



Web Map Publishing using GeoServer

GeoServer...

- GeoServer is an open-source server written in Java
- Allows users to share, process and edit geospatial data
- Designed for interoperability
- Publishes data from any major spatial data source using open standards.
- GeoServer reads a variety of data formats, including:
 - Shapefiles, GeoTIFF, ECW, MrSID, JPEG2000
 - PostGIS, Oracle Spatial, ArcSDE, DB2, MySQL, MongoDB, Apache
- GeoServer implements industry standard OGC protocols such as
 - Web Feature Service (WFS) - Vector
 - Web Map Service (WMS) - Raster
 - Web Coverage Service (WCS)
 - Web Processing Service (WPS) (as extension)
 - Web Map Tile Service (WMTS) (as extension)

GeoServer...



Java Runtime
Environment (JRE)

GeoServer



Web Map
Publishing

GeoServer installation

- **Download Java & Geoserver (Latest Version)**
- **Create Directories**
 1. Create a folder in: C:\Program Files (x86)
 2. Rename the folder as: “GeoServer”
 3. Extract the download
 4. Copy Paste the extracted items in: C:\Program Files (x86)\GeoServer
- **Setup Environmental Variables**
 5. Select Advanced System Settings (My Computer / This PC >> Properties)
 6. Select Advanced Tab >> Environmental Variables
 7. Select “New” from System Variables group
 8. Enter the values **Name:** JAVA; **Value:** C:\Program Files (x86)\Java\jre1.8.0_241
 9. Select “New” from System Variables” group
 10. Enter the values **Name:** GEOSERVER_DATA_DIR; **Value:** C:\Program Files (x86)\GeoServer
- **Run GeoServer**
 11. Go to C:\Program Files (x86)\GeoServer\bin
 12. Run “Startup.bat” file
 13. Open browser and type: “http://localhost:8080/geoserver”

GeoServer...

INSTALLATION

The screenshot shows a web browser window with the URL `java.com/en/download/`. The page features the Java logo and navigation links for 'Download' and 'Help'. A sidebar on the left contains links for 'All Java Downloads', 'Report an issue', and a FAQ section. The main content area is titled 'Java Download' and includes a 'Download Java for your desktop computer now!' button. Below this is a yellow warning box titled 'Important Oracle Java License Update' with text explaining the new Oracle Technology Network License Agreement for Oracle Java SE, effective April 16, 2019. At the bottom of the page, there is a section titled 'Why download Java?' with explanatory text.

Java Download Help

All Java Downloads

If you want to download Java for another computer or Operating System, click the link below.
[All Java Downloads](#)

Report an issue

Why am I always redirected to this page when visiting a page with a Java app?
[» Learn more](#)
[» Report an issue](#)

Java Download

Download Java for your desktop computer now!

Version 8 Update 241
Release date January 14, 2020

Important Oracle Java License Update
The Oracle Java License has changed for releases starting April 16, 2019.

The new [Oracle Technology Network License Agreement for Oracle Java SE](#) is substantially different from prior Oracle Java licenses. The new license permits certain uses, such as personal use and development use, at no cost -- but other uses authorized under prior Oracle Java licenses may no longer be available. Please review the terms carefully before downloading and using this product. An FAQ is available [here](#).

Commercial license and support is available with a low cost [Java SE Subscription](#).

Oracle also provides the latest OpenJDK release under the open source [GPL License](#) at [jdk.java.net](#).

Java Download

[» What is Java?](#) [» Do I have Java?](#) [» Need Help?](#)

Why download Java?

Java technology allows you to work and play in a secure computing environment. Upgrading to the latest Java version improves the security of your system, as older versions do not include the latest security updates.

Java allows you to play online games, chat with people around the world, calculate your mortgage interest, and view images in 3D, just to name a few.

GeoServer...

INSTALLATION

The screenshot shows a web browser window displaying the Java download page for Windows. The browser's address bar shows the URL `java.com/en/download/win10.jsp`. The page features the Java logo at the top left, a search bar, and navigation links for "Download" and "Help".

Download Java for Windows
Recommended Version 8 Update 241 (filesize: 1.97 MB)
Release date January 14, 2020

Important Oracle Java License Update
The Oracle Java License has changed for releases starting April 16, 2019.

The new [Oracle Technology Network License Agreement for Oracle Java SE](#) is substantially different from prior Oracle Java licenses. The new license permits certain uses, such as personal use and development use, at no cost -- but other uses authorized under prior Oracle Java licenses may no longer be available. Please review the terms carefully before downloading and using this product. An FAQ is available [here](#).

Commercial license and support is available with a low cost [Java SE Subscription](#).

Oracle also provides the latest OpenJDK release under the open source [GPL License](#) at [jdk.java.net](#).

In Windows 10, the Edge browser does not support plug-ins and therefore will not run Java. Switch to a different browser (Internet Explorer, for example) to run the Java plug-in. Select the More Actions option located at the top right of the Edge browser and click on Open with Internet Explorer. [More info](#)

Agree and Start Free Download

By downloading Java you acknowledge that you have read and accepted the terms of the [Oracle Technology Network License Agreement for Oracle Java SE](#)

When your Java installation completes, you may need to restart your browser (close

GeoServer...

INSTALLATION

The screenshot shows the GeoServer website's download page. The main heading reads "GeoServer is an open source server for sharing geospatial data. Designed for interoperability, it publishes data from any major spatial data source using open standards." Below this is a map of Athens, Greece. To the right, a "Download" section is highlighted with a yellow border, containing three buttons: "Stable" (2.16.2 Nightly), "Maintenance" (2.15.5 Nightly), and "Development" (Master). Below the download section is a "News" section with two articles: "GeoServer 2.15.5 Released" and "GeoServer 2.16.2 released". At the bottom, there are sections for "OGC Implementation" and "Part of a Vibrant Open Source Community". A "Donate" button is visible at the bottom center. The browser's address bar shows "geoserver.org/download/" and the Windows taskbar is visible at the very bottom.

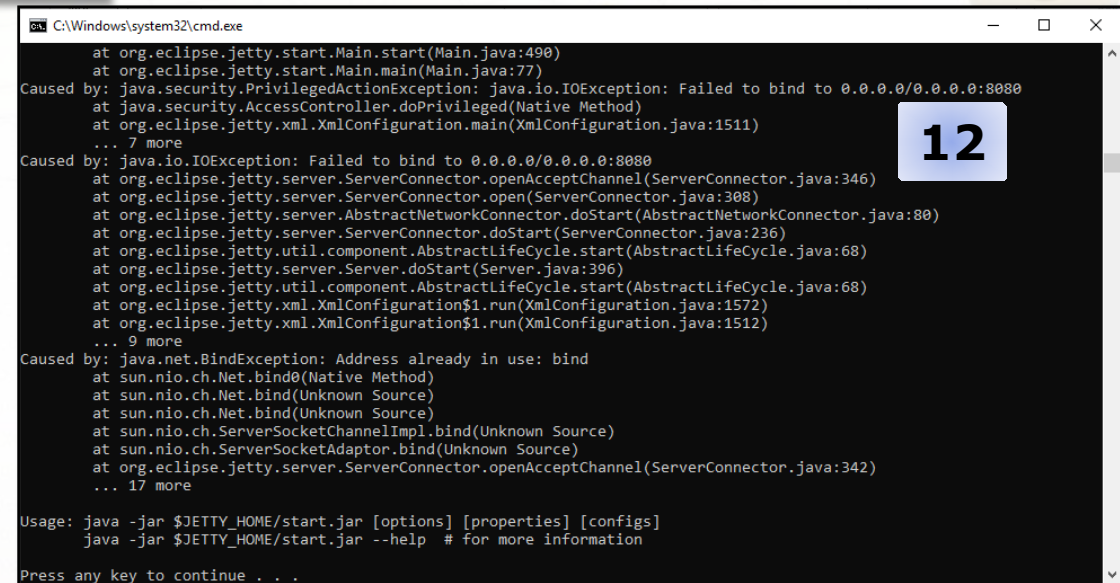
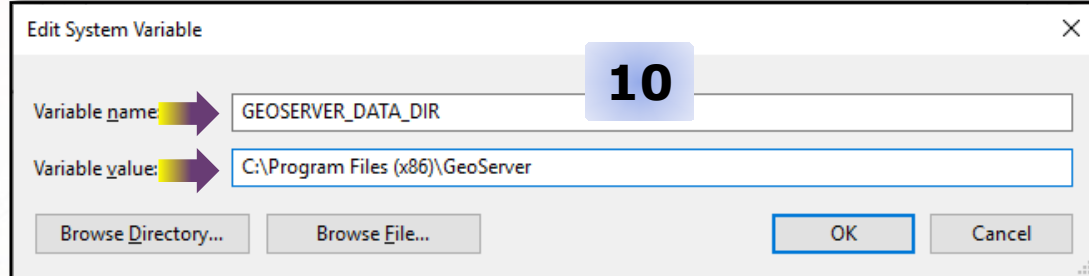
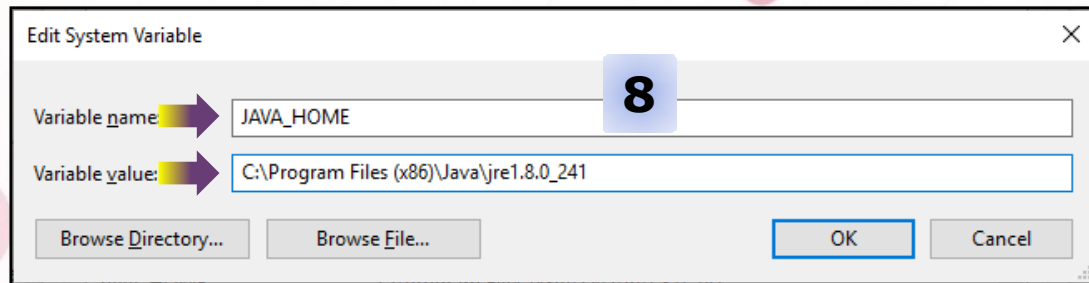
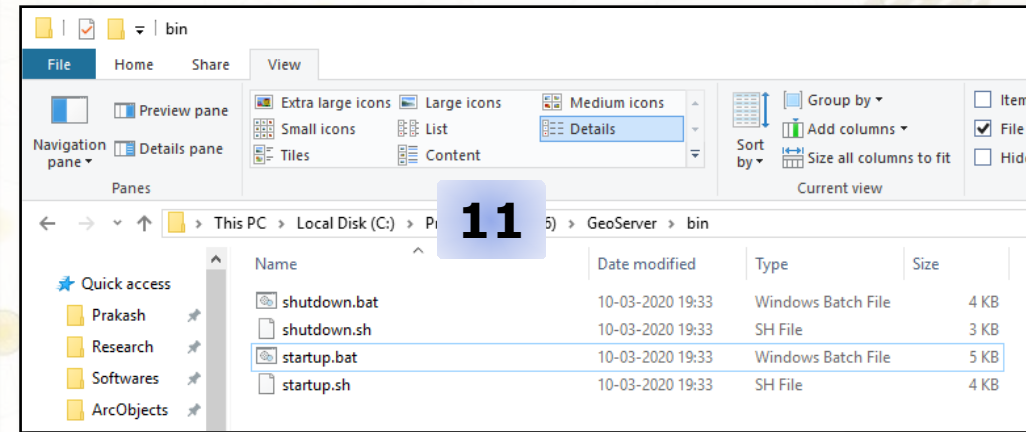
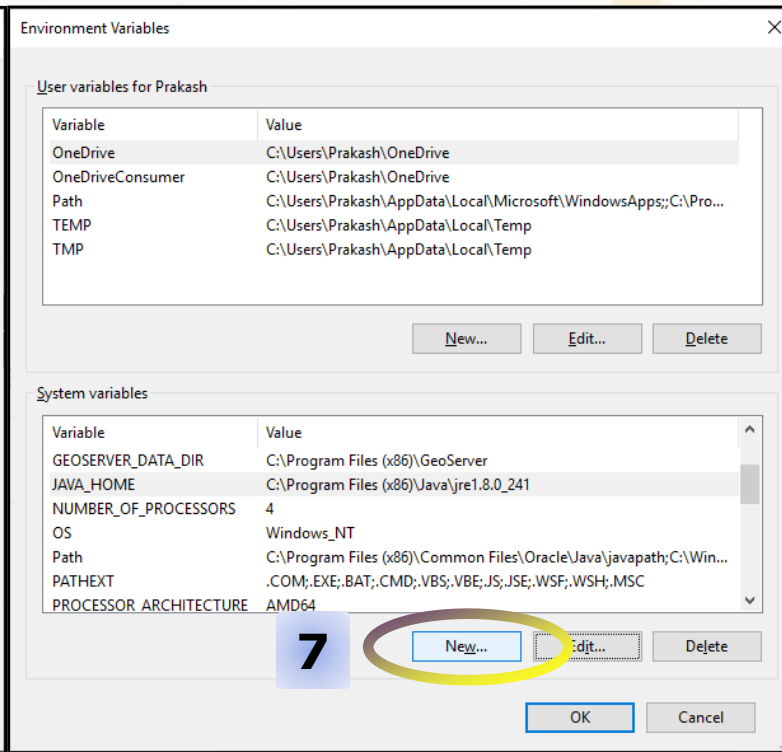
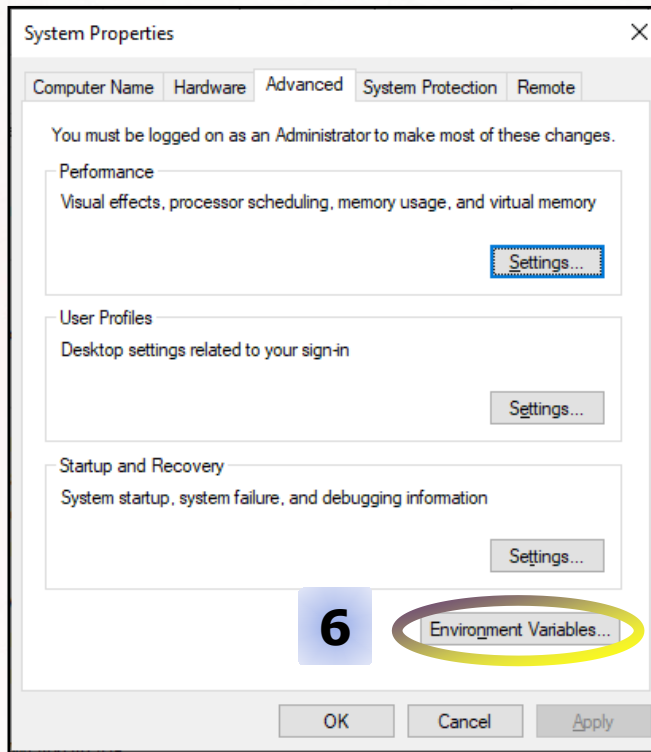
GeoServer...

INSTALLATION

The screenshot shows the GeoServer download page with the following content:

- GeoServer** logo and navigation links: About | Blog | Download | Documentation | Community
- Downloads** section with a note: "GeoServer release schedule offers six months of stable releases, followed by six months of maintenance releases."
- Section header: "Choose a version of GeoServer to download."
- Three tabs: Production (selected), Development, Archived
- Stable GeoServer 2.16.2** (highlighted with a yellow box):
 - Description: "The recommended release of GeoServer, tested and supported by the community."
 - Releases: "GeoServer 2.16 releases: 2.16.2 2.16.1 2.16.0 2.16-RC"
 - Note: "Nightly builds for the 2.16.x series can be found [here](#)."
- Maintenance GeoServer 2.15.5**:
 - Description: "Long term support, so you have time to upgrade."
 - Releases: "GeoServer 2.15 releases: 2.15.5 2.15.4 2.15.3 2.15.2 2.15.1 2.15.0 2.15-RC 2.15-M0"
 - Note: "Nightly builds for the 2.15.x series can be found [here](#)."

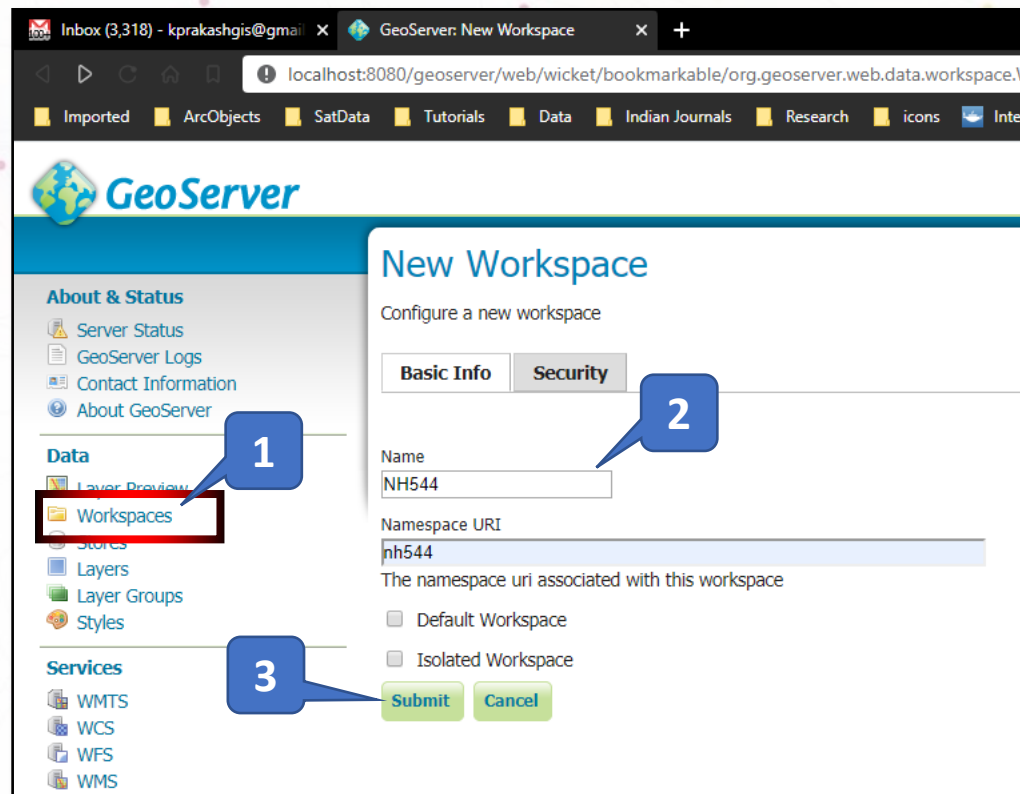
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GeoServer Publishing

- Copy your shapefiles in **“C:\Program Files (x86)\GeoServer\data_dir\data”**
- Create Workspace
 - Login with credentials
 - Username: admin Password: geoserver
- Create Store
- Create Layers
- Preview Layers
 - Publish

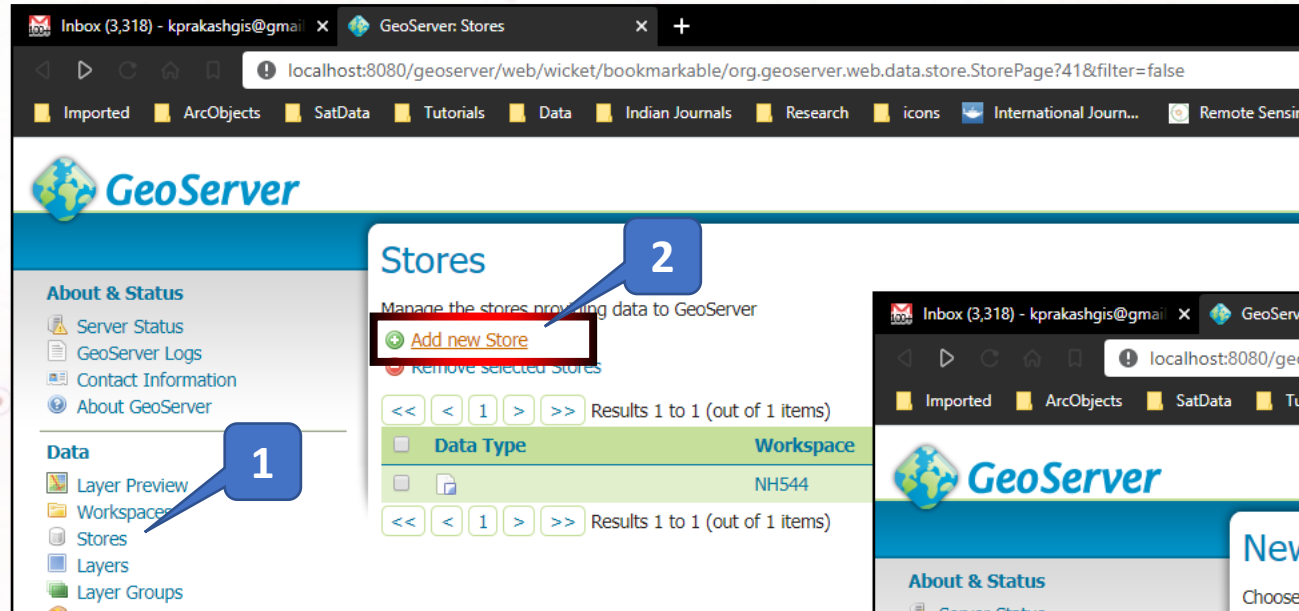
GeoServer Publishing



Workspace:

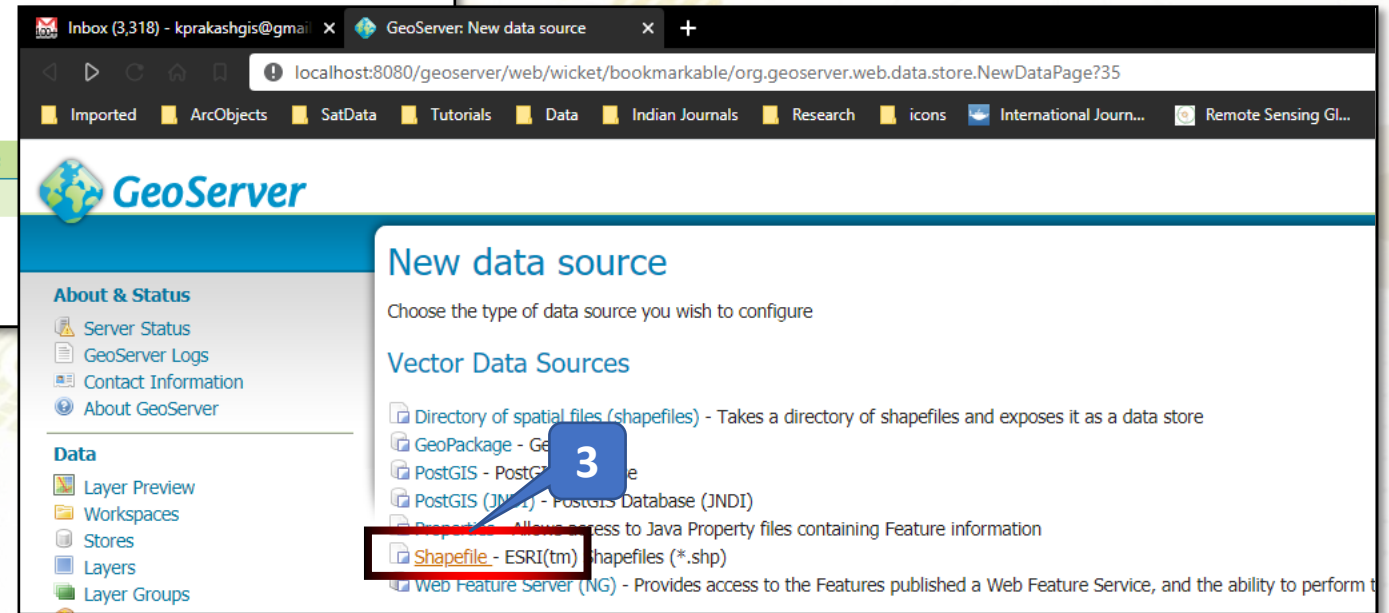
1. Click Workspace
2. Fill name and Namespace URI
3. Submit

GeoServer Publishing



Store:

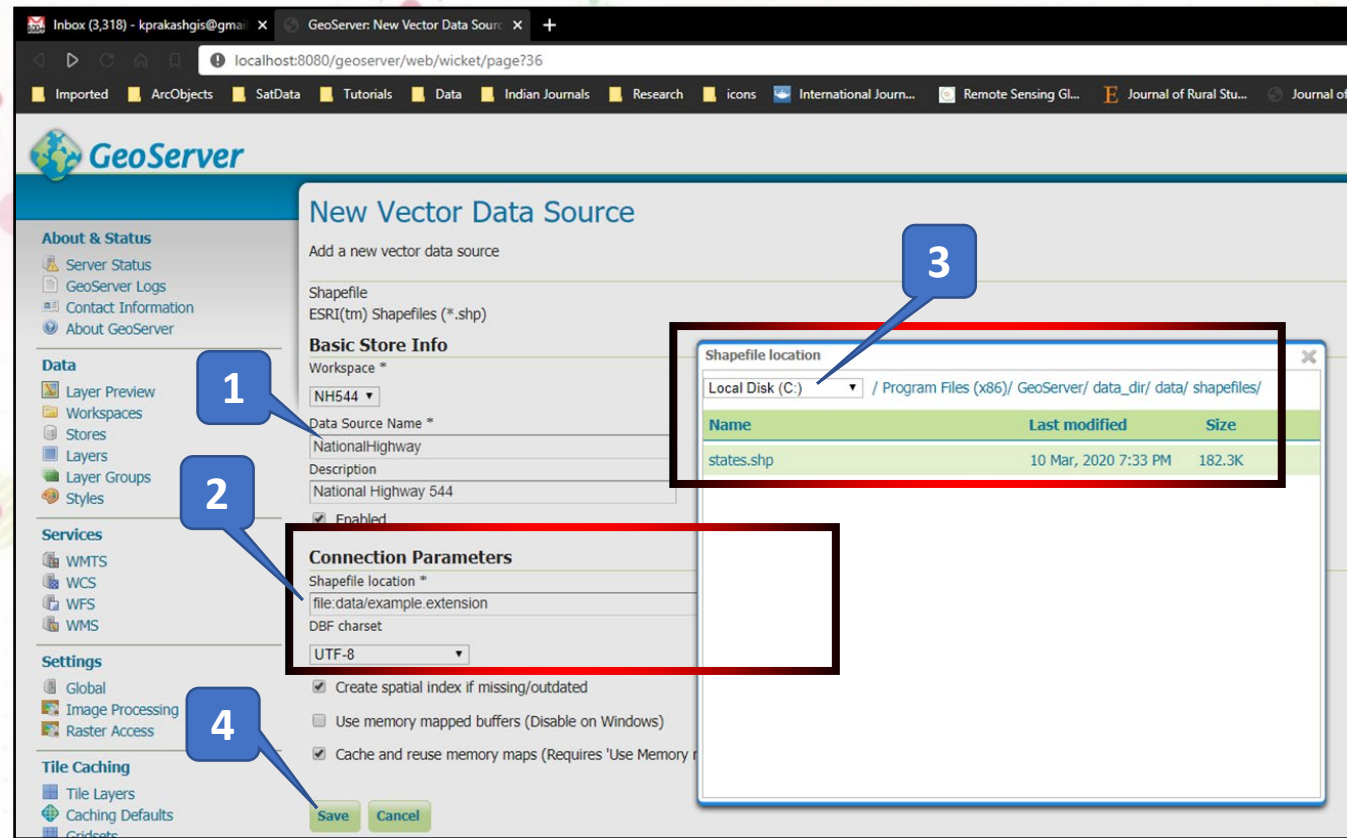
1. Click Store
2. Click Add New Store



New Data Source:

- Click Shapefile

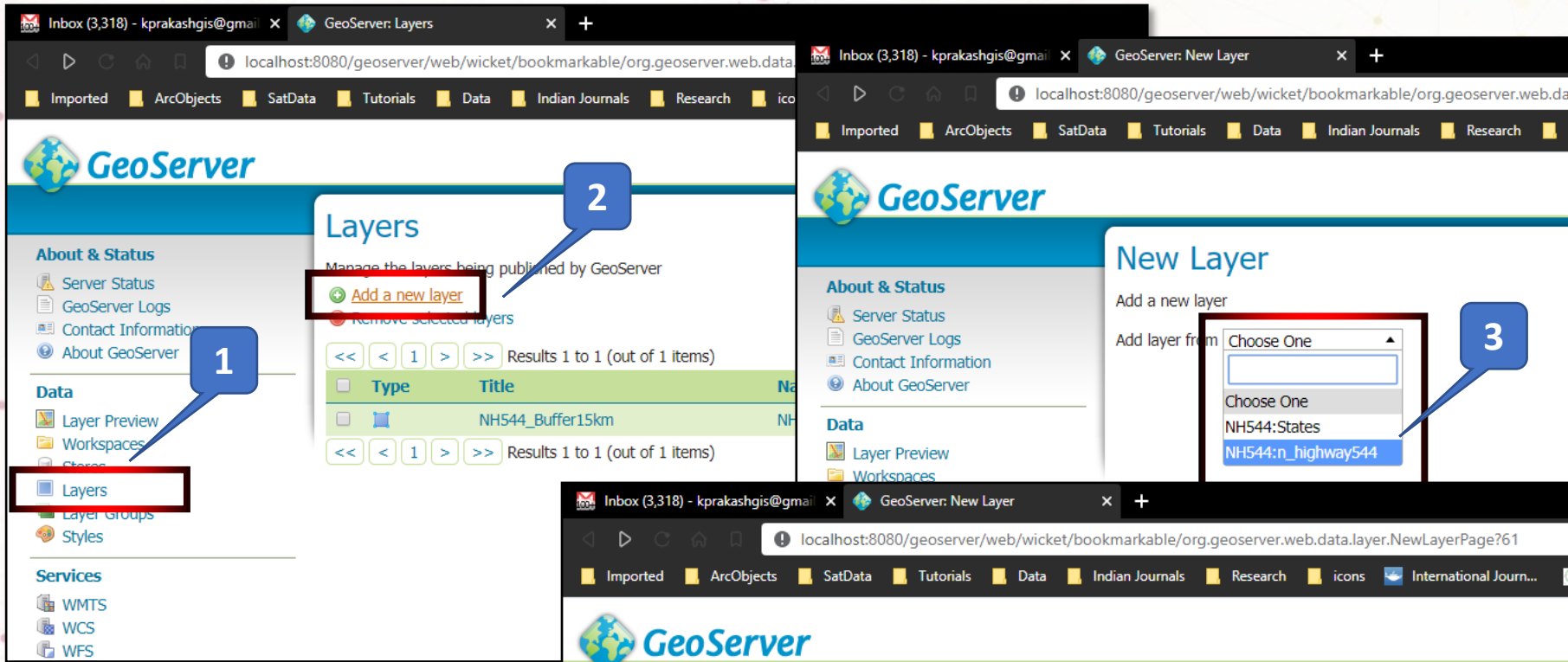
GeoServer Publishing



New Vectors Data Source:

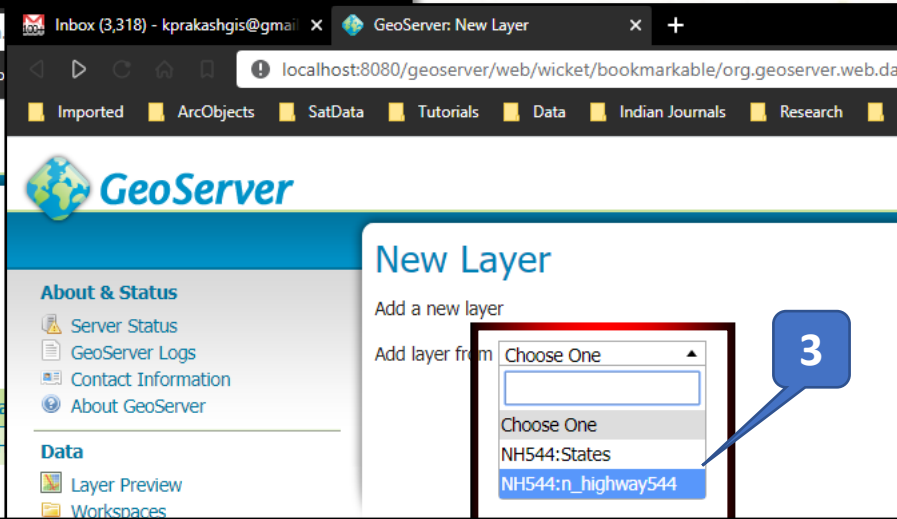
1. Provide Data source name
2. Click Browse
3. Select the shapefile in the **"C:\Program Files (x86)\GeoServer\data_dir\data"** (Previously copied shapefile) and set DBF Charset to UTF-8
4. Save

GeoServer Publishing



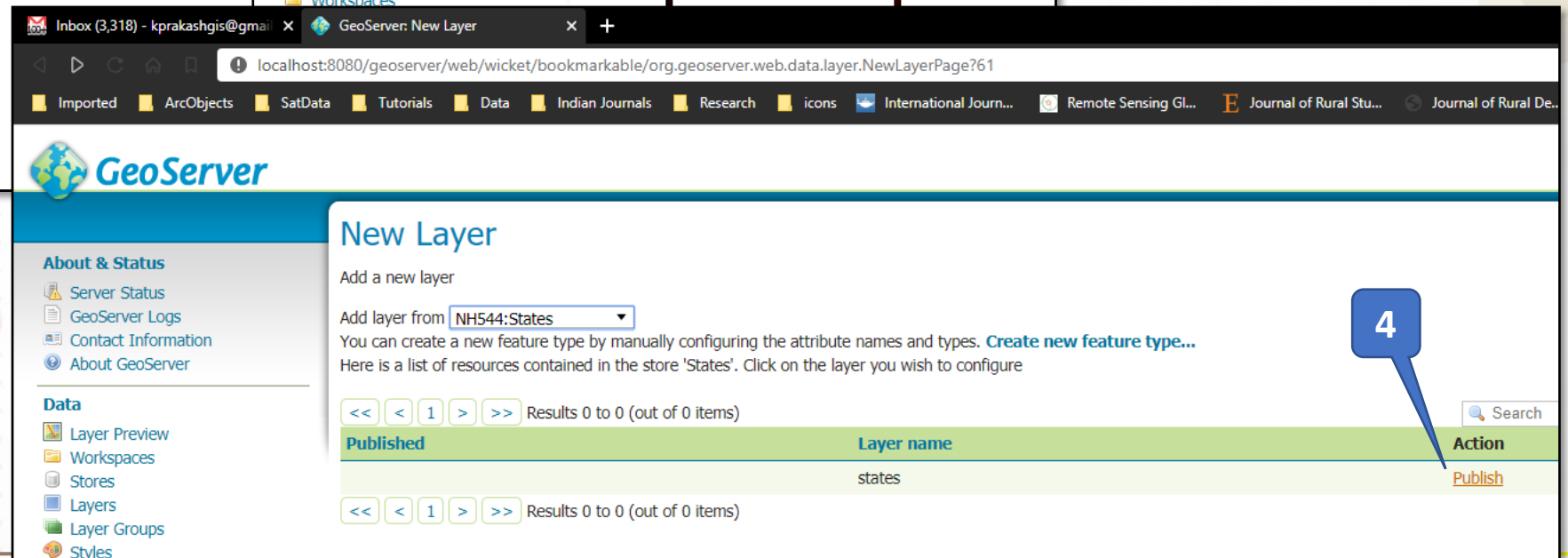
Layers:

1. Click Layers
2. Click Add a new layer



New Layer:

3. Choose a layer from the list
4. Click publish



GeoServer Publishing

SRS handling
Force declared

1

Bounding Boxes

Native Bounding Box

Min X	Min Y	Max X	Max Y
-124.731422000	24.955967	-66.969849	49.371735

[Compute from data](#)
[Compute from SRS bounds](#)

Lat/Lon Bounding Box

Min X	Min Y	Max X	Max Y
-124.731422000	24.955967	-66.969849	49.371735

[Compute from native bounds](#)

2

Curved geometries control

Linear geometries can contain circular arcs

Linearization tolerance (useful only if your data contains curved geometries)

Feature Type Details

Property	Type
the_geom	MultiPolygon
STATE_NAME	String
STATE_FIPS	String

Layers:

1. Click Compute from data
2. Click compute from native bounds
3. Scroll down and Click Save

Inbox (3,318) - kprakashgis@gmail.com x GeoServer: Layer Preview x +

localhost:8080/geoserver/web/wicket/bookmarkable/org.geoserver.web.demo.MapPreviewPage?71&filter=false

Imported ArcObjects SatData Tutorials Data Indian Journals Research icons International Journ... Remote Sensing GL... Journal of Ru

GeoServer

Layer Preview

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

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

Type	Title	Name	Common Formats
■	NH544_Buffer15km	NH544:NH544_Buffer15km	OpenLayers GML KML
■	states	NH544:states	OpenLayers GML KML

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

1

2

Layers:

1. Click Layer Preview
2. Click OpenLayers for any layer to view in browser

