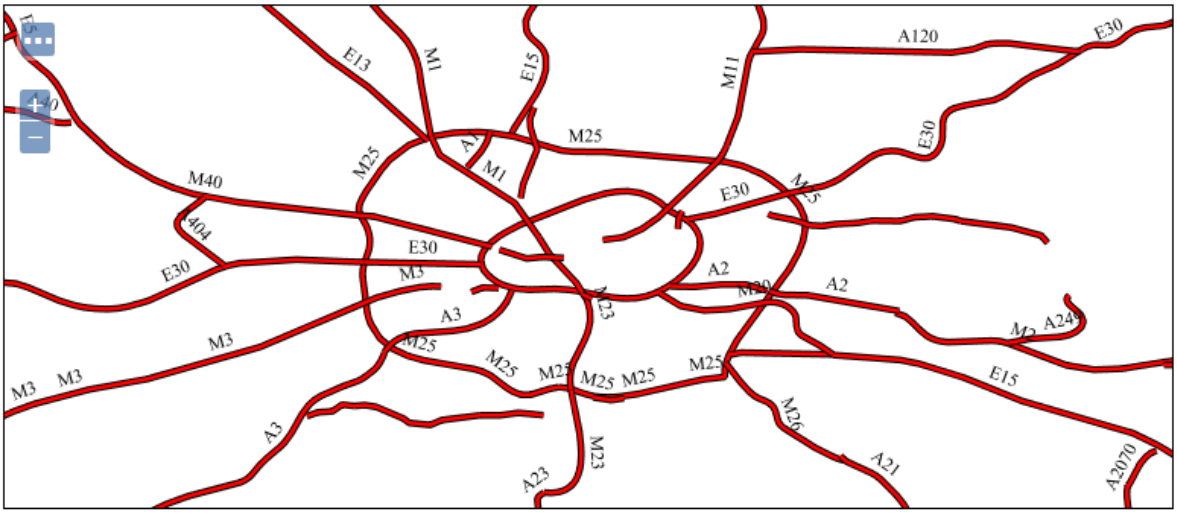


Scale = 1 : 1M

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: RoadsLabeled Width/

Filter: CQL Apply Reset



Scale = 1 : 1M

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: CountriesLabeled Wi

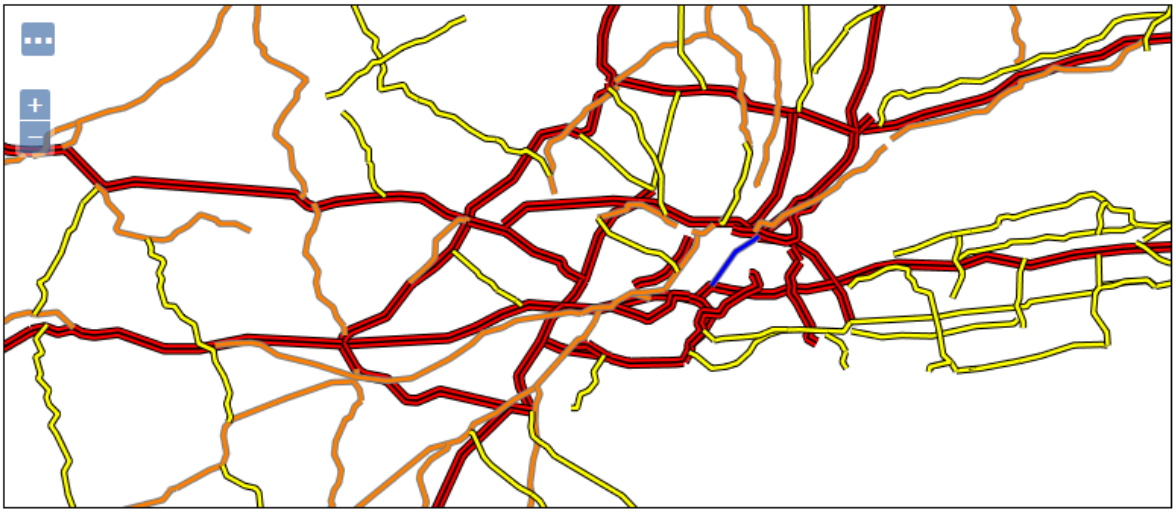
Filter: CQL Apply Reset

Scale = 1 : 17M

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: RoadsThematic Width

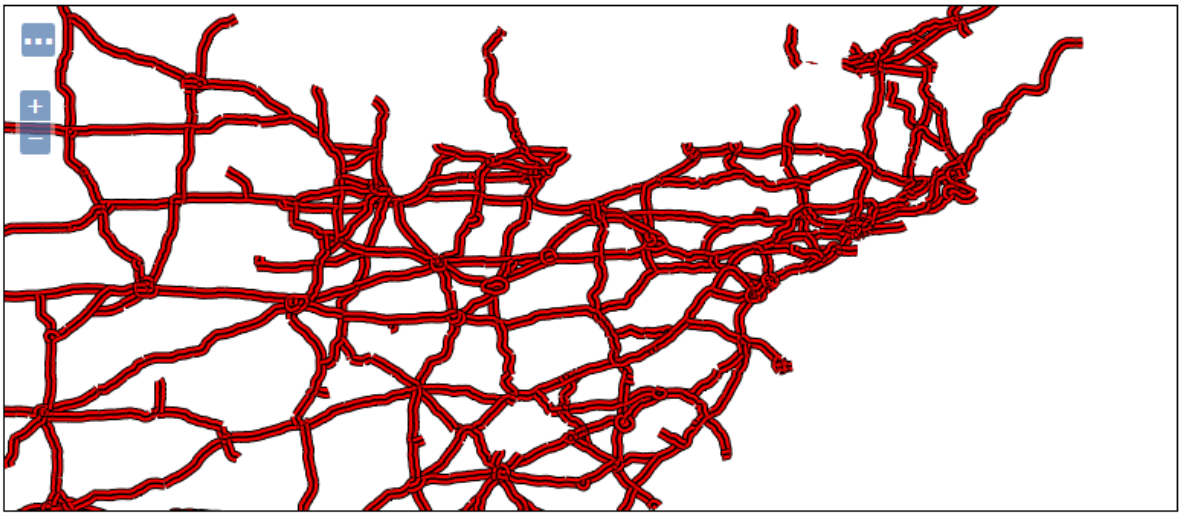
Filter: CQL Apply Reset



Scale = 1 : 1M

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: RoadsThematicScale

Filter: CQL Apply Reset

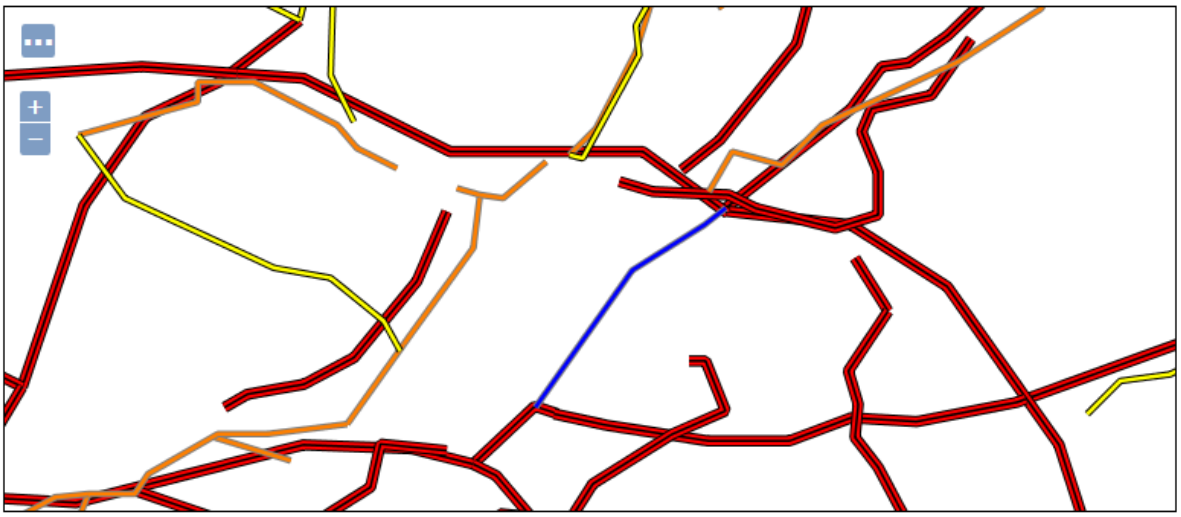


Scale = 1 : 17M

Click on the map to get feature info

WMS version: 1.1.1 Tiling: Single tile Antialias: Full Format: PNG 24bit Styles: RoadsThematicScale

Filter: CQL Apply Reset



Scale = 1 : 273K

Click on the map to get feature info

Layer Groups

Define and manage layer groupings

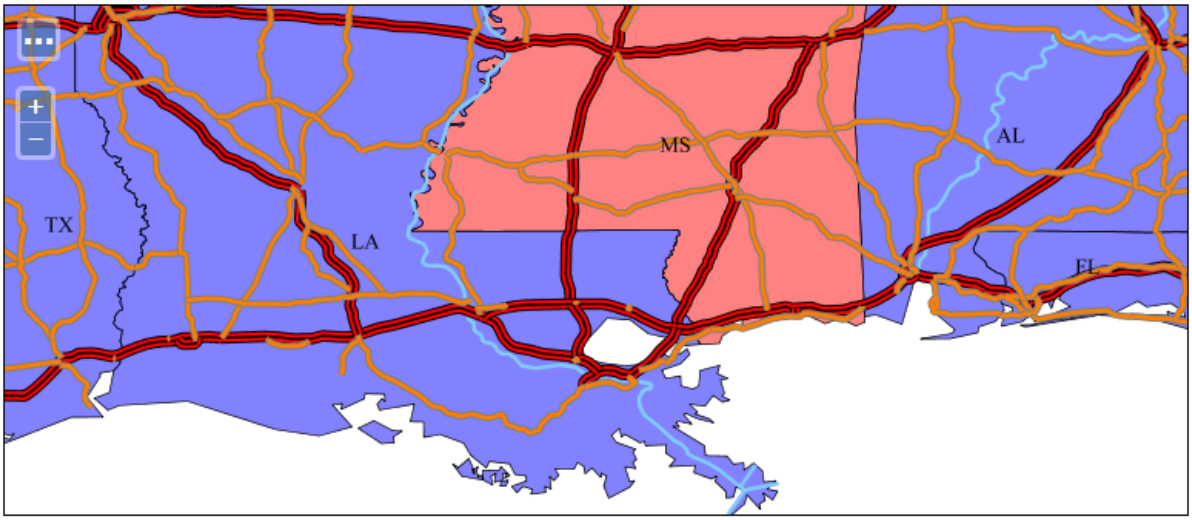
Add new layer group

Remove selected layer group(s)

poly_landmarks	nyc	tiger
tiger_roads	nyc	tiger
states	states_shapefile	topp
tasmania_cities	taz_shapes	topp
tasmania_roads	taz_shapes	topp

<< < 1 2 > >> Results 1 to 25 (out of 27 items)

Tasmania water bodies	topp:tasmania_water_bodies	OpenLayers KML GML	Select one
Spearfish	spearfish	OpenLayers KML	Select one
Tasmania	tasmania	OpenLayers KML	Select one
TIGER New York	tiger-ny	OpenLayers KML	Select one
myLayerGroup	myLayerGroup	OpenLayers KML	Select one



Scale = 1 : 4M -93.83423, 32.47559

Click on the map to get feature info

Data

Style Data

Name

WorldRoads

Workspace

Format

CSS

Legend

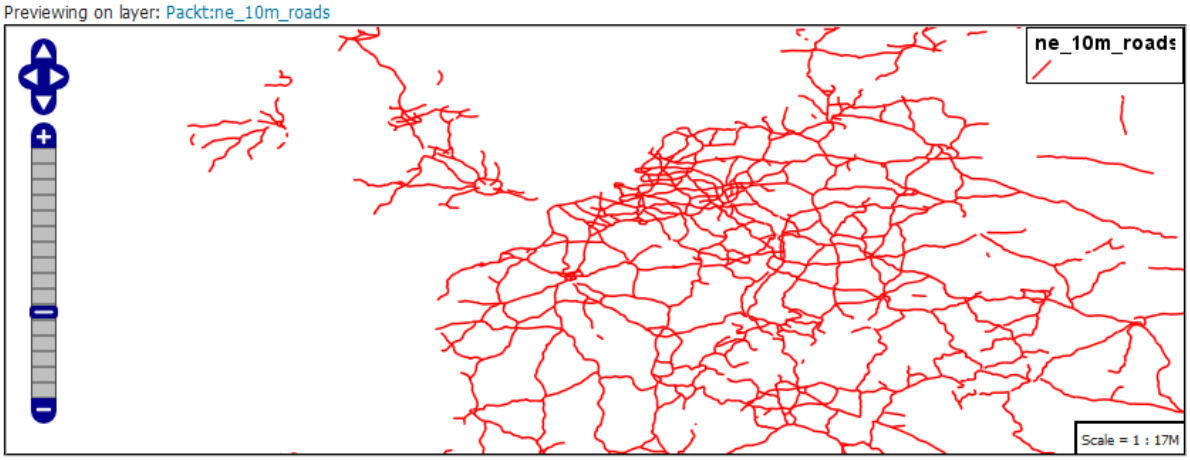
Legend

Add legend

Preview legend

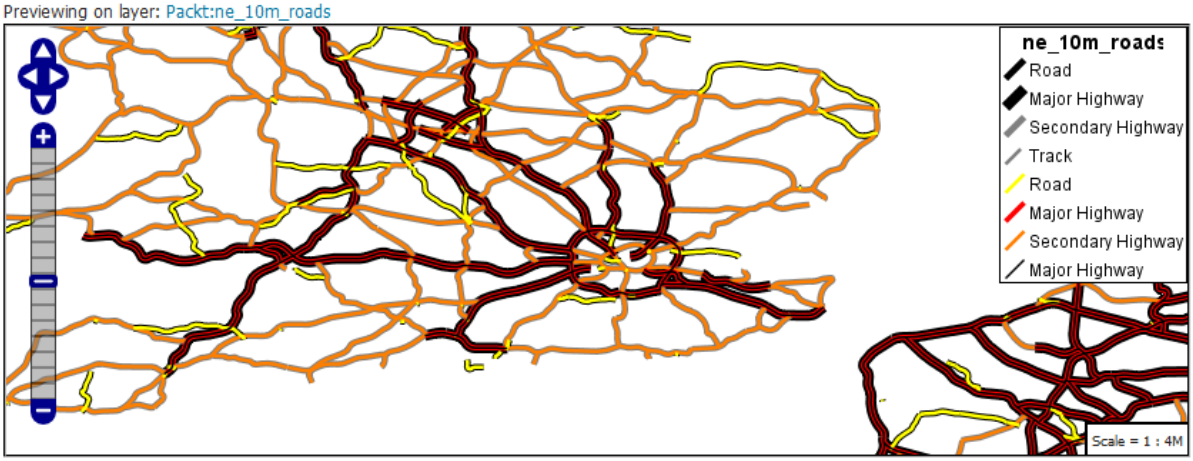
Data | Publishing | Layer Preview | Layer Attributes

Previewing on layer: Packt:ne_10m_roads



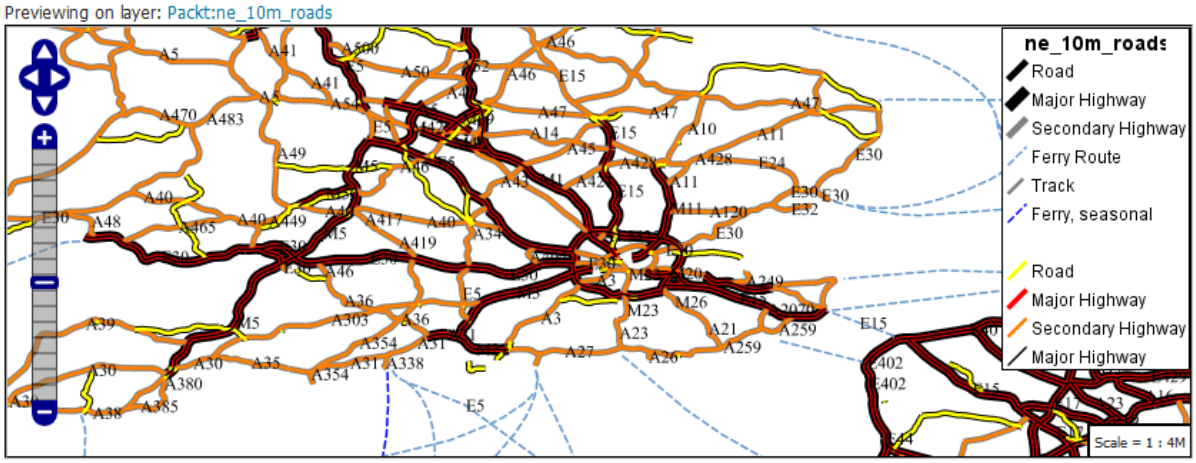
Data | Publishing | Layer Preview | Layer Attributes

Previewing on layer: Packt:ne_10m_roads

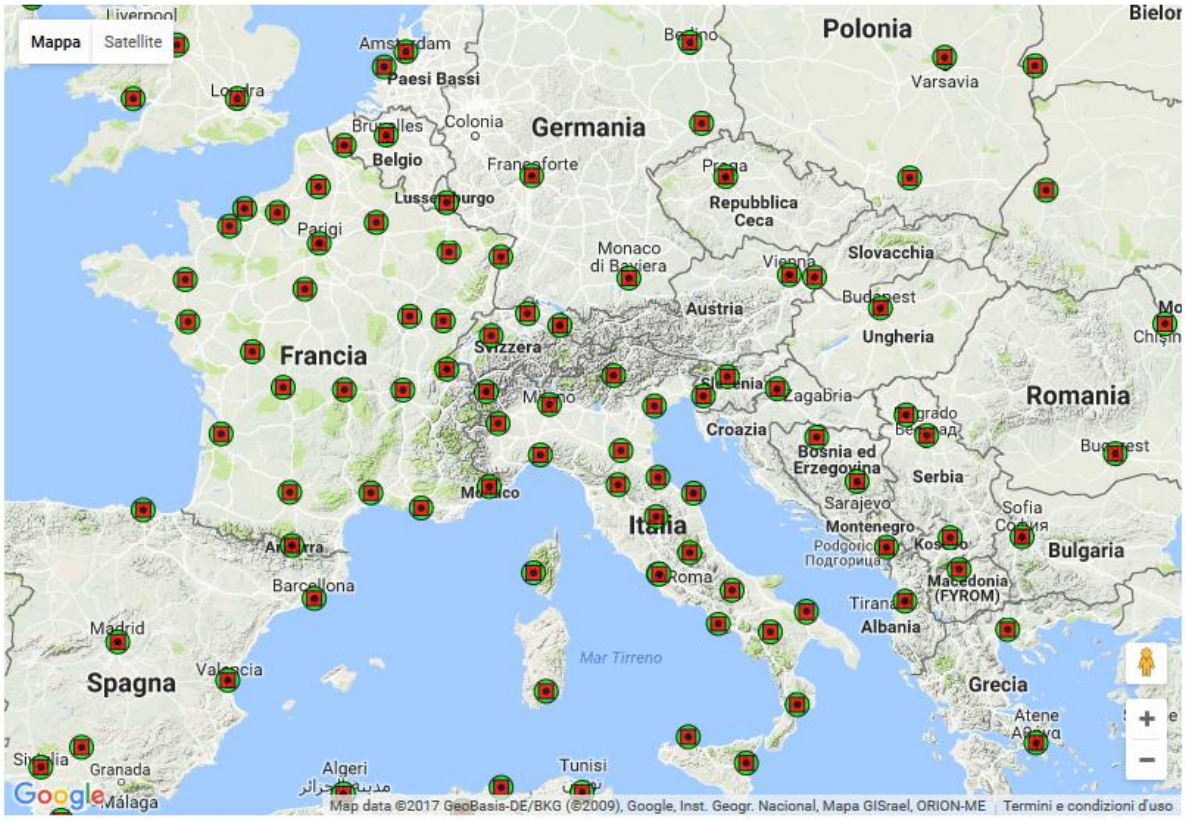


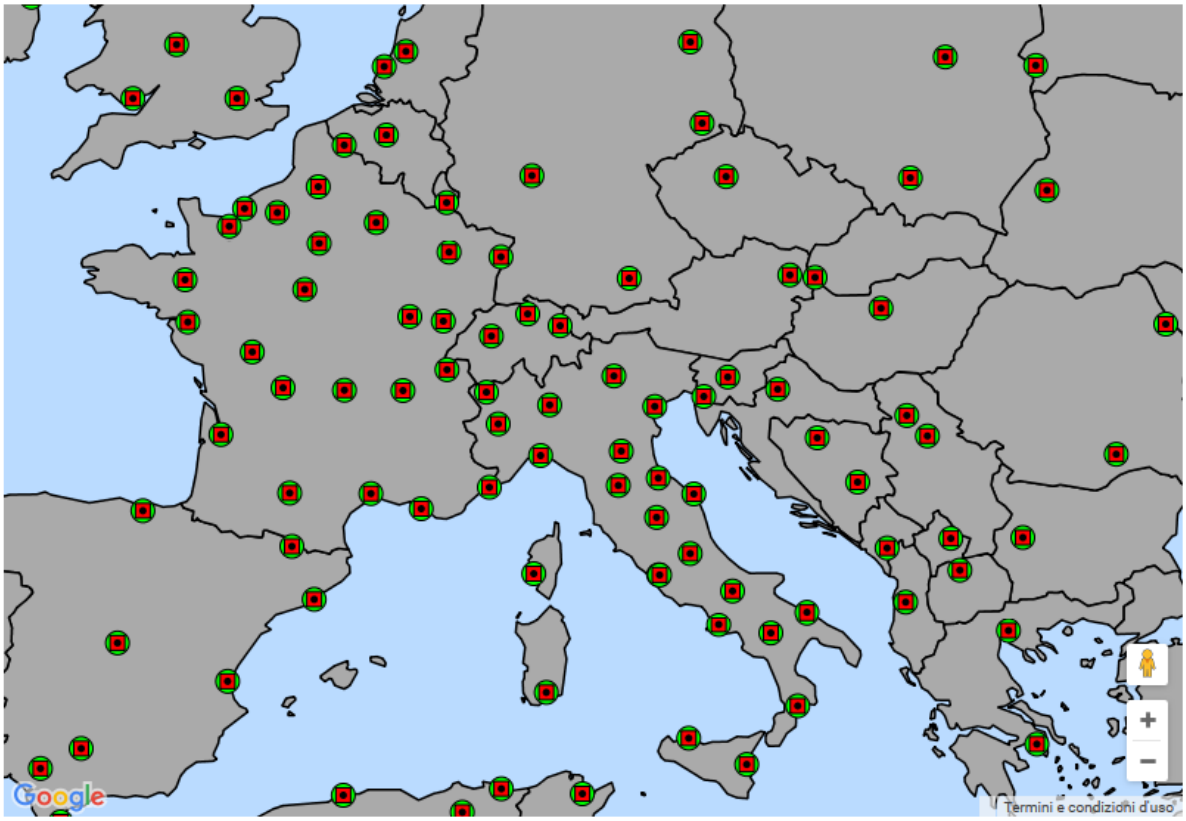
Data | Publishing | Layer Preview | Layer Attributes

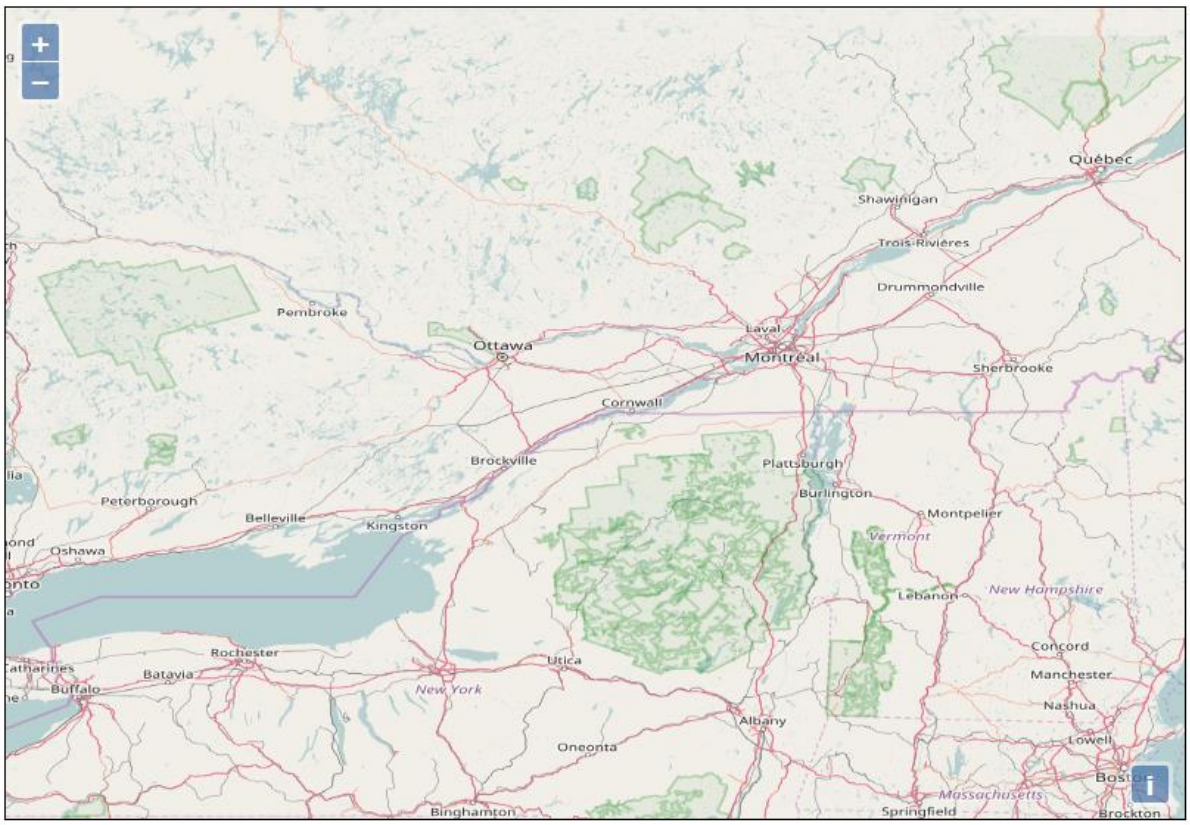
Previewing on layer: Packt:ne_10m_roads

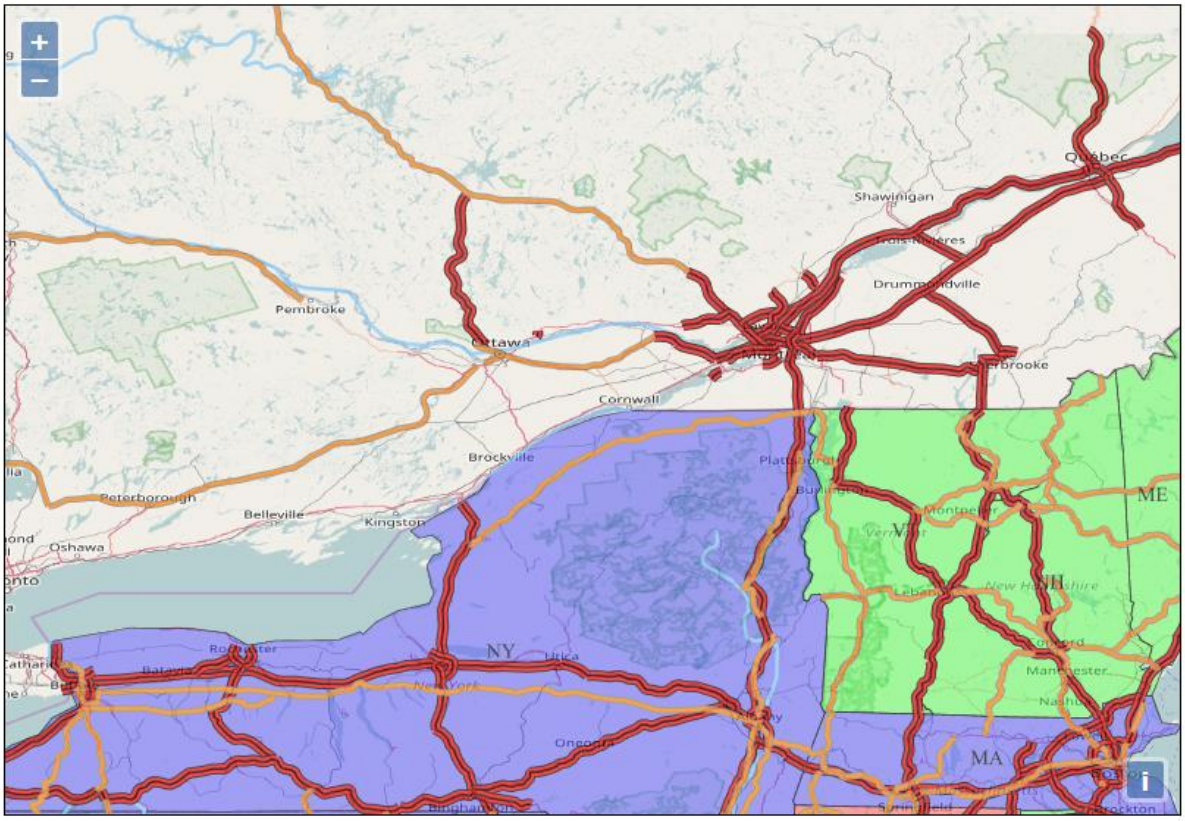


Chapter 7: Creating Simple Maps

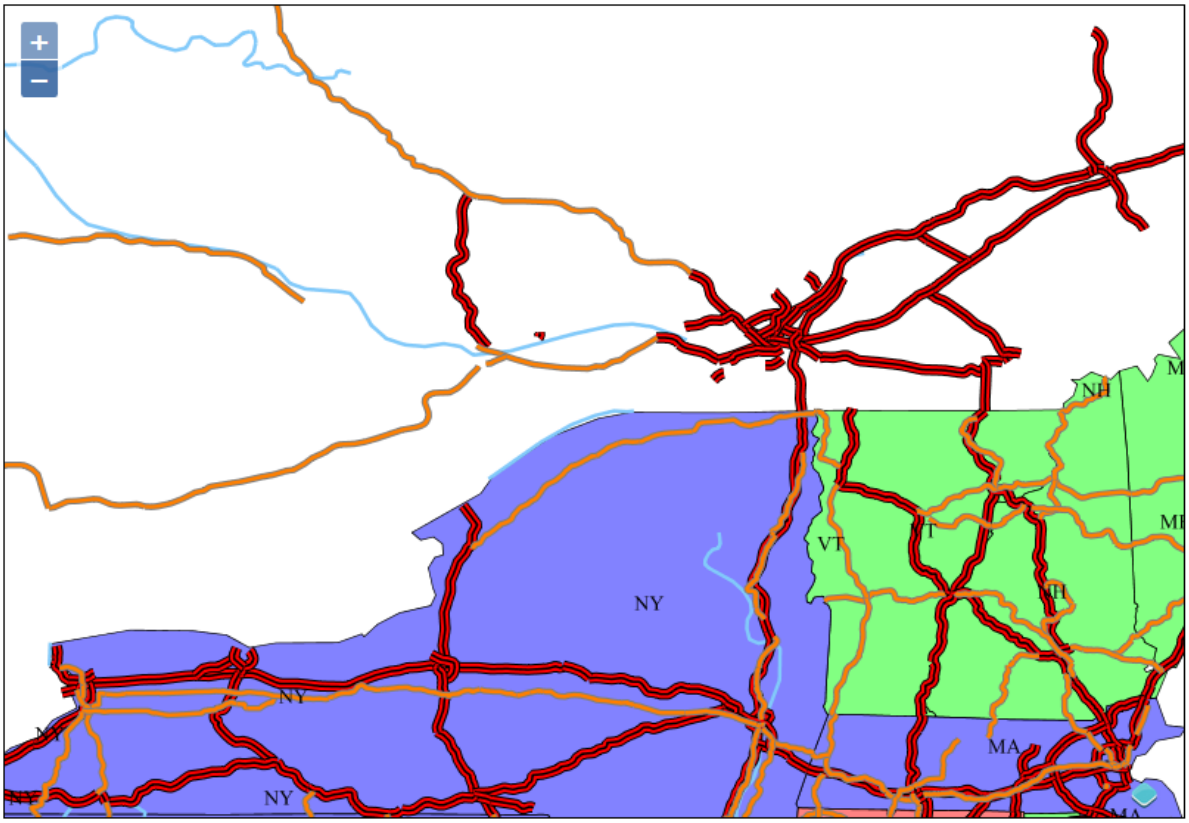

Mappa
Satellite
Polonia
Varsavia
Germania
Paesi Bassi
Colonia
Belgio
Francoforte
Repubblica Ceca
Parigi
Monaco di Baviera
Slovacchia
Vienna
Austria
Budapest
Ungheria
Francia
Svizzera
Romania
Croazia
Bosnia ed Erzegovina
Serbia
Sarajevo
Montenegro
Sofia
Bulgaria
Italia
Roma
Barcellona
Madrid
Spagna
Mar Tirreno
Albania
Grecia
Atene
Granada
Málaga
Algeri
Tunisi
Google
Map data ©2017 GeoBasis-DE/BKG (©2009), Google, Inst. Geogr. Nacional, Mapa GISrael, ORION-ME
Termini e condizioni d'uso


Google
Termini e condizioni d'uso

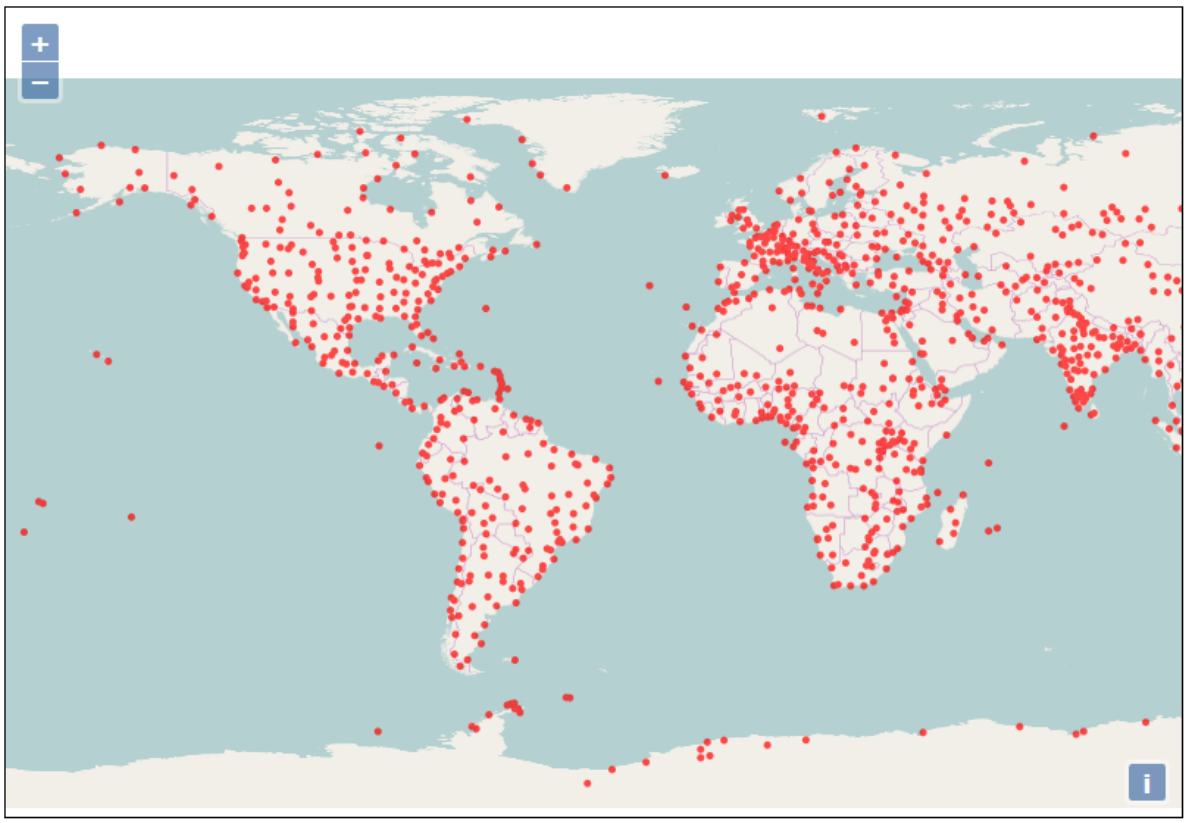

Québec
Shawinigan
Trois-Rivières
Drummondville
Pembroke
Ottawa
Laval
Montréal
Sherbrooke
Cornwall
Brockville
Plattsburgh
Burlington
Peterborough
Belleville
Kingston
Montpelier
Vermont
Oshawa
New Hampshire
Lebanon
Rochester
Concord
Utica
Batavia
Manchester
Buffalo
New York
Nashua
Albany
Lowell
Oneonta
Boston
Massachusetts
Binghamton
Springfield
Brockton

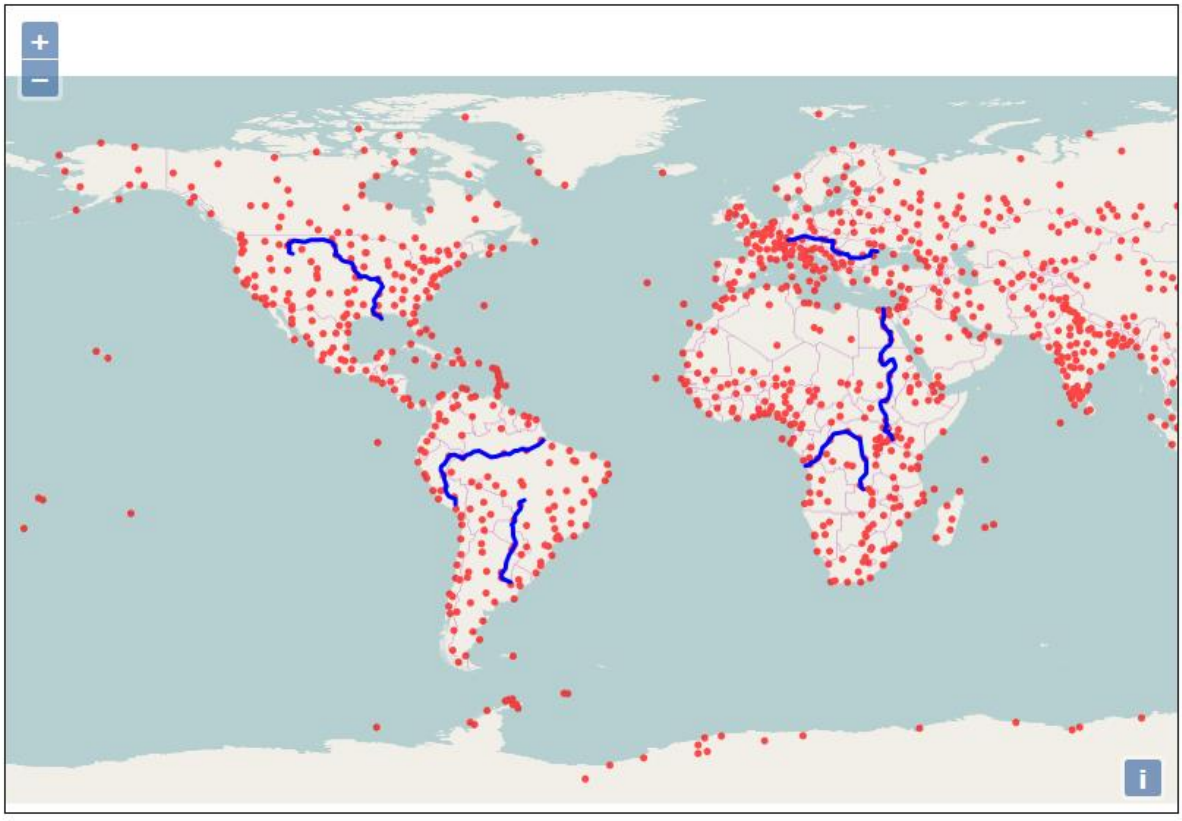

Québec
Shawinigan
Pembroke
Ottawa
Cornwall
Brockville
Peterborough
Belleville
Kingston
Oshawa
ME
VT
NH
NY
Utica
MA
Oneonta

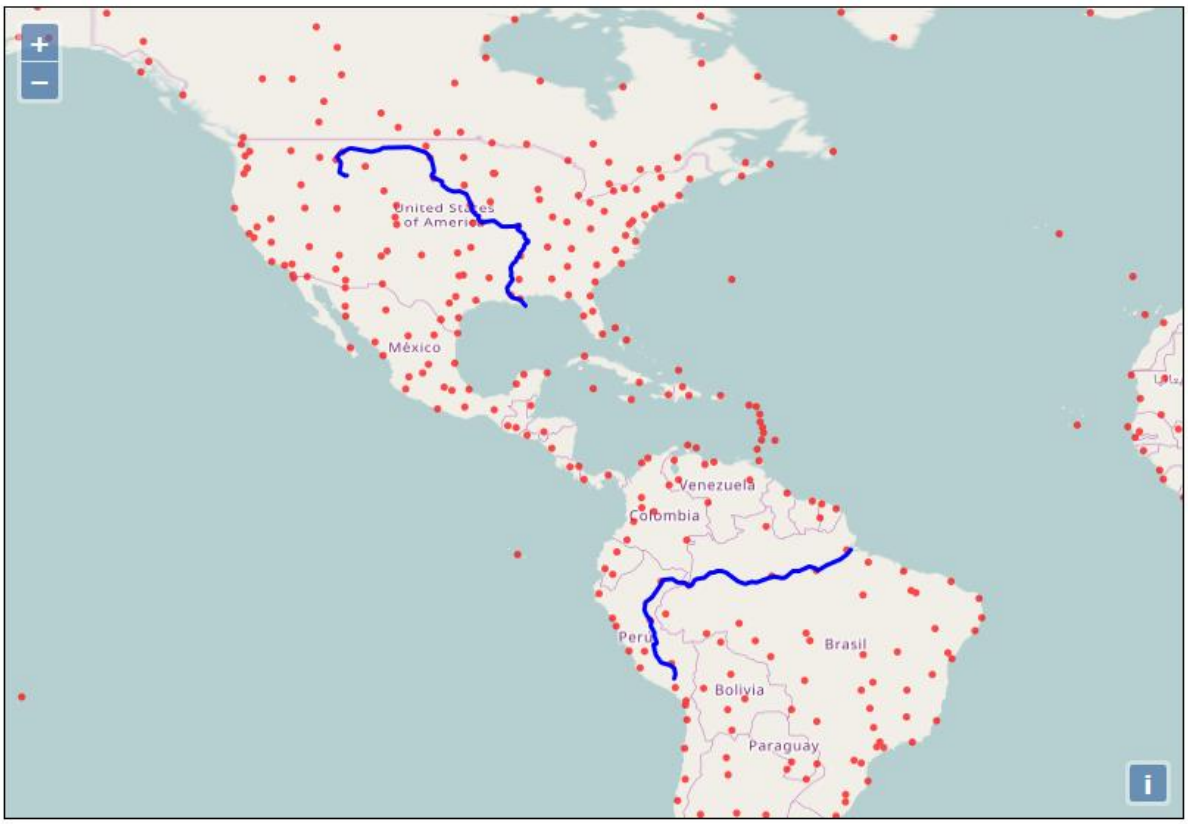
○	200	GET	basemapWMS.html	localhost:8080	html	In cache	1,21 kB
○	200	GET	ol.css	openlayers.org	css	In cache	3,77 kB
○	200	GET	ol.js	openlayers.org	js	In cache	503,40 kB
●	200	GET	wms?SERVICE=WMS&VERSION=1.3.0&REQUEST=...	localhost:8080	png	159,23 kB	159,23 kB



▲	304	GET	tiledWMS.html	localhost:8080	html	1,12 kB	1,12 kB	→ 111 ms
▲	304	GET	ol.css	openlayers.org	css	1,25 kB	3,77 kB	→ 219 ms
▲	304	GET	ol.js	openlayers.org	js	166,09 kB	503,40 kB	→ 225 ms
●	200	GET	wms?SERVICE=WMS&VERSION=1.3.0&REQUEST=...	localhost:8080	png	15,99 kB	15,99 kB	→ 161 ms
●	200	GET	wms?SERVICE=WMS&VERSION=1.3.0&REQUEST=...	localhost:8080	png	30,87 kB	30,87 kB	→ 288 ms
●	200	GET	wms?SERVICE=WMS&VERSION=1.3.0&REQUEST=...	localhost:8080	png	21,26 kB	21,26 kB	→ 288 ms
●	200	GET	wms?SERVICE=WMS&VERSION=1.3.0&REQUEST=...	localhost:8080	png	11,85 kB	11,85 kB	→ 273 ms
●	200	GET	wms?SERVICE=WMS&VERSION=1.3.0&REQUEST=...	localhost:8080	png	40,44 kB	40,44 kB	→ 425 ms
●	200	GET	wms?SERVICE=WMS&VERSION=1.3.0&REQUEST=...	localhost:8080	png	20,29 kB	20,29 kB	→ 240 ms
●	200	GET	wms?SERVICE=WMS&VERSION=1.3.0&REQUEST=...	localhost:8080	png	57,30 kB	57,30 kB	→ 329 ms
●	200	GET	wms?SERVICE=WMS&VERSION=1.3.0&REQUEST=...	localhost:8080	png	1,74 kB	1,74 kB	→ 475 ms
●	200	GET	wms?SERVICE=WMS&VERSION=1.3.0&REQUEST=...	localhost:8080	png	3,83 kB	3,83 kB	→ 525 ms


+
−
i


+
−
i


United States
of America
México
Venezuela
Colombia
Perú
Brasil
Bolivia
Paraguay

Leaflet

+
−
Leaflet

+
−
Leaflet

Chapter 8: Performance and Caching

/geoserver	*None specified*	GeoServer	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

Message:	OK - Reloaded application at context path /geoserver

Packt:ne_50m_populated_places N/A 0,0 B Select One Seed/Truncate | Empty

<< < 1 2 > >> Results 1 to 25 (out of 37 items)

Select One
EPSG:4326 / jpeg
EPSG:4326 / png
EPSG:900913 / jpeg
EPSG:900913 / png

Packt:ne_50m_populated_places N/A 1,77 MB Select One Seed/Truncate | Empty

<< < 1 2 > >> Results 1 to 25 (out of 37 items)

Disk Quota

Configure the disk quota limits and expiration policy for the tile cache

Disk Quota

Enable disk quota

Disk quota check frequency:

10 Seconds

(Last run: 4 s ago.)

Maximum tile cache size

500 MiB

Using 2,43 MB of a maximum 500,0 MB

When enforcing disk quota limits, remove tiles that are:

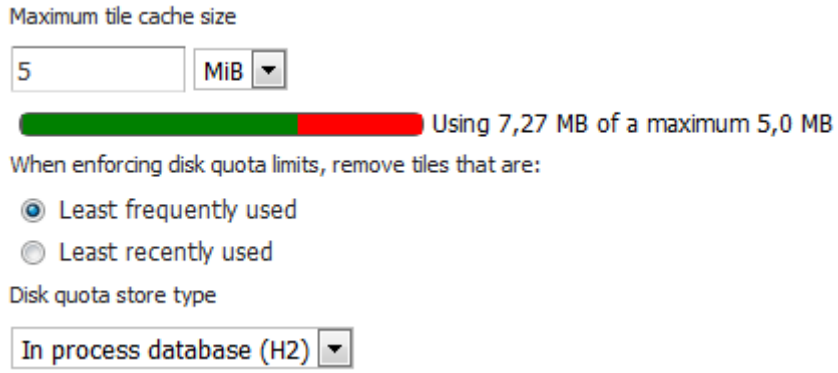
Least frequently used

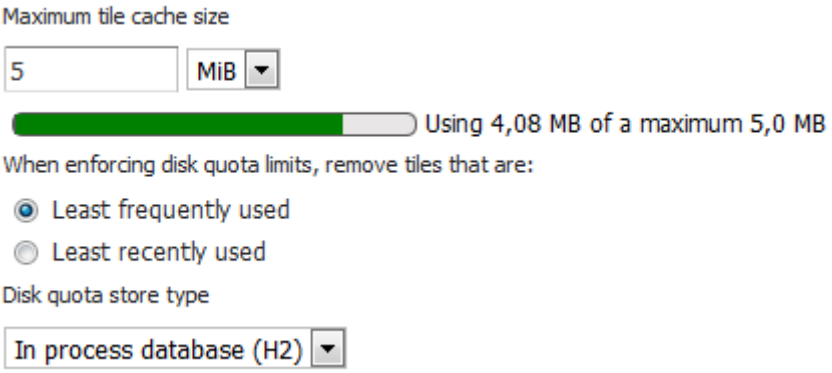
Least recently used

Disk quota store type

In process database (H2)

myLayerGroup
N/A
6,54 MB
Select One
Seed/Truncate | Empty


Maximum tile cache size
5
MiB
Using 7,27 MB of a maximum 5,0 MB
When enforcing disk quota limits, remove tiles that are:
Least frequently used
Least recently used
Disk quota store type
In process database (H2)


Maximum tile cache size
5
MiB
Using 4,08 MB of a maximum 5,0 MB
When enforcing disk quota limits, remove tiles that are:
Least frequently used
Least recently used
Disk quota store type
In process database (H2)

Disk Quota

Enable disk quota

Disk quota check frequency:

10 Seconds

(Last run: 3 s ago.)

Maximum tile cache size

5 GiB

Using 4,08 MB of a maximum 5,0 MB

When enforcing disk quota limits, remove tiles that are:

- Least frequently used
- Least recently used

Disk quota store type

In process database (H2)

Submit Cancel

Disk quota store type

External database

Target database type

PostgreSQL

JDBC data source

GeoServer managed connection pool

JDBC Driver class name

org.postgresql.Driver

JDBC connection URL

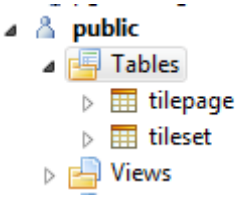
jdbc:postgresql://localhost:5432/gwc

User name

postgres

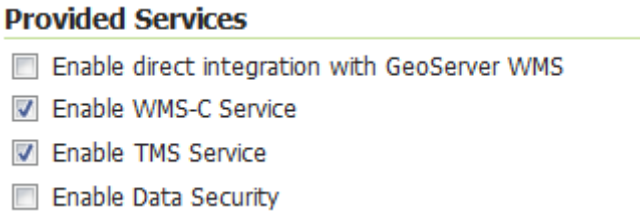
Password

••••••••



	key	layer_name	gridset_id	blob_format
1	Packt:NaturalEarthCountries#EPSG:4326#image/jpeg	Packt:NaturalEarthCountries	EPSG:4326	image/jpeg
2	Packt:NaturalEarthCountries#EPSG:4326#image/png	Packt:NaturalEarthCountries	EPSG:4326	image/png
3	Packt:NaturalEarthCountries#EPSG:900913#image/jpeg	Packt:NaturalEarthCountries	EPSG:900913	image/jpeg
4	Packt:NaturalEarthCountries#EPSG:900913#image/png	Packt:NaturalEarthCountries	EPSG:900913	image/png

	key	tileset_id	page_z	page_x	page_y	creation_time_minutes	frequency_of_use	last_access_time_minutes
1	myLayerGroup#EPSG:4326#image/png@4,16,6	myLayerGroup#EPSG:4326#image/png	6	4	16	25.016.255	0	25.016.255
2	myLayerGroup#EPSG:4326#image/png@4,17,6	myLayerGroup#EPSG:4326#image/png	6	4	17	25.016.255	0	25.016.255
3	myLayerGroup#EPSG:4326#image/png@4,2,2	myLayerGroup#EPSG:4326#image/png	2	4	2	25.016.255	0	25.016.255
4	myLayerGroup#EPSG:4326#image/png@4,2,3	myLayerGroup#EPSG:4326#image/png	3	4	2	25.016.255	0	25.016.255
5	myLayerGroup#EPSG:4326#image/png@4,3,2	myLayerGroup#EPSG:4326#image/png	2	4	3	25.016.255	0	25.016.255
6	myLayerGroup#EPSG:4326#image/png@4,3,3	myLayerGroup#EPSG:4326#image/png	3	4	3	25.016.255	0	25.016.255
7	myLayerGroup#EPSG:4326#image/png@4,4,3	myLayerGroup#EPSG:4326#image/png	3	4	4	25.016.255	0	25.016.255



Default Caching Options for GeoServer Layers

☑ Automatically configure a GeoWebCache layer for each new layer or layer group

Tile locking mechanism

Sceglierne uno

☑ Automatically cache non-default styles

Default metatile size:

4 tiles wide by 4 tiles high

Default gutter size in pixels:

0

Default Tile Image Formats for:

Vector Layers	Raster Layers	Layer Groups
☐ application/json;type=utfgrid	☐ image/gif	☐ application/json;type=utfgrid
☐ image/gif	☑ image/jpeg	☐ image/gif
☑ image/jpeg	☑ image/png	☑ image/jpeg
☑ image/png	☐ image/png8	☑ image/png
☐ image/png8	☐ image/vnd.jpeg-png	☐ image/png8
☐ image/vnd.jpeg-png		☐ image/vnd.jpeg-png

In Memory BlobStore Options

Enable

Default Cached Gridsets

Gridset	CRS	Tile Dimensions	Zoom levels	Disk Usage	
EPSG:4326	EPSG:4326	256 x 256	22	4,72MiB	⊖
EPSG:900913	EPSG:900913	256 x 256	31	0,0B	⊖

Add default gridset Sceglierne uno ⊕

Web Page 717 views
nps_boundary.derived.shp — Visit page

Zip File 2467 views
nps_boundary.original.zip — Download

Web Page 53 views
nps_boundary.derived.gml — Download

Manage the available gridsets or create a new one

Create a new gridset

Remove selected gridsets

<< < 1 > >> Results 1 to 5 (out of 5 items)

Search

Gridset	CRS	Tile Dimensions	Zoom levels	Disk Usage	
GlobalCRS84Pixel	EPSG:4326	256 x 256	18	0,0 B	Create a copy
EPSG:4326	EPSG:4326	256 x 256	22	4,72 MB	Create a copy
GoogleCRS84Quad	EPSG:4326	256 x 256	19	0,0 B	Create a copy
EPSG:900913	EPSG:900913	256 x 256	31	0,0 B	Create a copy
GlobalCRS84Scale	EPSG:4326	256 x 256	21	0,0 B	Create a copy

<< < 1 > >> Results 1 to 5 (out of 5 items)

Coordinate Reference System

EPSG:4269 Find... EPSG:NAD83...

Units: °

Meters per unit: 111319.49079327358

Gridset bounds

Min X	Min Y	Max X	Max Y
-180	10	-60	80

Compute from maximum extent of CRS

Tile width in pixels *

256

Tile height in pixels *

256

Tile Matrix Set

Define grids based on: Resolutions Scale denominators

Level	Pixel Size	Scale	Name	Tiles
0	0,2734375	1: 976,5625000000001		2 x 1

Tile Matrix Set

Define grids based on: (•) Resolutions ( ) Scale denominators

Level	Pixel Size	Scale	Name	Tiles
0	0,2734375	1: 976,5625000000001		2 x 1
1	0,13671875	1: 488,28125000000006		4 x 2
2	0,068359375	1: 244,14062500000003		7 x 4
3	0,0341796875	1: 122,07031250000001		14 x 8
4	0,01708984375	1: 61,03515625000001		28 x 16
5	0,008544921875	1: 30,517578125000004		55 x 32
6	0,0042724609375	1: 15,258789062500002		110 x 64
7	0,00213623046875	1: 7,629394531250001		220 x 128
8	0,001068115234375	1: 3,8146972656250004		439 x 256
9	0,0005340576171875	1: 1,9073486328125002		878 x 512
10	0,0002670288085938	1: 0,9536743164062501		1.756 x 1.024

Gridset	Published zoom levels	Cached zoom levels	Grid subset bounds
EPSG:900913	Min / Max	Min / Max	Dynamic
EPSG:4326	Min / Max	Min / Max	Dynamic
EPSG:4269	Min / Max	Min / Max	Dynamic

Type	Layer Name	Disk Quota	Disk Used	BlobStore	Enabled	Preview	Actions
	nurc:Pk50095	N/A	0,0 B		✓	Select One	Seed/Truncate | Empty
	sf:restricted	N/A	0,0 B		✓	Select One	Seed/Truncate | Empty
	Packt:rivers	N/A	0,0 B		✓	Select One	Seed/Truncate | Empty
	sf:archsites	N/A	0,0 B		✓	Select One	Seed/Truncate | Empty
	Packt:nps_boundary	N/A	0,0 B		✓	Select One	Seed/Truncate | Empty

Tile cache configuration

☑ Create a cached layer for this layer

☑ Enable tile caching for this layer

☑ Enable In Memory Caching for this Layer.

BlobStore

(*) Default BlobStore

Metatiling factors

4 tiles wide by 4 tiles high

Gutter size in pixels

0

Tile Image Formats

- [ ] application/json;type=utfgrid
- [ ] image/gif
- [x] image/jpeg
- [x] image/png
- [ ] image/png8
- [ ] image/vnd.jpeg-png

Expire server cache after n seconds (set to 0 to use source setting)

0

Expire client cache after n seconds (set to 0 to use server setting)

0

Available gridsets

Gridset	Published zoom levels	Cached zoom levels	Grid subset bounds	
EPSG:900913	Min / Max	Min / Max	Dynamic	
EPSG:4326	Min / Max	Min / Max	Dynamic	

Add grid subset: Sceglierne uno

200	GET	plainWMS.html	localhost:8080	document	html	1,16 kB	1,16 kB	→ 15 ms
200	GET	ol.css	openlayers.org	stylesheet	css	1,25 kB	3,77 kB	→ 750 ms
200	GET	ol.js	openlayers.org	script	js	166,09 kB	503,40 kB	→ 754 ms
200	GET	wms?SERVICE=WMS&VERSION=1.3.0&REQUEST=...	localhost:8080	img	png	96,28 kB	96,28 kB	

200	GET	WMTS.html	localhost:8080	document	html	2,11 kB	2,11 kB	→ 16 ms
200	GET	ol.css	openlayers.org	stylesheet	css	1,25 kB	3,77 kB	→ 929 ms
200	GET	ol.js	openlayers.org	script	js	166,09 kB	503,40 kB	→ 981 ms
200	GET	wmts?layer=Packt:NaturalEarthCountries&tilemat...	localhost:8080	img	png	16,08 kB	16,08 kB	
200	GET	wmts?layer=Packt:NaturalEarthCountries&tilemat...	localhost:8080	img	png	20,90 kB	20,90 kB	
200	GET	wmts?layer=Packt:NaturalEarthCountries&tilemat...	localhost:8080	img	png	12,02 kB	12,02 kB	
200	GET	wmts?layer=Packt:NaturalEarthCountries&tilemat...	localhost:8080	img	png	18,53 kB	18,53 kB	
200	GET	wmts?layer=Packt:NaturalEarthCountries&tilemat...	localhost:8080	img	png	12,05 kB	12,05 kB	
200	GET	wmts?layer=Packt:NaturalEarthCountries&tilemat...	localhost:8080	img	png	15,25 kB	15,25 kB	
200	GET	wmts?layer=Packt:NaturalEarthCountries&tilemat...	localhost:8080	img	png	14,19 kB	14,19 kB	
200	GET	wmts?layer=Packt:NaturalEarthCountries&tilemat...	localhost:8080	img	png	11,94 kB	11,94 kB	
200	GET	wmts?layer=Packt:NaturalEarthCountries&tilemat...	localhost:8080	img	png	13,97 kB	13,97 kB	
200	GET	wmts?layer=Packt:NaturalEarthCountries&tilemat...	localhost:8080	img	png	2,43 kB	2,43 kB	

Packt:ne_50m_rivers_lake_centerlines N/A 0,0 B Select One Seed/Truncate | Empty

GeoWebCache

List this Layer tasks (there are no tasks for other Layers)

Kill all Tasks for Layer 'Packt:ne_50m_rivers_lake_centerlines'. Submit

List of currently executing tasks:

- *none*

Refresh list

Please note:

- This minimalistic interface does not check for correctness.
- Seeding past zoomlevel 20 is usually not recommended.
- Truncating KML will also truncate all KMZ archives.
- Please check the logs of the container to look for error messages and progress indicators.

Here are the max bounds, if you do not specify bounds these will be used.

- EPSG:4326: -165.2439391752527,-50.24013722075608,176.32580610576724,73.33490387681252
- EPSG:900913: -18394871.1656638,-6487967.709079518,19628498.949407496,12252226.83435225

Create a new task:

Number of tasks to use: 04

Type of operation: Seed - generate missing tiles

- Reseed - regenerate all tiles
- Seed - generate missing tiles
- Truncate - remove tiles

Grid Set:

Format:

Zoom start: 00

Grid Set: EPSG:4326

Format: image/png

Zoom start: 00

Zoom stop: 10

Modifiable Parameters: STYLES: Rivers

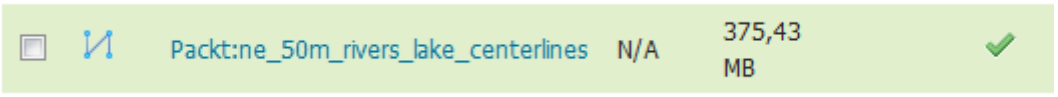
Bounding box:

These are optional, approximate values are fine.

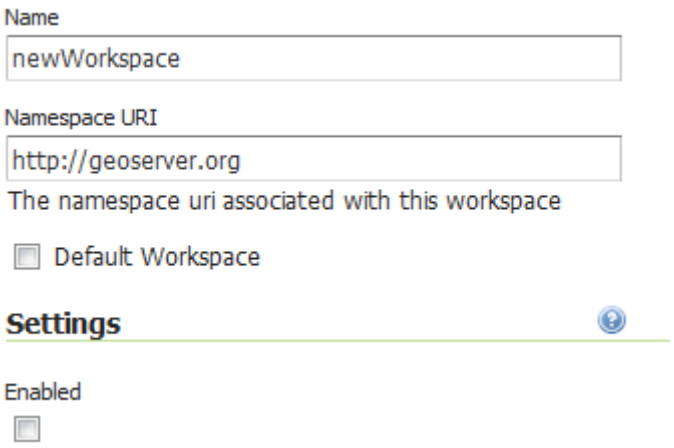
Submit

List of currently executing tasks:

Id	Layer	Status	Type	Estimated # of tiles	Tiles completed	Time elapsed	Time remaining	Tasks	
1	Packt:ne_50m_rivers_lake_centerlines	RUNNING	SEED	1,845,730	3,472	1 minute 19 s	2 hours 53 m	(Task 1 of 4)	Kill Task
2	Packt:ne_50m_rivers_lake_centerlines	RUNNING	SEED	1,845,730	3,760	1 minute 19 s	2 hours 40 m	(Task 2 of 4)	Kill Task
3	Packt:ne_50m_rivers_lake_centerlines	RUNNING	SEED	1,845,730	3,728	1 minute 19 s	2 hours 41 m	(Task 3 of 4)	Kill Task
4	Packt:ne_50m_rivers_lake_centerlines	RUNNING	SEED	1,845,730	3,808	1 minute 19 s	2 hours 38 m	(Task 4 of 4)	Kill Task



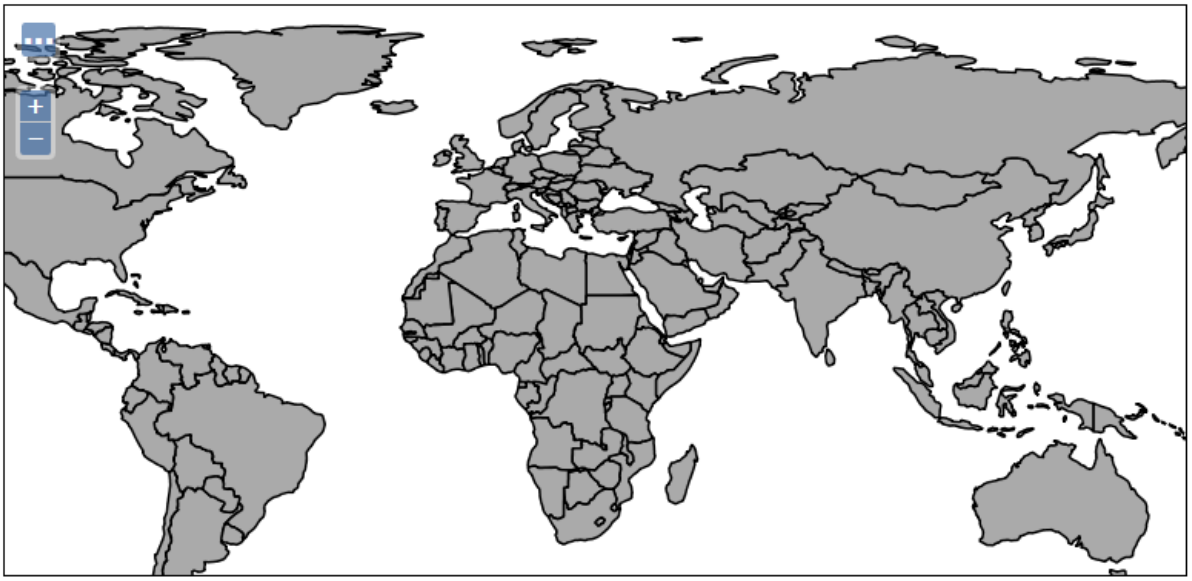
Chapter 9: Automating Tasks - GeoServer REST Interface



	Data Type	Workspace	Store Name	Type	Enabled?
		Packt	Natural Earth	Directory of spatial files (shapefiles)	✔
		Packt	Natural Earth Roads	Shapefile	✔

	Data Type	Workspace	Store Name	Type	Enabled?
		Packt	Natural Earth	Directory of spatial files (shapefiles)	✔
		Packt	Natural Earth Countries	Shapefile	✔
		Packt	Places	Properties	✔

		Tasmania water bodies	topp:tasmania_water_bodies	taz_shapes	✔	EPSG:4326
		ne_110m_admin_0_countries	Packt:ne_110m_admin_0_countries	Natural Earth Countries	✔	EPSG:4326



Scale = 1 : 140M -85.42969, 76.64063

Click on the map to get feature info

☐	▣	ne_110m_admin_0_countries	Packt:ne_110m_admin_0_countries	Natural Earth Countries	✔	EPSG:4326
☐	▣	ne_110m_admin	Packt:ne_110m_admin	gisdata	✔	EPSG:4326

☐	▣	ne_110m_admin	Packt:ne_110m_admin	gisdata	✔	EPSG:4326
☐	⟋	World Rivers	Packt:worldrivers	gisdata	✔	EPSG:4326

Declared SRS

EPSG:4326 Find... EPSG:WGS 84...

SRS handling

Force declared

Bounding Boxes

Native Bounding Box

Min X	Min Y	Max X	Max Y
0	0	-1	-1

Compute from data

Compute from SRS bounds

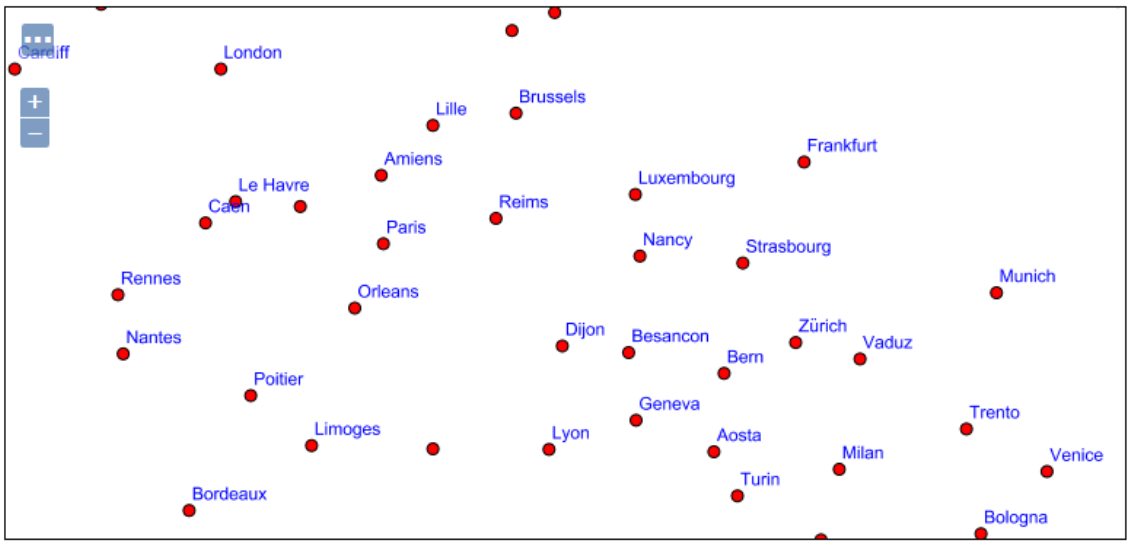
Lat/Lon Bounding Box

Min X	Min Y	Max X	Max Y
0	0	-1	-1

Compute from native bounds

- PopulatedPlaces
- PopulatedPlacesBlueLabeled
- PopulatedPlacesComplex

WMS version: 1.1.1 **Tiling:** Single tile **Antialias:** Full **Format:** PNG 24bit **Styles:** PopulatedPlacesBlueLabeled



Scale = 1 : 9M 2.50488, 46.10962

Click on the map to get feature info

Primary Contact

Contact

Stefano Iacovella

Organization

Packt

Position

Chief Geographer

Email

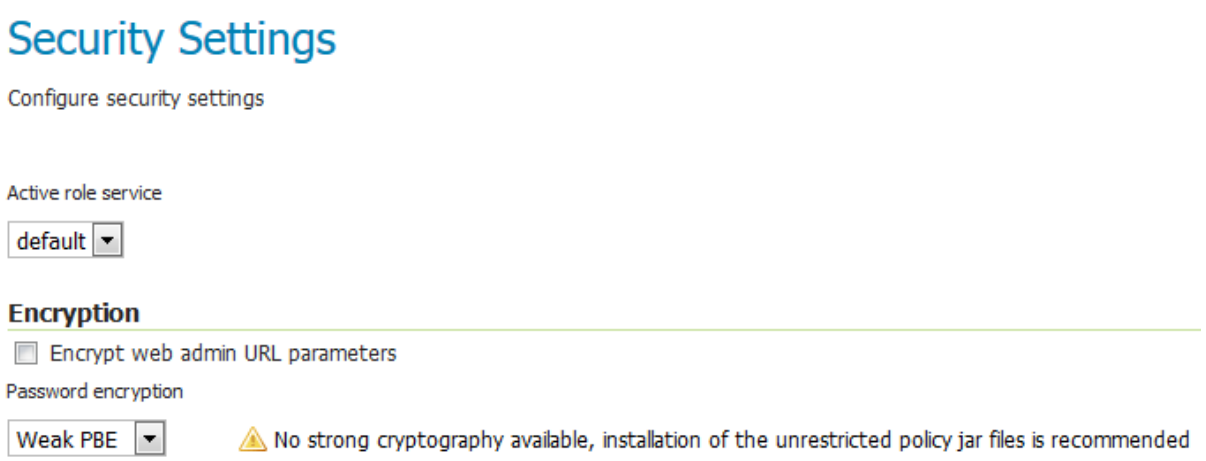
stefano.iacovella@myself.myhome

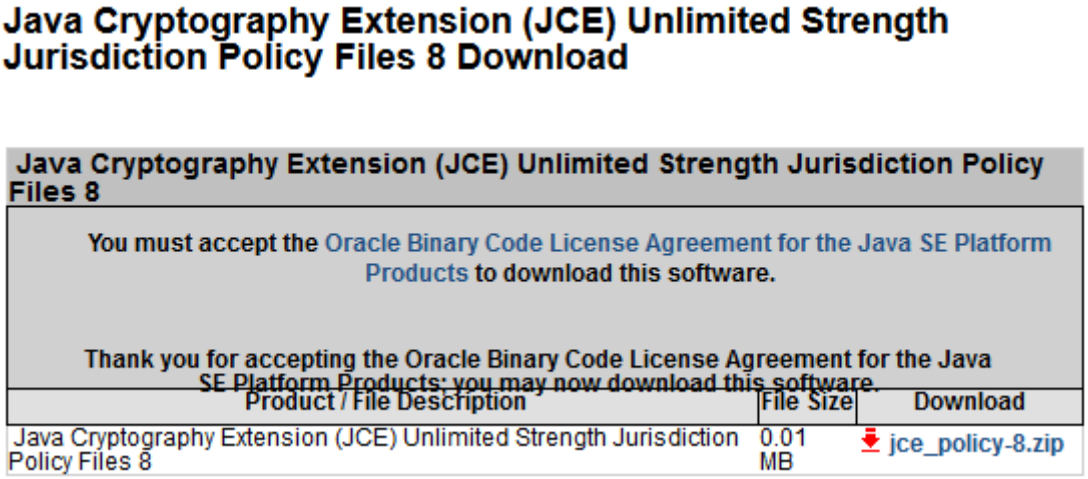
Limited SRS list

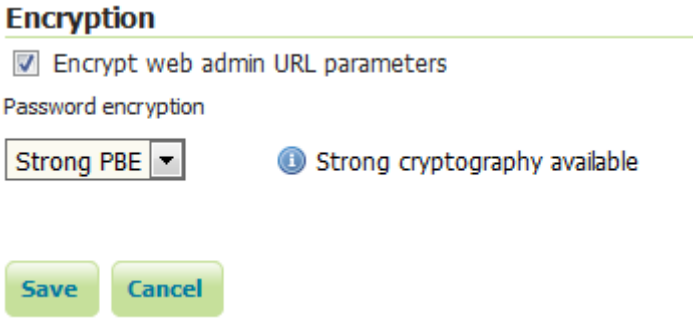
4326, 3857, 4269, 3003, 3004

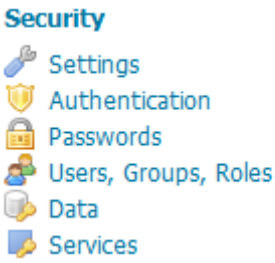
☐ Output bounding box for every supported CRS

Chapter 10: Securing GeoServer Before Production









Passwords

Password settings

Active master password provider default Change password

Master password provider
default

Current password
••••••••••

New password
••••••••••

Confirmation
••••••••••

Change Password Cancel

Services | Users/Groups | Roles

User Group Services

Add new
Remove selected

Search

Name	Type	Password Encryption	Password Policy
default	Default XML user/group service	Digest	default

<< < 1 > >> Results 1 to 1 (out of 1 items)

XML User Group Service default

Default user group service stored as XML

Settings | Users | Groups

Add new group
Remove Selected
Remove Selected and remove role associations

<< < > >> Results 0 to 0 (out of 0 items) Search

Groupname	Enabled

<< < > >> Results 0 to 0 (out of 0 items)

Add a new group

Specify a new group name and associate roles with the group.

Group name

Packt_Publishers

Enabled

<< < 1 > >> Results 0 to 0 (out of 0 items) Search

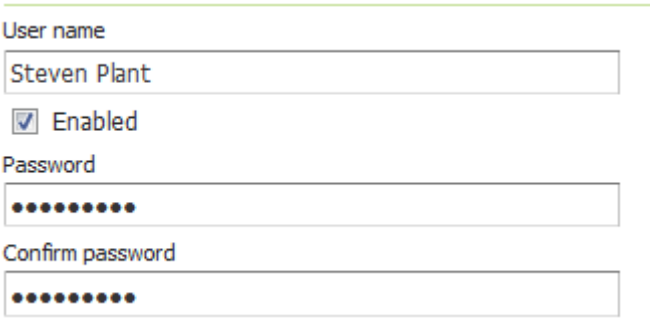
Groupname	Enabled
Packt_Admins	✔
Packt_Editors	✔
Packt_Publishers	✔

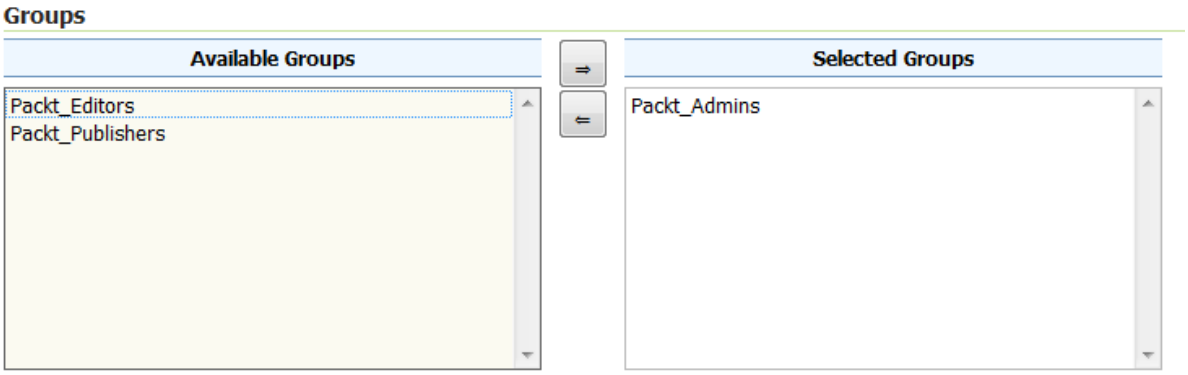
<< < 1 > >> Results 0 to 0 (out of 0 items)

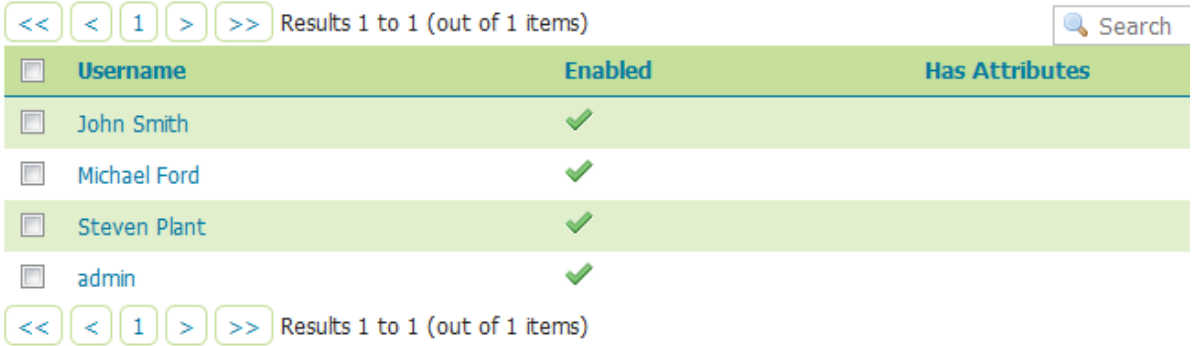
<< < 1 > >> Results 1 to 1 (out of 1 items) Search

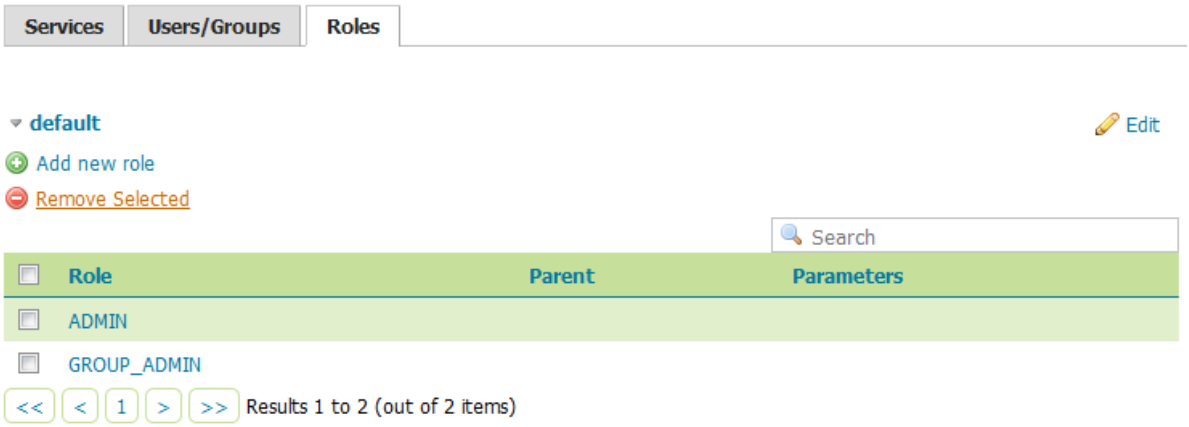
Username	Enabled	Has Attributes
admin	✔	

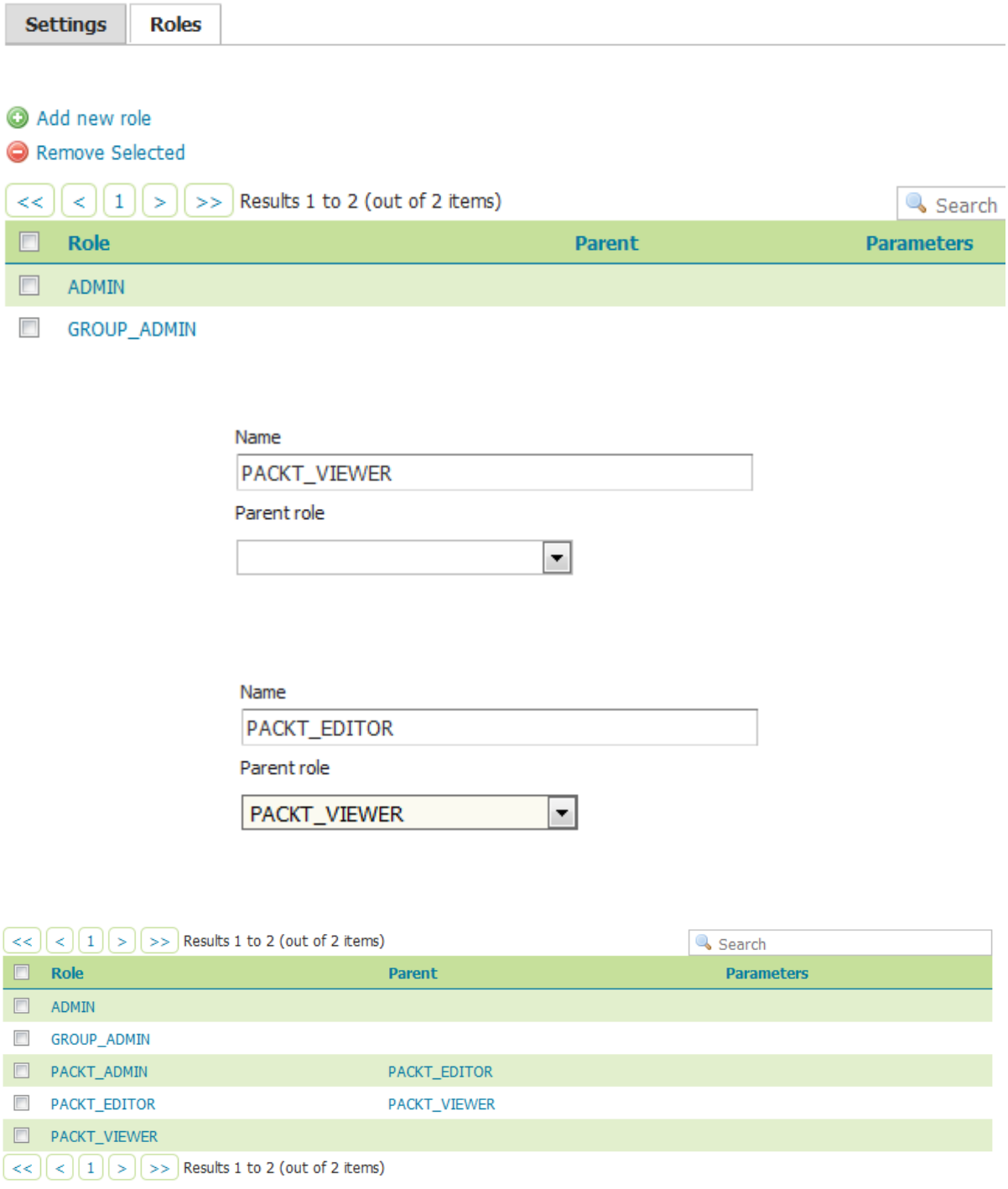
<< < 1 > >> Results 1 to 1 (out of 1 items)


User name
Steven Plant
Enabled
Password
Confirm password


Groups
Available Groups
Packt_Editors
Packt_Publishers
Selected Groups
Packt_Admins


<< < 1 > >> Results 1 to 1 (out of 1 items)
Search
Username
Enabled
Has Attributes
John Smith
Michael Ford
Steven Plant
admin
<< < 1 > >> Results 1 to 1 (out of 1 items)


Services
Users/Groups
Roles
default
Edit
Add new role
Remove Selected
Search
Role
Parent
Parameters
ADMIN
GROUP_ADMIN
<< < 1 > >> Results 1 to 2 (out of 2 items)


Settings
Roles
Add new role
Remove Selected
<< < 1 > >> Results 1 to 2 (out of 2 items)
Search
Role
Parent
Parameters
ADMIN
GROUP_ADMIN
Name
PACKT_VIEWER
Parent role
Name
PACKT_EDITOR
Parent role
PACKT_VIEWER
<< < 1 > >> Results 1 to 2 (out of 2 items)
Search
Role
Parent
Parameters
ADMIN
GROUP_ADMIN
PACKT_ADMIN
PACKT_EDITOR
PACKT_EDITOR
PACKT_VIEWER
PACKT_VIEWER
<< < 1 > >> Results 1 to 2 (out of 2 items)

Roles taken from active role service: default

Available Roles		Selected Roles
ADMIN GROUP_ADMIN PACKT_ADMIN PACKT_EDITOR	⇒ ⇐	PACKT_VIEWER

Data Security

Manage data security: edit, add and remove access rules

Add new rule

Remove Selected(s)

<< < 1 > >> Results 1 to 2 (out of 2 items) Search

Rule path	Roles
..r	*
..w	GROUP_ADMIN,ADMIN

<< < 1 > >> Results 1 to 2 (out of 2 items)

Workspace

Packt

Layer

*

Access mode

Read

Roles

Grant access to any role

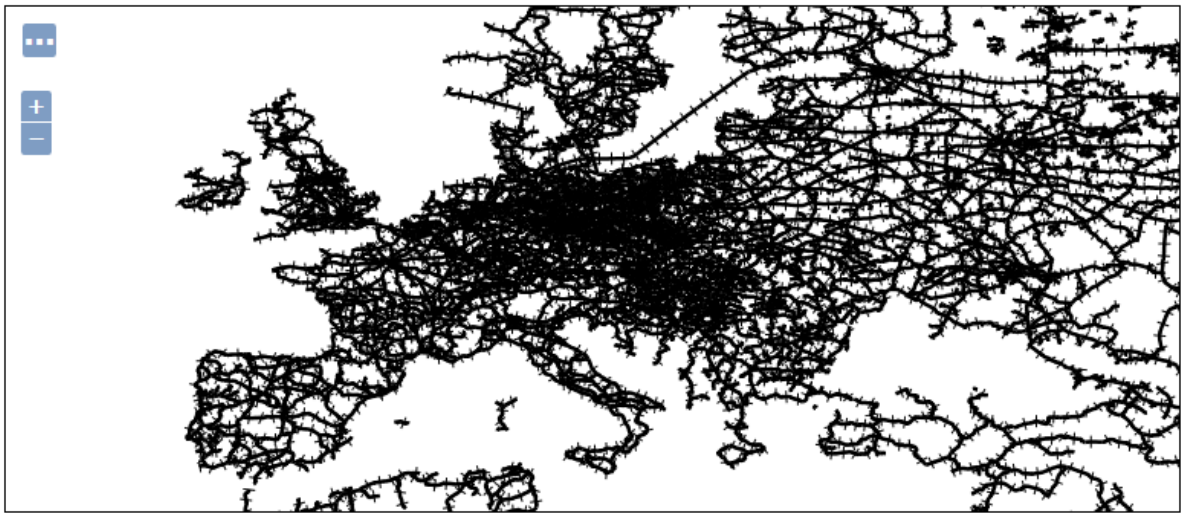
Available Roles		Selected Roles
Admin GROUP_ADMIN PACKT_ADMIN PACKT_EDITOR ROLE_ANONYMOUS ROLE_AUTHENTICATED	⇒ ⇐	PACKT_VIEWER

<< < 1 > >> Results 1 to 5 (out of 5 items)

Search

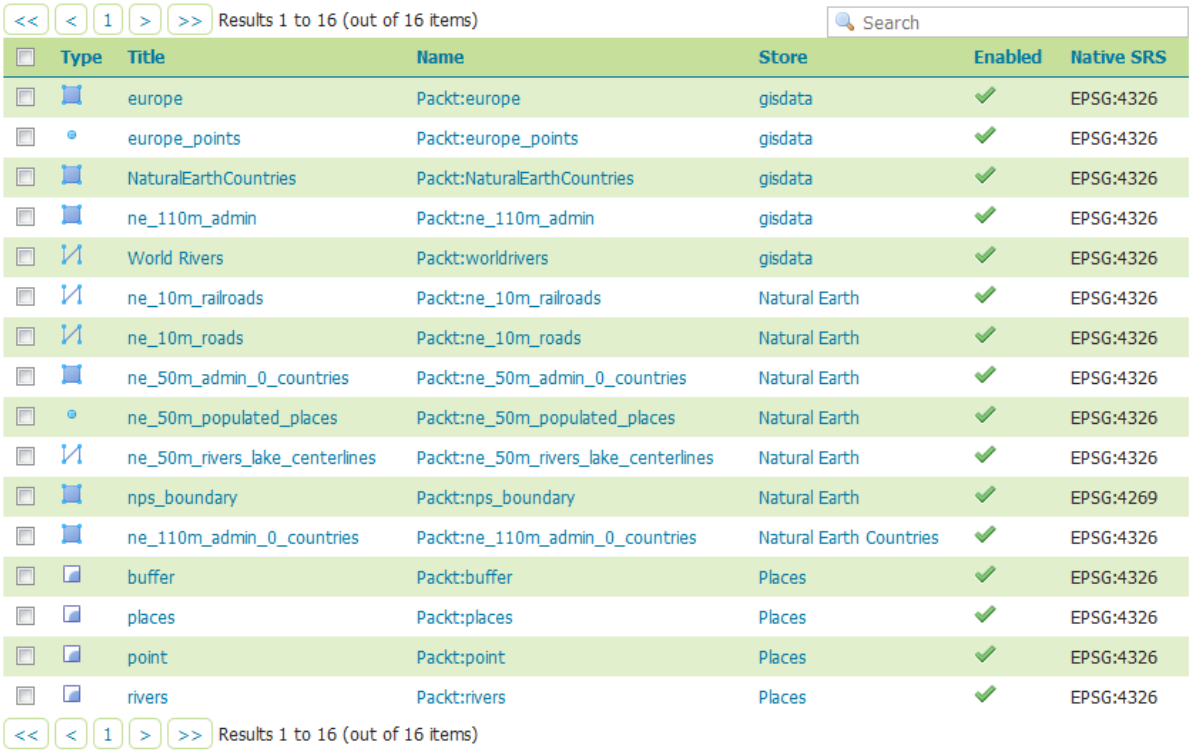
Rule path	Roles
..r	*
..w	GROUP_ADMIN,ADMIN
Packt.*.r	PACKT_VIEWER
Packt.*.w	PACKT_EDITOR
Packt.*.a	PACKT_ADMIN

<< < 1 > >> Results 1 to 5 (out of 5 items)



Scale = 1 : 35M -11.51367, 61.25977

Click on the map to get feature info



<< < 1 > >> Results 1 to 16 (out of 16 items)

Search

Type	Title	Name	Store	Enabled	Native SRS
	europe	Packt:europe	gisdata	✔	EPSG:4326
	europe_points	Packt:europe_points	gisdata	✔	EPSG:4326
	NaturalEarthCountries	Packt:NaturalEarthCountries	gisdata	✔	EPSG:4326
	ne_110m_admin	Packt:ne_110m_admin	gisdata	✔	EPSG:4326
	World Rivers	Packt:worldrivers	gisdata	✔	EPSG:4326
	ne_10m_railroads	Packt:ne_10m_railroads	Natural Earth	✔	EPSG:4326
	ne_10m_roads	Packt:ne_10m_roads	Natural Earth	✔	EPSG:4326
	ne_50m_admin_0_countries	Packt:ne_50m_admin_0_countries	Natural Earth	✔	EPSG:4326
	ne_50m_populated_places	Packt:ne_50m_populated_places	Natural Earth	✔	EPSG:4326
	ne_50m_rivers_lake_centerlines	Packt:ne_50m_rivers_lake_centerlines	Natural Earth	✔	EPSG:4326
	nps_boundary	Packt:nps_boundary	Natural Earth	✔	EPSG:4269
	ne_110m_admin_0_countries	Packt:ne_110m_admin_0_countries	Natural Earth Countries	✔	EPSG:4326
	buffer	Packt:buffer	Places	✔	EPSG:4326
	places	Packt:places	Places	✔	EPSG:4326
	point	Packt:point	Places	✔	EPSG:4326
	rivers	Packt:rivers	Places	✔	EPSG:4326

<< < 1 > >> Results 1 to 16 (out of 16 items)

GeoServer Demos

Collection of GeoServer demo applications

- Demo requests Example requests for GeoServer (using the TestServlet).
- SRS List List of all SRS known to GeoServer
- Reprojection console Simple coordinate reprojection tool
- WCS request builder Step by step WCS GetCoverage request builder

Request WFS_transactionInsert.xml

URL http://localhost:8080/geoserver/wfs

Body

12pt

```
<!--
      YOU PROBABLY DO NOT WANT TO RUN THIS QUERY SINCE
       IT WILL MODIFY YOUR SOURCE DATA FILES

       It will add a simple line to the tasmania_roads dataset.

  -->
<wfs:Transaction service="WFS" version="1.0.0"
  xmlns:wfs="http://www.opengis.net/wfs"
  xmlns:topp="http://www.openplans.org/topp"
  xmlns:gml="http://www.opengis.net/gml"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.opengis.net/wfs http://schemas.opengis.net/wfs/1.0.0/WFS-
transaction.xsd http://www.openplans.org/topp http://localhost:8080/geoserver
/wfs/DescribeFeatureType?typename=topp:tasmania_roads">
  <wfs:Insert>
    <topp:tasmania_roads>
      <topp:the_geom>
        <gml:MultiLineString srsName="http://www.opengis.net/gml/srs/epsg.xml#4326">
          <gml:lineStringMember>
            <gml:LineString>
              <gml:coordinates decimal="." cs="," ts=" ">
494475.71056415,5433016.8189323 494982.70115662,5435041.95096618
              </gml:coordinates>
            </gml:LineString>
```

User Name admin Password ••••••••

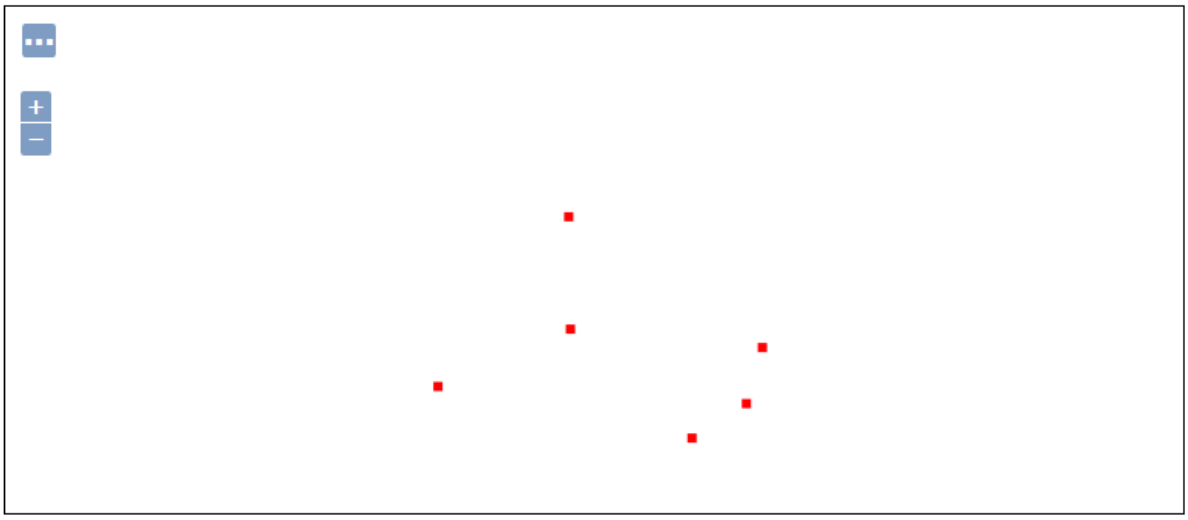
Submit

```
− <ServiceExceptionReport version="1.2.0"
  xsi:schemaLocation="http://www.opengis.net/ogc http://schemas.opengis.net
  /wfs/1.0.0/OGC-exception.xsd">
  − <ServiceException>
      {https://www.packtpub.com/}places is read-only
    </ServiceException>
  </ServiceExceptionReport>
```

User Name Michael Ford Password ••••••••••

Submit

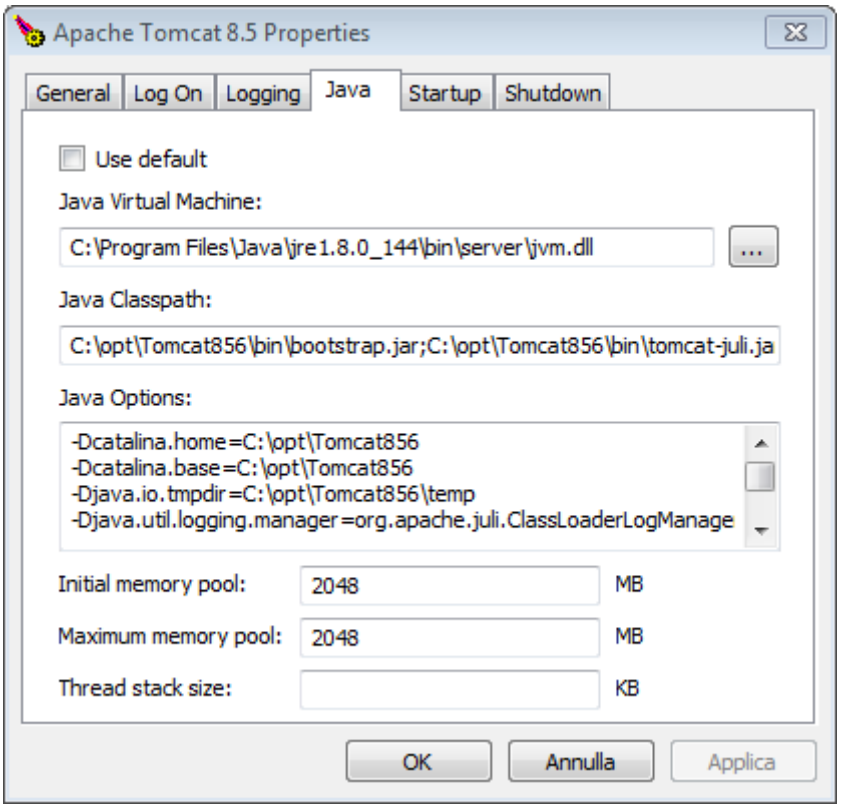
```
- <wfs:WFS_TransactionResponse version="1.0.0"
  xsi:schemaLocation="http://www.opengis.net/wfs http://localhost:8080/geoserver
  /schemas/wfs/1.0.0/WFS-transaction.xsd">
   - <wfs:InsertResult>
        <ogc:FeatureId fid="new0"/>
     </wfs:InsertResult>
   - <wfs:TransactionResult>
      - <wfs:Status>
           <wfs:SUCCESS/>
        </wfs:Status>
     </wfs:TransactionResult>
  </wfs:WFS_TransactionResponse>
```



Scale = 1 : 70M 149.94141, 3.86719

Click on the map to get feature info

Chapter 11: Tuning GeoServer in a Production Environment



Native JAI	true	
Native JAI ImageIO	true	
JAI Maximum Memory	181 MB	
JAI Memory Usage	0 KB	Free memory
JAI Memory Threshold	75.0	
Number of JAI Tile Threads	7	
JAI Tile Thread Priority	5	

Service Metadata

- [x] Enable WCS
- [ ] Strict CITE compliance

Service Metadata

- [x] Enable WFS
- [ ] Strict CITE compliance

Features

Maximum number of features

10000

Maximum number of features for preview (Values <= 0 use the maximum number of features)

50

- [ ] Return bounding box with every feature
- [ ] Ignore maximum number of features when calculating hits

Service Level

- (•) Basic
- ( ) Transactional
- ( ) Complete

Resource consumption limits

Max rendering memory (KB)

20480

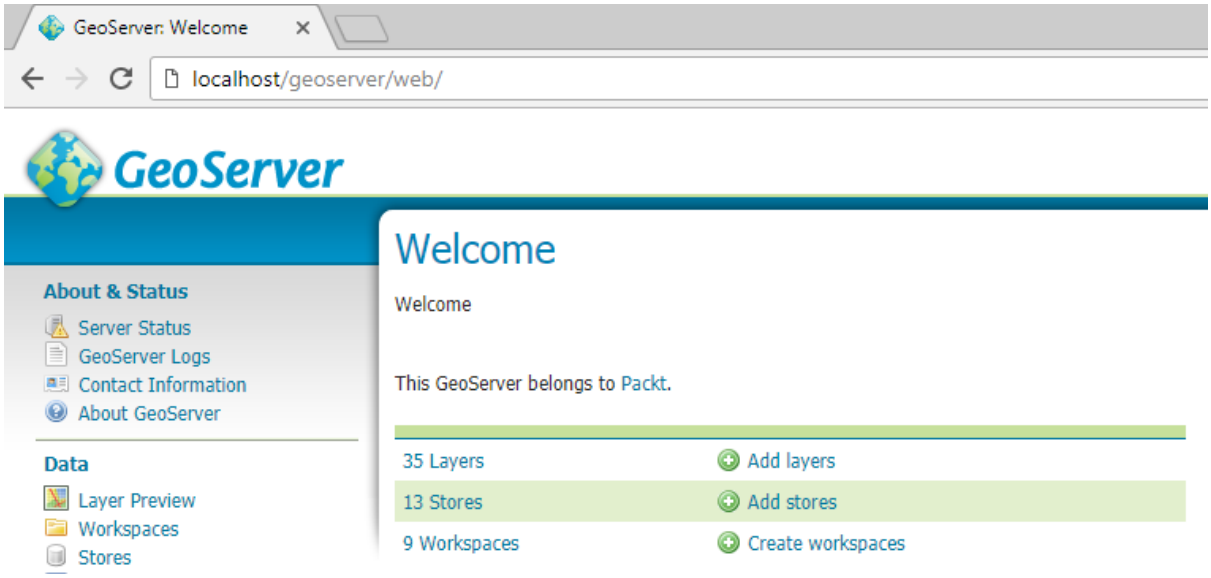
Max rendering time (s)

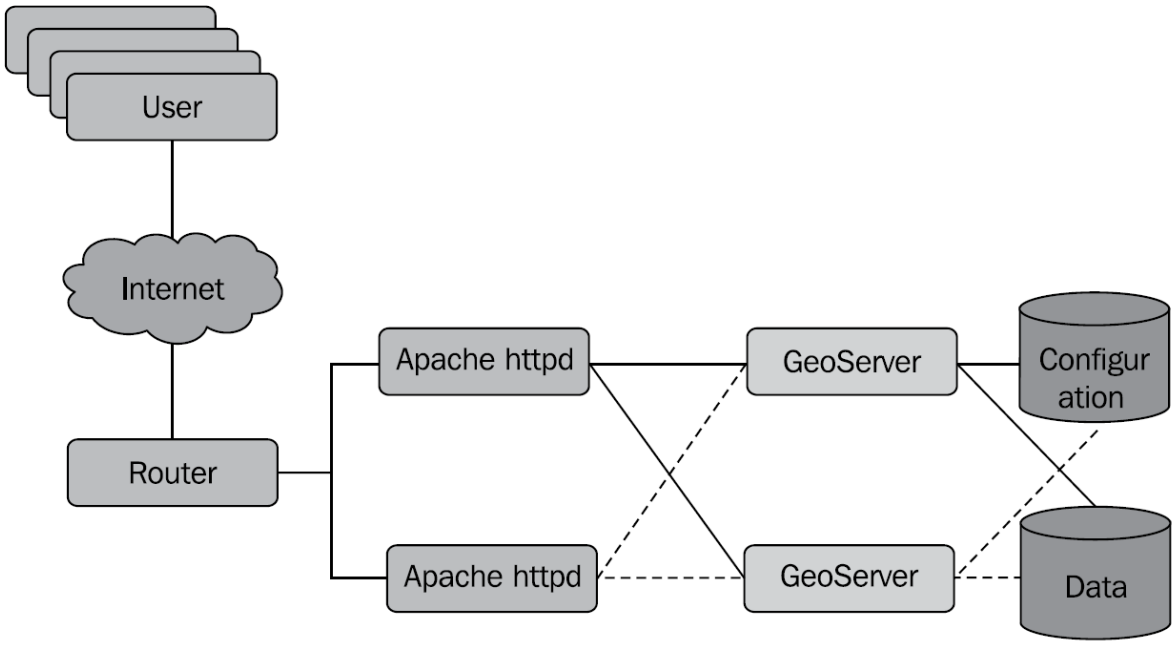
60

Max rendering errors (count)

1000

It works!





LoadBalancer Status for balancer://geoserver

StickySession	Timeout	FailoverAttempts	Method
-	0	1	byrequests

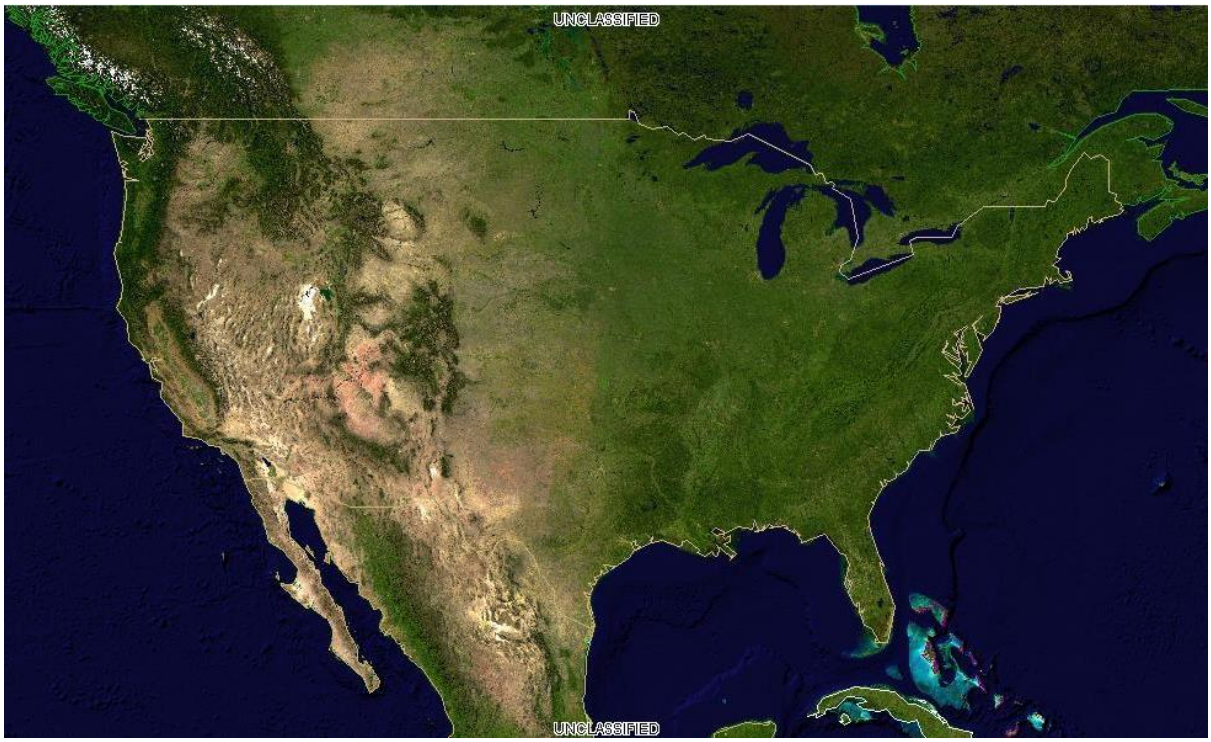
Worker URL	Route	RouteRedir	Factor	Set	Status	Elected	To	From
ajp://localhost:8009/geoserver			1	0	Ok	6	0	9.4K
ajp://localhost:8109/geoserver			1	0	Ok	5	0	80K

LoadBalancer Status for balancer://geoserver

StickySession	Timeout	FailoverAttempts	Method
-	0	1	byrequests

Worker URL	Route	RouteRedir	Factor	Set	Status	Elected	To	From
ajp://localhost:8009/geoserver			1	0	Ok	10	0	14K
ajp://localhost:8109/geoserver			3	0	Ok	31	33	43K

Chapter 12: Going Further - Getting Help and Troubleshooting



Edit Vector Data Source

Edit an existing vector data source

PostGIS (JNDI)
PostGIS Database (JNDI)

Basic Store Info

Workspace *

Packt

Data Source Name *

PostGISJNDI

Description

Enabled

Connection Parameters

dbtype *

postgis

jndiReferenceName *

java:comp/env/jdbc/postgis

schema

Namespace *

https://www.packtpub.com/

<< < 1 > >> Results 0 to 0 (out of 0 items)

Search

Published	Layer name	Action
	europe	Publish
	europe_points	Publish
	ne_110m_admin	Publish
	ne_50m_admin_0_countries	Publish
	rivers	Publish
	rivers2	Publish
	worldrivers	Publish

<< < 1 > >> Results 0 to 0 (out of 0 items)

Miscellaneous

- Chart Symbolizer
- Control Flow
- Cross Layer Filtering
- CSS Styling
- CAS
- Monitor (Core, Hibernate)
- Importer (Core, BDB Backend)
- INSPIRE
- Printing
- YSLD Styling

Monitor

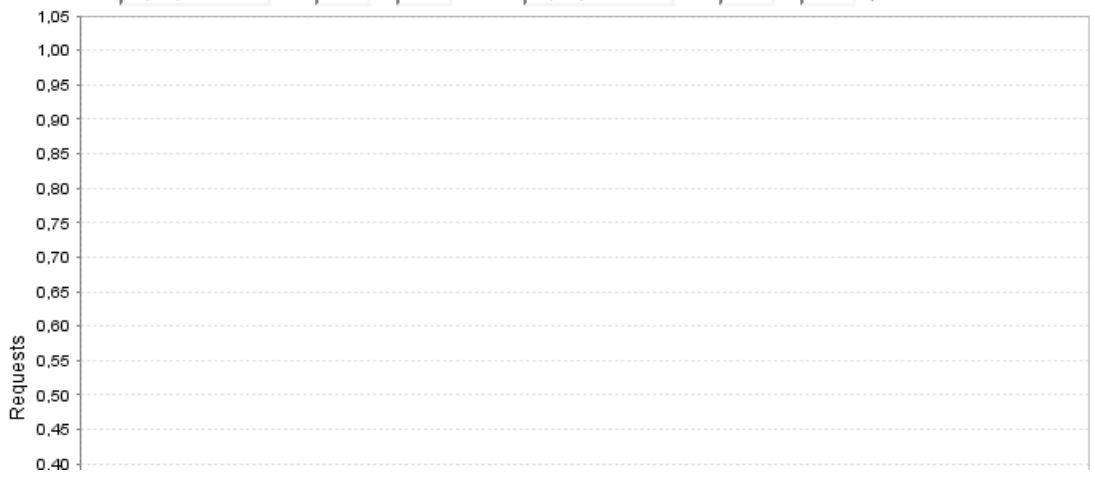
Activity
Reports

Activity

Recent Server Activity

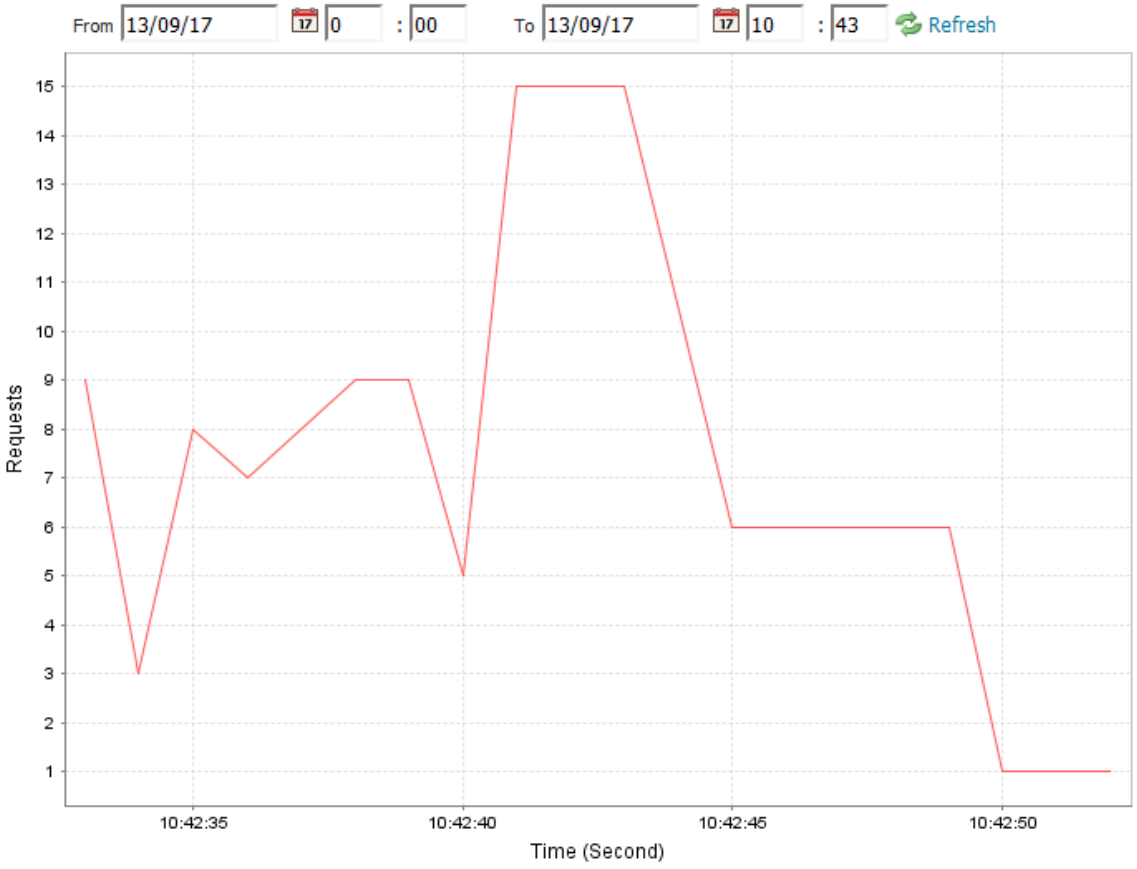
Live | Daily | Weekly | Monthly

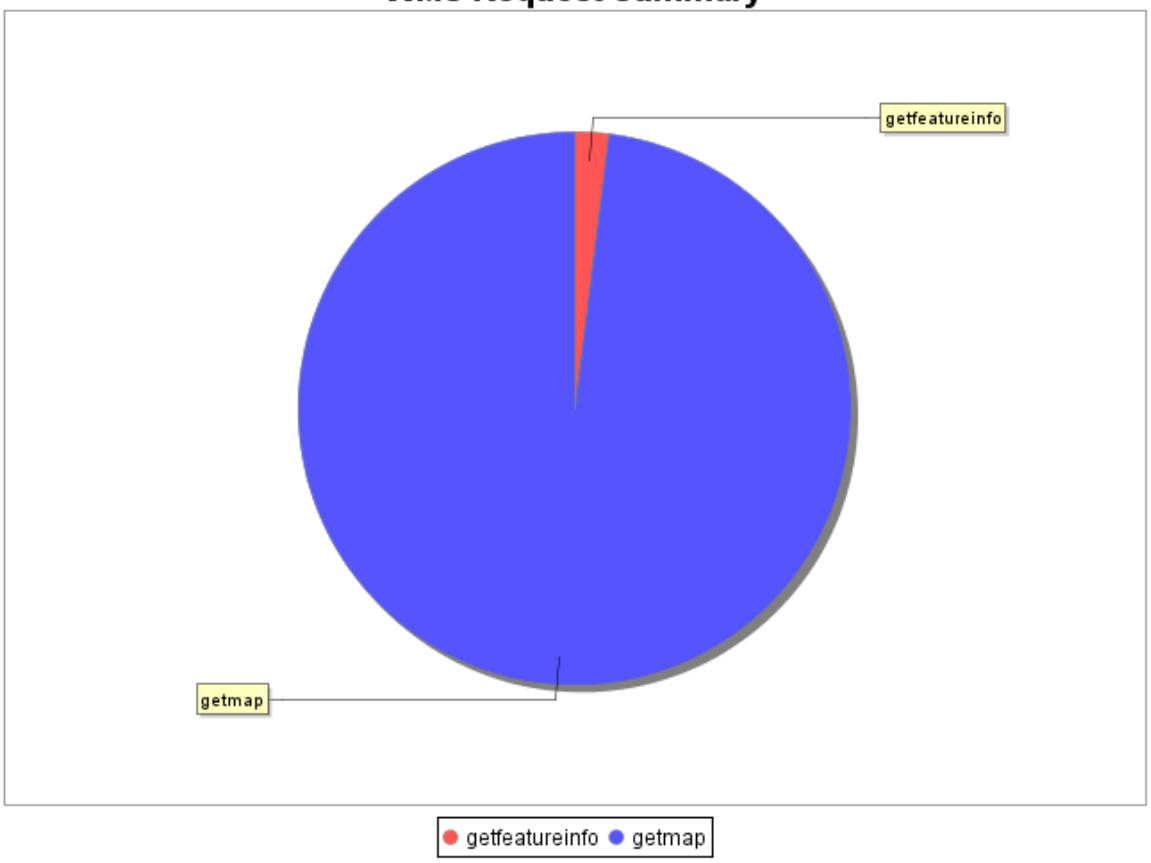
From 13/09/17 0 : 00 To 13/09/17 10 : 39 Refresh



Live | Daily | Weekly | Monthly

From 13/09/17 0 : 00 To 13/09/17 10 : 43 Refresh



Overview | WFS | WMS | WCS

WMS Request Summary