Web serve Db2 spatial data with GeoServ

David Adler
Published on September 20, 2016 / *Updated on February 10, 2021*

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Overview

Skill Level: Any Skill Level

GeoServer is an open source Web Map and Web Feature server.

This recipe takes you through the steps to load spatial data into a Db2 database, and setup GeoServ data.

Ingredients

- Db2 client and server(Db2 Developer client & server download)
- GeoServer 2.15 or later (download)
- Sample data (download)
- Db2 spatial documentation as appropriate for your environment:
  - Db2 for z/OS Knowledge Center
  - Db2 LUW Knowledge Center

With this recipe you will create a map of San Jose streets, two bank branches and a number of sample like the following screen capture from QGIS.

Step-by-step

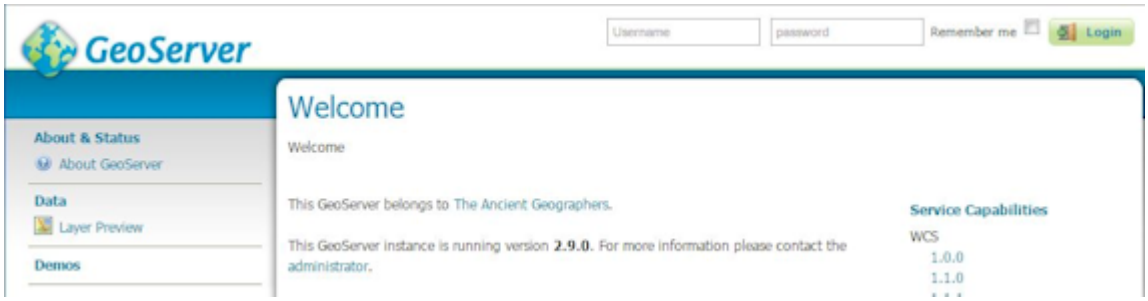
1 Setup Db2 and sample data

1. Note: this recipe uses GeoServer running on Ubuntu Linux connecting to a DashDB databa database connection values in the examples to your database name and userid.
2. Download and unzip the sample data to a convenient directory.
3. Open a Db2 command window where you can execute SQL statements. If you are using a r sure it is cataloged locally. You can use the scripts **catalog-luw.sql** or **catalog-zos.sql** as a changes for the remote server location. (Use **catalog-luw.sql** for DashDB)
   You can execute the script with a command like:
   db2 -tvf catalog-luw.sql

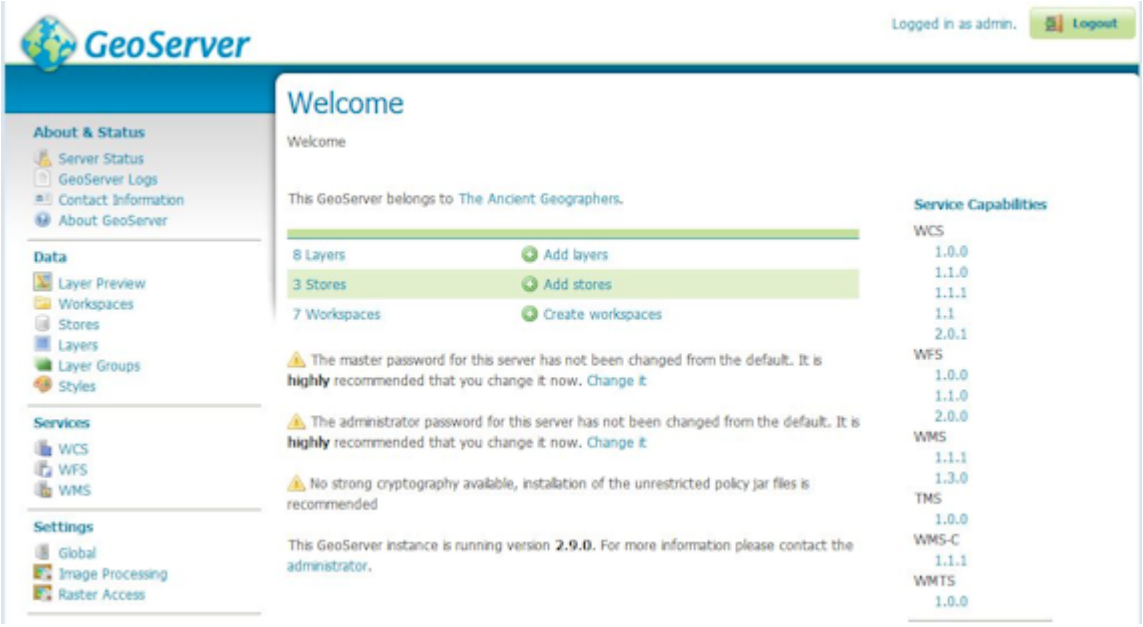
4. Import sample spatial for banks, customers and San Jose streets.
   – Modify the scripts **import-luw.sql** or **import-zos.sql** as appropriate to change the userid procedure. (The scripts contain descriptions of each of the steps and any modifications ne
   – Execute the script with a command like:
   db2 -tvf import-luw.sql
   – Check that there were no processing errors
5. Verify the imported data with the SQL statement (change "**dash5510**" to your connection
   db2 select name, street, varchar(db2gse.st_astext(geom),32) from dash5510.banks
   which should return the name, street address and location of the **Meridian** and **San Carlos**

2 Install and setup GeoServer

1. Download and install GeoServer using the instructions at the download link in the Ingredie support is an extension that needs to be download and installed separately using these di
2. From the Windows start menu, navigate to Geoserver and click on "Start Geoserver. This w window and show startup messages for a minute or so until the server is started.
3. From the start menu, navigate to GeoServer and click on "GeoServer Web Admin Page" wh in your default web browser like the following.



4. Use the default userid 'admin' and password "geoserver" to login which will then show the window as shown.



3 Create Db2 Data Source and Vector Layers

1. Click on “Add stores”. Select **DB2 NG** and then fill in the connection information similar to click **Save** at the bottom. Note that the schema is case sensitive so it is generally importan

is entered in upper case which is the database default. On DashDB this should be the sam

2. This will bring up the New Layer dialog with a list of the tables with spatial columns. In ord available, click on **Publish** under “Action”.

3. This will bring up a Layer Edit dialog with many fields. The only essential action is to click c
native bounds as shown below and then **Save**.

4 Access the spatial web server

1. A sample of what the data looks like can be shown by selecting “Layer Preview” from the r
selecting the “OpenLayers” format which will result in a display as below for the San Jose

2. In general, you will want to access GeoServer through an open source or commercial GIS p
   data integration using a Web Map Server (WMS) or Web Feature Server (WFS). A WMS prov
   map) of the data while a WFS provides the feature vector information along with attribute
   for styling and labeling purposes.
3. To use the Geoserver WMS capability, use a URL like the following from the GIS tool:
   http://localhost:8080/geoserver/cite/wms?service=WMS
4. To use the Geoserver WMS capability, use a URL like the following from the GIS tool:
   http://localhost:8080/geoserver/cite/wfs?service=WFS
5. This example uses the QGIS open source GIS product to display the banks, customers and
   GeoServer using the WFS support.

5 Conclusion

With GeoServer you can make available Db2 spatial data through the Internet in a wide variety

- WMS
- WFS
- KML
- GML
- GeoJSON
- Shapefile
- and many others

You may also find these tutorials on Developer Works useful:

- Manage spatial data with IBM DB2 Spatial Extender, Part 1 – Acquiring spatial data and de
- Manage spatial data with IBM DB2 Spatial Extender, Part 2 – Implementing typical spatial

by David Adler

2 comments on"Web serve Db2 spatial data with GeoServer"

StratosTsompanopoulos • February 14, 2018

Thank you very much for the detailed steps.
I see you are using Port:50000. I am guessing this connection is with disabled SSL.
So, I have one question: does it support SSL connection?

Reply (Edit)

David Adler • February 14, 2018

Thank you for your comment.
I haven't worked much with SSL but am pretty sure that this should work just fine. When you insta
install SSL support.

Reply (Edit)

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