OpenESSENCE Installation Guide

Prepared by The Johns Hopkins University Applied Physics Laboratory, for the Armed Forces Health Surveillance Center, Division of GEIS Operations





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Installation Overview

OpenESSENCE requires several software products and some environment customization to function properly:

- Java Development Kit the software runtime used for OpenESSENCE execution
- PostgreSQL an open-source database for surveillance data
- **Apache Tomcat** a web application server, hosting the OpenESSENCE software and providing it to browser users

NOTE: Version numbers of these products may change over time and may not exactly match versions seen in screen shots in this guide.

This guide describes the installation of these products, customization of your environment, and deployment of the demo version of OpenESSENCE. This version is a fully functioning version of OpenESSENCE that contains dummy data for demonstration purposes. This guide assumes that you are installing on a Windows 7 computer. Installation is very similar for other recent versions of Windows.

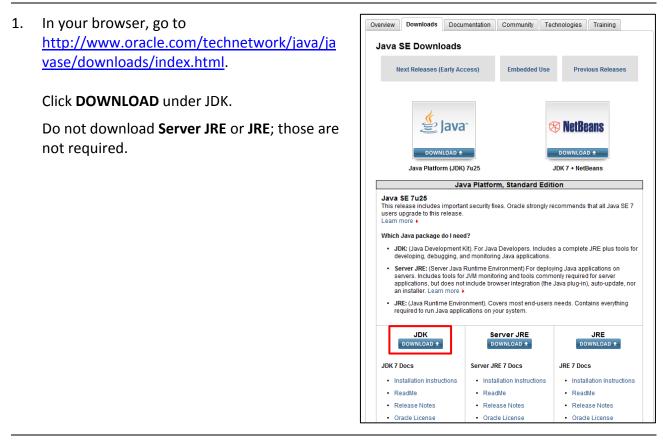
Some OpenESSENCE configuration files require changes to indicate installation-specific details such as database user name and password. These changes require the installer to have write access to the directories containing the configuration files. If the system is running the Windows 7 operating system and you have limited administrative access, you will need to copy configuration files to a location that allows edits, such as the Windows Desktop. Once edited, the original files can be overwritten by using copy and replace. If issues during the installation process still exist, please contact the local administrator.

In several places throughout this guide, you will be asked to download either a 32-bit version of a particular application, or a 64-bit version. In general, if you are using Windows XP, you should select the 32-bit version of the application. If you are using Windows 7, you should select the 64-bit version of the application.

Even though we have tried to be as thorough as possible in these instructions, this guide assumes that you have a moderate amount of experience in downloading and installing web applications, starting and stopping services, using the Windows command prompt, and navigating through the file system.

Installing and Configuring Java

OpenEssence requires Oracle's Java Development Kit (JDK) for execution. You must install Java and configure the JAVA_HOME and Path environment variables as described here.



 Check the Accept License Agreement box on the download page and select the Java distribution you would like to use.

If you are running 32-bit Windows (such as Windows XP), you must choose 32-bit Java for Windows (Windows x86).

If you are running 64-bit Windows (such as Windows 7), you may choose either 32-bit or 64-bit Java; we recommend 64-bit (Windows x64).

Accept License Agreement Dec	software. cline License Ag	reement
	\searrow	
Product / File Description	File Size	Download
Linux x86	80.38 MB	jdk-7u25-linux-i586.rpm
Linux x86	93.12 MB	🛓 jdk-7u25-linux-i586.tar.gz
Linux x64	81.46 MB	🛓 jdk-7u25-linux-x64.rpm
Linux x64	91.85 MB	보 jdk-7u25-linux-x64.tar.gz
Mac OS X x64	144.43 MB	보 jdk-7u25-macosx-x64.dmg
Solaris x86 (SVR4 package)	136.02 MB	보 jdk-7u25-solaris-i586.tar.Z
Solaris x86	92.22 MB	보 jdk-7u25-solaris-i586.tar.gz
Solaris x64 (SVR4 package)	22.77 MB	보 jdk-7u25-solaris-x64.tar.Z
Solaris x64	15.09 MB	보 jdk-7u25-solaris-x64.tar.gz
Solaris SPARC (SVR4 package)	136.16 MB	보 jdk-7u25-solaris-sparc.tar.Z
Solaris SPARC	95.5 MB	보 jdk-7u25-solaris-sparc.tar.gz
Solaris SPARC 64-bit (SVR4 package)	23.05 MB	🛓 jdk-7u25-solaris-sparcv9.tar.Z
Solaric SPARC 64 bit	17.67 MB	🛓 jdk 7u25 celerie eperci0.ter.gz
Windows x86	89.09 MB	jdk-7u25-windows-i586.exe
Windows x64	90.66 MB	jdk-7u25-windows-x64.exe

3.	Run the downloaded Java installer.	Java SE Development Kit 7 Update 25 (64-bit) - Setup
	Press Next to continue the Java Development Kit (JDK) installation.	Welcome to the Installation Wizard for Java SE Development Kit 7 Update 25 This wizard will guide you through the installation process for the Java SE Development Kit 7 Update 25. The JavaFX SDK is now included as part of the JDK. Next > Cancel
4.	You can install to any directory.	Java SE Development Kit 7 Update 25 (64-bit) - Custom Setup
	Note the location of this directory as you will need it later. Click Next .	CRACLE Select optional features to install from the list below. You can change your choice of features after installation by using the Add/Remove Programs utility in the Control Panel Source Code Public JRE Install to: C:Program Files\Java\ydk1.7.0_25\
		< Back Next > Cancel

5. A status indicator bar will show the progress of the installation.

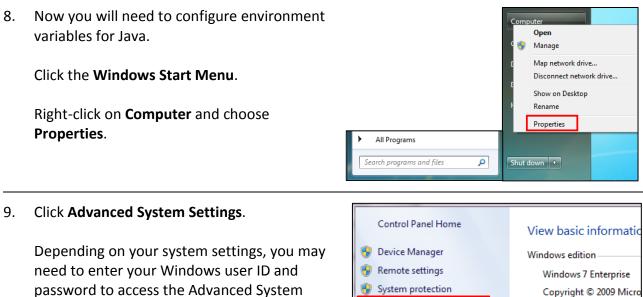
🔁 Java SE Development Kit 7 Update 25 (64-bit) - Progress	
👙 Java	ORACLE
Status:	

 After the JDK has installed, the Java Runtime Environment (JRE) will be installed. Press Next.



 At the end of the Java installation you should see this screen. You do not need to click Next Steps. Click Close.





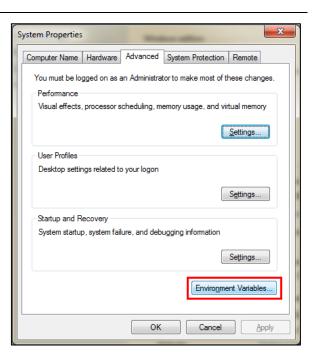
Settings application.

2

🚱 Advanced system settings

Service Pack 1

10. Click Environment Variables.



11. If a JAVA_HOME variable is listed under **User Variables**, select it and click **Delete**. (The user variables are listed in the <u>upper</u> half of this screen.)

If a JAVA_HOME variable is listed under **System Variables**, select it and click **Edit**. (The system variables are listed in the <u>lower</u> half of this screen.)

If no JAVA_HOME variable is listed under **System Variables** click **New**.

Variable Value Variable Value FP_NO_HOST_C NO GDAL_DATA C:\Program Files\PostgreSQL\9.2\gal JAVA_HOME C:\Program Files\Java\jdk1.7.0_25	Variable	Value
New Edit Delete vstem variables Variable Value FP_NO_HOST_C NO GDAL_DATA C:\Program Files\PostoreSOL\9.2\odal JAVA_HOME C:\Program Files\Java\jdk1.7.0_25	TEMP	%USERPROFILE%\AppData\Local\Temp
Variables Variable Value FP_NO_HOST_C NO GDAL_DATA C:\Program Files\PostgreSOL\9.2\gala JAVA_HOME C:\Program Files\Java\jdk1.7.0_25	TMP	%USERPROFILE%\AppData\Local\Temp
Value Value FP_NO_HOST_C NO GDAL_DATA C:\Program Files\PostgreSOL\9.2\gradal JAVA_HOME C:\Program Files\Java\jdk1.7.0_25		New Edit Delete
Value Value FP_NO_HOST_C NO GDAL_DATA C:\Program Files\PostgreSOL\9.2\galal JAVA_HOME C:\Program Files\Java\jdk1.7.0_25	ystem variables	
JAVA_HOME C:\Program Files\Java\jdk1.7.0_25	Variable	Value
JAVA_HOME C:\Program Files\Java\jdk1.7.0_25	FP_NO_HOST_C	
······································		C:\Program Files\PostgreSOL\9.2\gdal
		C:\program Files\Java\jdk1.7.0_25 C:\tools\apache-maven-3.0.5
MVN_HOME C: \tools \apache-maven-3.0.5	JAVA_HOME	······

5

Enter the name of the directory in which you installed Java (from Step 4) for Variable_value. The variable name should be JAVA_HOME.

Make sure that you specify the *base* directory for the Java installation and not the bin directory that's inside it.

Click **OK** to save the value.

 Select the Path variable under System Variables and click Edit. (It is highly unlikely that the Path variable does not already exist, but if it does not, press New.)



Variable	Value
TEMP	%USERPROFILE%\AppData\Local\Temp
TMP	%USERPROFILE%\AppData\Local\Temp
	New Edit Delete
vstem variables	
Variable	Value
OS	Windows NT
OS Path	Windows NT %JAVA_HOME%\bin;%ANT_HOME%\b
Path PATHEXT	%JAVA_HOME%\bin;%ANT_HOME%\b .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;
Path	%JAVA_HOME%\bin;%ANT_HOME%\b .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;

14. Add the following text in front of the existing value in the Variable_value field (press the HOME key to make sure you are at the beginning of the field):

%JAVA_HOME%\bin;

Click **OK** to save the value.

Close all other dialog boxes by clicking **OK**.



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- 15. To verify that the path was set correctly, open a CMD window:
 - a) Click the Windows Start button
 - b) Type cmd in the text field and press ENTER

You should see a black command screen window (as shown in the next step).

Programs (1)		
cmd.exe		
	File description: Windows Command Processor Company: Microsoft Corporation File version: 6.1.7601.17514 Date created: 11/20/2010 10:23 PM Size: 337 KB	
🔎 See more resul	ts	
cmd	× Shut down >	age: 27 of 39

16. At the prompt, type where java and press ENTER. You should see the following path: C:\Program Files\Java\jdk1.7.0_25\bin\java.exe

Installing PostgreSQL

These installation instructions are based on PostgreSQL 9.2 and assume that the system does not currently have another server running on port 5432 (the default PostgreSQL port) on the target machine.

 To check if port 5432 is available, open a command prompt (from the Windows Start menu, type cmd in the search box and press ENTER). Windows Command Processor
 Indows [Version 6.1.7601]
 Copyright https://www.systen32/netstat-ano findstr 5432
 C:\Windows\Systen32>

At the command prompt, type

netstat -ano | findstr 5432

and press ENTER. There should be no process associated with the port.

2. Open your browser and go to <u>http://www.postgresql.org/download</u>.

Click **Windows** under the pre-built binary packages section.



3. Click the **Download** link.



4. Select either the 32-bit or 64-bit installer for Windows.

If you are running 32-bit Windows, you must choose 32-bit PostgreSQL for Windows (Win x86-32)

If you are running 64-bit Windows, you may choose either 32-bit or 64-bit PostgreSQL; we recommend 64-bit (Win x86-64)

5. Run the downloaded installer.

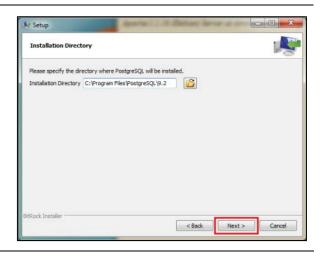
Click Next to continue.



Setup - PostgreSQL
Welcome to the PostgreSQL Setup Wizard.
< Back Next > Cancel

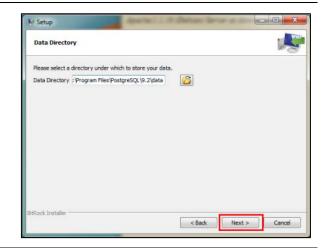
 Select the installation directory for PostgreSQL. The default directory is recommended.

> Note the location of this directory; you will need it when installing PostGIS. Press **Next** to continue.



7. Select the directory where your data will be stored. The default directory is recommended.

Press **Next** to continue.



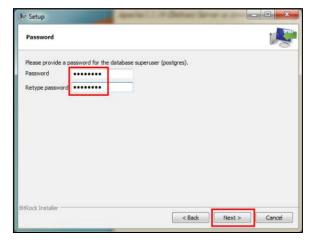
8. Enter and retype a password for your database administrator (the administrator user ID is *postgres*).

Note the password. This password will be used to access the database by OpenESSENCE. PostgreSQL will warn if the password does not match your system requirements.

Press Next to continue.

9. Enter the port on which the PostgreSQL server will listen for incoming requests. The default port, 5432, is recommended unless there is a conflict on your machine.

Press Next to continue.



Port			
Please select the port numb	per the server should listen	on.	
Port 5432			
Rock Installer			

10. Choose the locale for your database. The Setup default (Default locale) is recommended. Advanced Options Press Next to continue. Select the locale to be used by the new database cluster. Locale [[Default locale] -< Back Next > Cancel 11. Press Next to start the installation. Netup Ready to Install Setup is now ready to begin installing PostgreSQL on your computer. Next > Cancel < Back 12. A status indicator bar will show the progress 📕 Setup of the installation. Installing Please wait while Setup installs PostgreSQL on your computer Instaling Initialising the database cluster (this may take a few minutes). < Back Next > Cancel

13. Uncheck the Launch Stack Builder at exit? option.

Click **Finish** to complete the PostgreSQL installation.

🕀 Setup	
\bigcirc	Completing the PostgreSQL Setup Wizard
h h d	Setup has finished installing PostgreSQL on your computer. Launch Stack Builder at exit?
	tack Builder may be used to download and instal dditional tools, drivers and applications to complement your PostgreSQL installation.
PostgreSQL	
Packaged by:	
Enterprise DB®	
	< Back Finish Cancel

Installing PostGIS

You will now install the PostgreSQL GIS extensions. PostGIS is an open source software program that adds support for geographic objects to PostgreSQL.

1.	Open your browser and go to http://postgis.net/install .	Pest	GI	S		Spatial and Ge	ographic obje	cts for PostgreSQL
		In	Home	Download	Documentation	Development	Support	(@OSGeo
	Click the Windows Downloads link.	Compiling from S	ource		Ge	tting Started		
		PostGIS has many p more adventurous a				se instructions are f tGIS 2.0 and higher.	or PostgreSQL	9.1 and higher,
		our source download			s: Ena	abling PostGIS		
		Source Download Binary Installers	and Compi	le Instructions	you	tGIS is an optional e r database before yo st the first step.		
		Binary distributions of operating systems.	f PostGIS a	re available for v	001	nect to your databas wing SQL:	se with page or	PgAdmin. Run the
		Windows More details abou windows can be f			<	- Snable Posto REATE EXTENSIO		es raster)
		page.		bows Download		tial SQL		
2.	Click the PostGIS Windows Downloads link.	Pest	GI	S	V	Spatial and Ge	eographic obje	ects for PostgreSQ
		E	Home	Download	Documentation	Development	Support	(@OSGeo
		Released Version • Latest released w PostoreSQL 8.4- Stackbuider and downbad: Packas • PostGiS 2.0.3 • Tiger geocode folder) • For 9.1-9.2-e • Commandine import/export. ppsq2shp	ersion is Por 3.2.32-bit an also availabl ge includes: with raster s r (in contrib/ raster loade raster loade	d 9 0-9 2 64-bit) e at <u>PostGIS Wi</u> support postgis-20/extra es er, shapefile	is on par indows bull in a esp s bad if yr inst su gon)	nreleased PostGIS pu are more adventu- take in our experime t automatically by W my of the PostGIS 2 excitally useful for tes tay in need of a bug f pu don't want to risk all or aren't allowed gest using the com clinaries which don isled in <u>Starting Pos</u>	rous, and risk- intal windows b linnie wheneve 0 and 2.1 bran ting out new fe ix that has not I messing up an to write to the r panion Postore it require instal	inaries of PostGIS r there is a change ches. These are atures or if you are been released yet. existing windows registry, we'd SQL EDB binaries: lation. Setup is

GUE shp2pgsql-gui which has both import and

13

3. Choose the latest version of PostGIS (in this example, the latest version is pg92).

Index of /postgis/windows

Name	Last modified	Size Description
Parent Directory		-
extras/	31-Oct-2012 11:20	-
pg80/	31-Oct-2012 10:38	-
pg81 /	31-Oct-2012 11:15	-
pg82/	31-Oct-2012 11:13	-
pg83/	31-Oct-2012 11:18	-
pg84 /	15-Mar-2013 22:00	-
pg90/	16-Mar-2013 07:48	-
pg91 /	16-Mar-2013 00:23	-
pg92/	16-Mar-2013 00:08	-
source/	15-Mar-2013 21:49	-

4. Download the 32-bit or 64-bit version of PostGIS.

If you are running 32-bit Windows (such as Windows XP), you must choose 32-bit PostGIS for Windows (postgis-pg##-setup-####.exe).

If you are running 64-bit Windows (such as Windows 7), you may choose either 32-bit or 64-bit PostGIS; 64-bit is recommended (postgis-pg##x64-setup-####.exe).

NOTE: You must use the same version (32 bit or 64 bit) for both PostgreSQL and PostGIS.

Index of /postgis/windows/pg92

Name	Last modified	Size Description
Parent Directory		-
archive/	11-Mar-2013 16:10	-
postgis-pg92-binaries-2.0.3w32-2.zij	2 15-Mar-2013 23:59	20M
postgis-pg92-binaries-2.0.3w64-2.zi	0 16-Mar-2013 00:09	21M
postgis-pg92-setup-2.0.3-2.exe	16-Mar-2013 00:00	17M
postgis-pg92x64-setup-2.0.3-2.exe	16-Mar-2013 00:08	19M
Apache/2.2.16 (Debian) Server at down	load.osgeo.org Port	80

- - X 5. Run the installer. PostGIS 2.0.3 for PostgreSQL x64 9.2 Setup 0 -0 License Agreement .0 Click I Agree to accept the terms of the Please review the license terms before installing PostGIS 2.0.3 for PostgreSQL x64 9.2. 0 license agreement. Press Page Down to see the rest of the agreement. GNU GENERAL PUBLIC LICENSE Version 2, June 1991 . Copyright (C) 1989, 1991 Free Software Foundation, Inc. 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed. Preamble The licenses for most software are designed to take away your If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install PostGIS 2.0.3 for PostgreSQL x649.2. Vullsoft Install System v2.46 -I <u>A</u>gree Cancel 6. Check the Create spatial database box to A PostGIS 2.0.3 for PostgreSQL x64 9.2 Setup _ 🗆 🗙 9 -Choose Components create a new database. Choose which features of PostGIS 2.0.3 for PostgreSQL x64 9.2 you want to install. The second Click Next to continue. Check the components you want to install and uncheck the components you don't want to install. Click $\ensuremath{\mathsf{Next}}$ to continue. Description Select components to install: PostGIS Position your mouse over a component to see its description. Cre e Space required: 86.3MB Vullsoft Install System v2.4 Next > < <u>B</u>ack Cancel 7. For the install location, choose the same PostGIS 2.0.3 for PostgreSQL x64 9.2 Setup - 🗆 🗙 9 -0 Choose Install Location folder in which you installed PostgreSQL. Choose the folder in which to install PostGIS 2.0.3 for PostgreSQL x64 9.2. (That folder may already appear in the Setup will install PostGIS 2.0.3 for PostgreSQL x64.9.2 in the following folder. To install in a different folder, dick Browse and select another folder. Click Next to continue. **Destination Folder** field.) Click Next to continue. Destination Folder Browse... Space required: 86.3MB Space available: 529.7GB < <u>B</u>ack Next > Cancel

8. Enter the user name (postgres). PostGIS 2.0.3 for PostgreSQL x64 9.2 Setup: Database Connection _ **_** × 0 -0 Database Connection Enter the password you selected when Specify the database connection 0 installing PostgreSQL. Database Connection Information User Name: postgres Click Next to continue. Password: Port: 5432 < <u>B</u>ack Next > Cancel PostGIS 2.0.3 for PostgreSQL x64 9.2 Setup: Database Name 9. In the Database Name field, use the default 0 Database Name name provided, postgis20. Specify the name of the spatial database to be created at the end of the installation process 0 Click Install to start the installation. Spatial Database Information Database Name: posto Install Cancel < <u>B</u>ack 10. A status indicator bar will show the progress PostGIS 2.0.3 for PostgreSQL x64 9.2 Setup of the installation. Installing Please wait while PostGIS 2.0.3 for PostgreSQL x64 9.2 is being installed. 0 Creating template database. Show <u>d</u>etails < Back Close Cancel

11.	Click Yes to set the GDAL_DATA variable.	PostGIS 2.0.3 for PostgreSQL x64 9.2 Setup Would you like us to register the GDAL_DATA environment variable for you, needed for raster transformation to work properly? This will overwrite existing settings if you have them. Yes No
12.	A status indicator bar will show the progress of the installation. Close the window when installation is complete.	PostGIS 2.0.3 for PostgreSQL x64 9.2 Setup Installing Please wait while PostGIS 2.0.3 for PostgreSQL x64 9.2 is being installed. Creating spatial database Show getails Nullsoft Install System v2.46 < Back

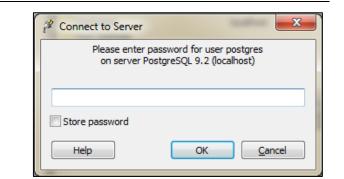
Creating a New Database

We will now create a new initial database that contains the basic schema. We will overwrite this initial database with a backup copy of the OpenESSENCE demo version (in the next section). To create a new database:

1. Launch the PostgreSQL administrative tool by Programs (2) doing the following: 🖤 pgAdmin III pgAdmin documentation Location: pgAdmin3 (C:\Program Files\PostgreSQL\9.2\bin) a) Click the Windows Start button b) Start typing pgadmin in the text box c) When **pgAdmin III** appears in the Programs list, select it See more results pgad Shut down 🔸 × 2. Under Servers, right-click PostgreSQL 9.2 nin II File Edit Plugins View Tools Help (localhost:5432) and choose Connect. P 😷 **% 0 0 0 / %** ver Group



3. Enter your database password (the one associated with user ID *postgres*).



- 4. Right-click **Databases** and select **New Database...**
- Parkdmin III
 Image: State of the stat
- 5. Enter a name for the database. In this instance, the database name should be *openessence*.

Note the name of the database as you will need it when configuring Tomcat and GeoServer later.

间 New Dat	tabase					×
Properties	Definition	Variables	Privileges	Security Labe	els SQL	
Name	openessen	ice				
OID						
Owner						-
Comment						× •
Help					<u>O</u> K	<u>C</u> ancel

6. Switch to the **Definition** tab.

In the **Template** field, select **template_postgis_20** as your database template.

Click **OK** to create the database.

🚺 New Da	tabase			-	-	-	X
Properties	Definition	Variables	Privileges	Security La	abels S	QL	
Encoding	U	TF8					•
Template	te	mplate_pos	stgis_20				•
Tablespace	-	default tabl	espace>				•
Collation							-
Character	type						-
Connection	n Limit -1						
Schema re	striction						
Help					<u>0</u>	к	<u>C</u> ancel

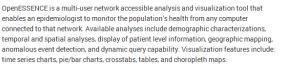
 Download the OpenESSENCE SQL script file from the SAGES website. In your browser, go to <u>http://www.jhuapl.edu/sages/tools.htm</u>.

Click **Download** next to OpenESSENCE 2.0. When prompted, choose to save the ZIP to a location on your computer (such as the Desktop). Once it is downloaded, right click on the ZIP file and select **Extract All** to extract the compressed files.

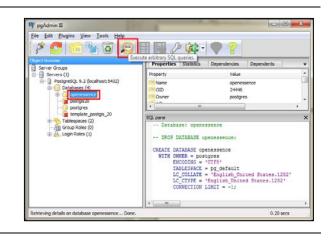
The ZIP file contains 6 files. For the current step, you need to be concerned only with openessence.sql. The other files will be used in subsequent sections of this guide.

8. Click on the new database to select it.

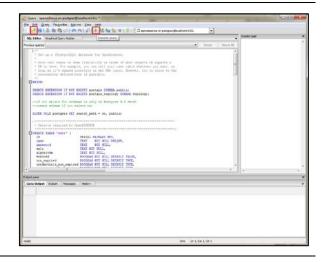
Click the **SQL** button on the toolbar to open the SQL query window.







9. Open the openessence.sql file containing the database setup script. Click the **Open file** icon on the toolbar, or click **File>Open** from the menu bar.



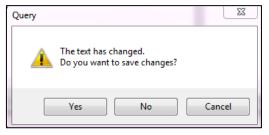
10. Before the SQL file executes, you may receive a question asking if you want to save changes. Click **No**.

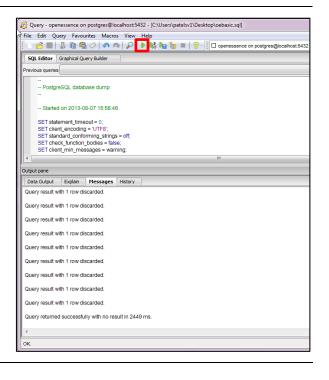
This message occurs because there may be some text in the SQL editor screen when it is first opened. When we open the SQL file, that text will be overwritten.

11. Press the **Execute query** button on the toolbar.

The queries should run quickly. You will see results similar to those shown on the right.

After running the queries, you can close the **pgAdmin** windows.





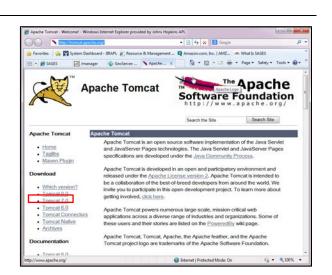
Installing and Configuring Apache Tomcat

These installation instructions assume that you do not currently have any other server running on port 8080 (the default Tomcat port) on the target machine. If you do have something running on port 8080 (you can check by using this command at the CMD prompt: netstat – ano | findstr 8080) and cannot install on another machine, change the ports as referenced in the Tomcat manual (found on the Apache Tomcat website: http://tomcat.apache.org).

1. Open your browser and go to <u>http://tomcat.apache.org/</u>

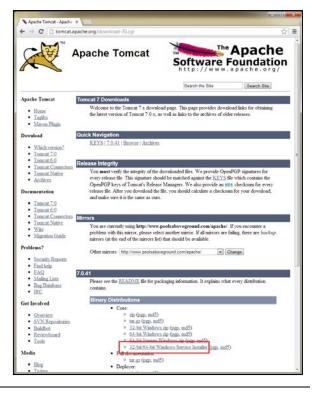
Select Tomcat 7.0 under the **Download** section.

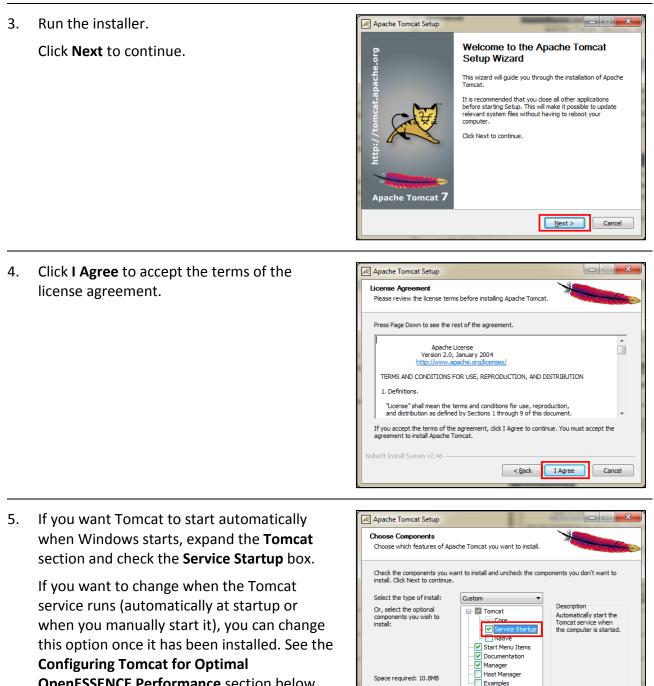
NOTE: OpenESSENCE has not been tested on Tomcat versions later than 7.0.



2. Click the **32-bit/64-bit Windows Service** Installer link.

> We will refer to the directory in which Tomcat is installed as <tomcat home>.





OpenESSENCE Performance section below.

Click Next to continue.

<<u>B</u>ack Next >

Cancel

 If there is another service running on port 8005, 8009 or 8080, you can change the values here. (This is not usually the case. However, some tools, like Oracle XE, listen to port 8080, which would require you to change the Tomcat port.) Check the ports at a command prompt:

netstat	-ano	findstr	8005
netstat	-ano	findstr	8009
netstat	-ano	findstr	8080

NOTE: Even though an administrator password is optional, we recommend creating a username and password for the Tomcat Administrator Login. You will need the Tomcat admin password later in this guide. Apache Tomcat Setup: Configuration Options - - × Configuration Tomcat basic configuration. Server Shutdown Port 8005 HTTP/1.1 Connector Port 8080 8009 AJP/1.3 Connector Port Windows Service Name Tomcat8 Create shortcuts for all users Tomcat Administrator Login User Name TomcatAdmin (optional) Password Roles manager-gui Nullsoft Install System v2.46 < Back Next > Cancel

Click Next to continue.

 Choose the location of your Java installation. Make sure to select the jre folder.

Click Next to continue.

💐 Apache Tomcat Setup: Java Virtual Machine pat	h selection
Java Virtual Machine Java Virtual Machine path selection.	The second second
Please select the path of a Java SE 6.0 or later JRE i	nstalled on your system.
ל:\Program Files\Java\jre7	
Nullsoft Install System v2:46	
	Eack Next > Cancel

8. Choose the location in which you want to install Tomcat.

It is **strongly** recommended that you change this to a directory for which you have access to edit/add/remove contents on your machine.

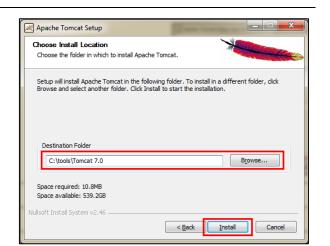
For example, c:\tools\Tomcat 7.0 works
well.

We will refer to this directory as:

<tomcat home>

Click Install to start the installation.

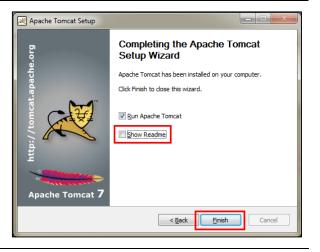
9. A status indicator bar will show the progress of the installation.



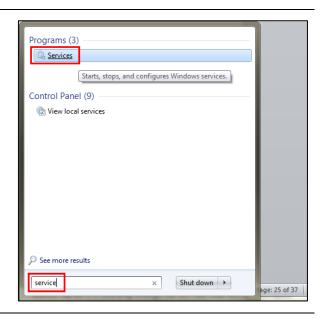
😹 Apache Tomcat Setup		
Installing Please wait while Apache Tomcat is being installed	۰. ۱.	*
Extract: void.gif		
Show details		
Nullsoft Install System v2,46	< Back N	evt > Cancel
	< <u>B</u> ack <u>N</u>	ext > Cancel

10. Uncheck **Show Readme** and click **Finish**. Tomcat will start.

You may see a dialog indicating that the Tomcat service is attempting to start.

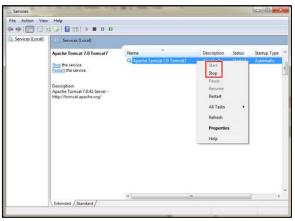


- 11. To check the status of Tomcat, open the **Services** control panel:
 - a) Click the Windows **Start** button
 - b) Start typing services
 - c) When **Services** appears in the **Programs** list, select it



 You can start or stop Tomcat by right-clicking the Apache Tomcat service and then selecting either Start or Stop. You can also Restart the service.

NOTE: You will see more services than just the Tomcat service in your actual services list.



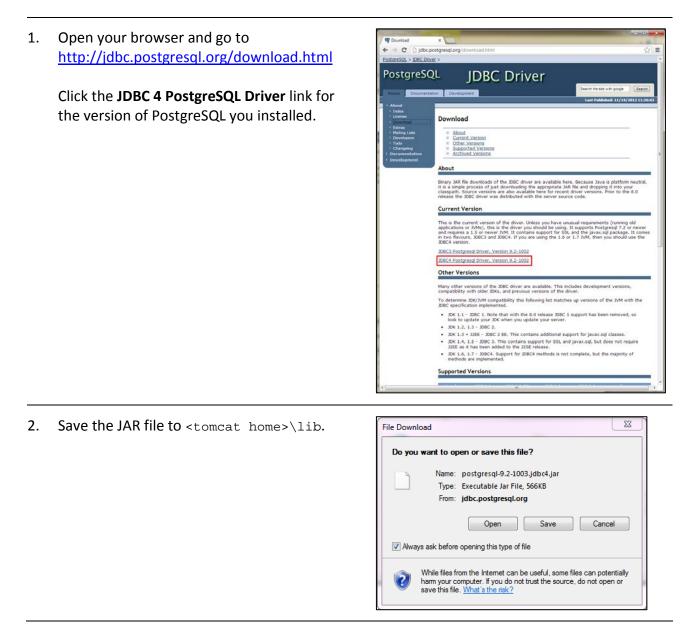
 To test Tomcat, open a browser and type <u>http://localhost:8080</u> and press ENTER. You should see the Apache Tomcat Manager Screen.

Click the **Manager App** link to test your Tomcat password. Login with your Tomcat admin password when prompted.



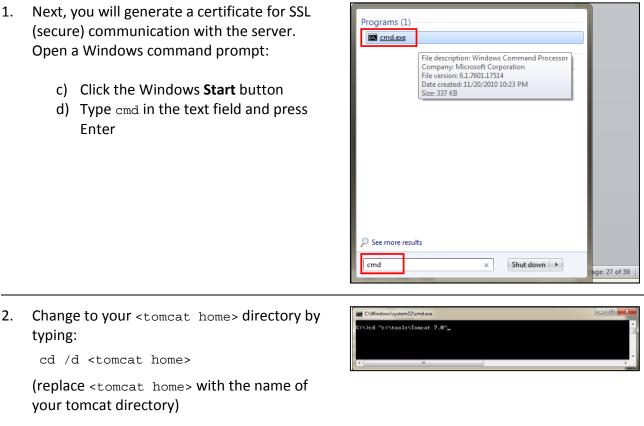
Installing the PostgreSQL JDBC Driver for Tomcat

The JDBC driver enables Tomcat to communicate with the PostgreSQL database.



Configuring Tomcat for Secure Socket Layer (SSL) Communication

You will now create a certificate and configure Tomcat for SSL communication.



For example:

cd /d "c:\tools\Tomcat 7.0"

NOTE: If your <tomcat home> directory name contains spaces, you need to surround it in quotes in the above command.

3. Run the following command (all on one line) to generate a keystore.

keytool -genkey -alias tomcat -keyalg RSA -keystore keystore

Enter the following information:

- Keystore password (re-enter when prompted)
- First/Last Name
 - o use localhost for local testing
 - use your domain name for production (e.g. <u>www.jhuapl.edu</u>)
- Org unit, org, city/locality, state/province, country code – enter appropriate values for your organization
- Type yes to confirm the entries
- When prompted to enter a password for <tomcat>, press RETURN (this will use the keystore password)
- Edit <tomcat home>\conf\server.xml using an editor such as Wordpad.

Find the block of text that starts with:

<Connector port="8443"

Remove the XML comments tags (< ! -- and -
 ->) that are around it.



</th <th>Define a SSL HTTP/1.1 Connector on port 8443</th>	Define a SSL HTTP/1.1 Connector on port 8443
	This connector uses the JSSE configuration, when using APR, the
	connector should be using the OpenSSL style configuration
	described in the APR documentation>
< !	



port="8443" protocol="HTTP/1.1" SSLEnabled="true"
maxThreads="150" scheme="https" secure="true"
client&uth="false" sslProtocol="TLS" />

<!-- befine a SSL HTTP/1.1 Connector on port 8443
This connector uses the JSSE configuration, when using APR, the
connector should be using the OpenSSL style configuration
described in the APR documentation -->
<Connector port="8443" protocol="HTTP/1.1" SSLEmabled="true"
maxThreads="150" scheme="https" secure="true"
clientAuth="false" sslProtocol="TLS" />

 Add keystoreFile and keystorePass to the end of the Connector tag so it contains the following. Use the password you used when creating the keystore.

```
<Connector port="8443"

protocol="HTTP/1.1"

SSLEnabled="true"

maxThreads="150" scheme="https"

secure="true" clientAuth="false"

sslProtocol="TLS"

keystoreFile="keystore"

keystorePass="<your keystore

password>"/>
```

7. Test by (re)starting Tomcat via the **Services** control panel (as described above when installing Tomcat).

Check the Tomcat log output in the following file corresponding to today's date:

```
<tomcat home>\logs\catalina.yyyy-mm-
dd.log
```

You should see INFO messages, ending with

INFO: Server startup in ### ms

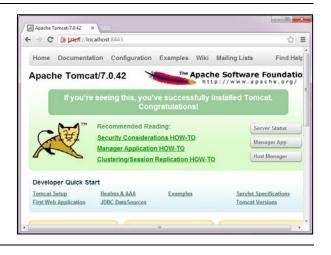
If you see the following error messages, you should verify the XML edits in the previous step.

```
SEVERE: Error starting endpoint
java.io.FileNotFoundException:
<tomcat home>\bad-keystore-name
(The system cannot find the file
specified)
```

or

SEVERE: Error starting endpoint java.io.IOException: Keystore was tampered with, or password was incorrect Jul 03, 2013 4:30:41 PM org.apache.coyote.AbstractProtocol pause INFO: Pausing ProtocolHandler ["http-bio-6080"] Jul 03, 2013 4:30:41 PM org.apache.coyote.AbstractProtocol pause INFO: Pausing ProtocolHandler ["http-bio-6009"] Jul 03, 2013 4:30:41 PM org.apache.coyote.AbstractProtocol pause INFO: Pausing ProtocolHandler ["http-bio-6009"] Jul 03, 2013 4:30:41 PM org.apache.coyote.AbstractProtocol stop INFO: Stopping PertocolHandler ["http-bio-6060"] Jul 03, 2013 4:30:41 PM org.apache.coyote.AbstractProtocol stop INFO: Stopping PertocolHandler ["http-bio-6060"] Jul 03, 2013 4:30:41 PM org.apache.coyote.AbstractProtocol stop INFO: Stopping PertocolHandler ["http-bio-6060"] Jul 03, 2013 4:30:41 PM org.apache.coyote.AbstractProtocol stop INFO: Stopping PertocolHandler ["http-bio-6060"] Jul 03, 2013 4:30:43 PM org.apache.coyote.AbstractProtocol stop INFO: Stopping PertocolHandler ["http-bio-6060"] Jul 03, 2013 4:30:43 PM org.apache.coyote.AbstractProtocol int INFO: Intializing ProtocolHandler ["http-bio-6000"] Jul 03, 2013 4:30:43 PM org.apache.coyote.AbstractProtocol int INFO: Intializing ProtocolHandler ["http-bio-6000"] Jul 03, 2013 4:30:44 PM org.apache.coyote.AbstractProtocol int INFO: Intializing ProtocolHandler ["http-bio-6000"] Jul 03, 2013 4:30:44 PM org.apache.coyote.AbstractProtocol int INFO: Intializing ProtocolHandler ["http-bio-6000"] Jul 03, 2013 4:30:44 PM org.apache.cotalina.startup.Catalina load INFO: Intializing protocolHandler ["http-bio-6000"] Jul 03, 2013 4:30:44 PM org.apache.cotalina.core.StandardEngine startInternal INFO: Starting service Catalina Jul 03, 2013 4:30:44 PM org.apache.cotalina.startup.MostConfig deployDirectory INFO: Deploying web application directory C:\tools\Tomcat 7:.0\webapayKNOT Jul 03, 2013 4:30:44 PM org.apache.cotalina.startup.HostConfig deployDirectory INFO: Starting ProtocolHandler ["http-bio-6080"] Jul 03, 2013 4:30:44 PM org.apache.cotalina.startup.HostConfig deployDirectory INFO: Deploying web application directory C:\tools\Tomcat 7:.0\webapayKNOT Jul 03, 2013 To test Tomcat with SSL communication, open a browser and type <u>https://localhost:8443</u> and press ENTER.

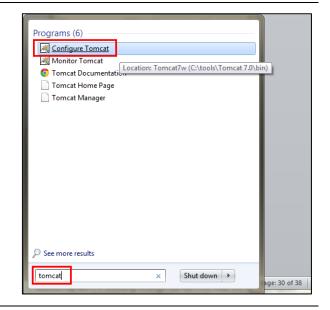
You may see a security warning. Press **Continue** or **Proceed Anyway** (depending on the browser you are using). You should see the Apache Tomcat Manager Screen.



Configuring Tomcat for Optimal OpenEssence Performance

When running Tomcat with OpenEssence and GeoServer web applications, it is often necessary to adjust the default memory settings. The JVM (Java Virtual Machine) that Tomcat uses can also be configured to provide debugging information over a specified port.

- 1. Start the Tomcat Configuration Tool:
 - a) Click the Windows Start button
 - b) Type tomcat in the text field
 - c) Click **Configure Tomcat** from the **Programs** list



2. Click the Java tab.

Add -XX:MaxPermSize=184m to the list of Java Options (case sensitive).

Set Initial Memory Pool to 512.

Set Maximum Memory Pool to 1024.

The pool sizes can be adjusted higher if you are running a 64-bit Java installation and you have sufficient memory, but the sizes given here reasonable for running OpenESSENCE.

Click Apply to apply the changes.

🍾 Apache Tomcat 7.0 Tomcat7 Properties 📃 💌
General Log On Logging Java Startup Shutdown
Use default
Java Virtual Machine:
C:\Program Files\Java\jdk1.7.0_25\jre\bin\server\jvm.dll
Java Classpath:
C:\tools\Tomcat 7.0\bin\bootstrap.jar;C:\tools\Tomcat 7.0\bin\tomcat-jul
Java Options:
-Djava.io.tmpdir=C:\tools\Tomcat 7.0\temp -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManage
-XX:MaxPermSize = 184m
Initial memory pool: 512 MB
Maximum memory pool: 1024 MB
Thread stack size: KB
OK Cancel Apply

3. The default startup type is automatic, which means that the Tomcat service will start when the computer starts. You can change the startup type for the service from automatic to manual using the **Startup type** option on the **General** tab. If the startup type is manual, you must start the service (from this screen) in order for OpenESSENCE to function.

On this screen, you can also start and stop the Tomcat service using the **Start** and **Stop** buttons. This may be a convenient alternative to starting and stopping the service via the **Services** control panel.

Apache Tomcat	7.0 Tomcat7 Properties			
General Log On	Logging Java Startup Shutdown			
Service Name:	Tomcat7			
Display <u>n</u> ame:	Apache Tomcat 7.0 Tomcat7			
Description:	Apache Tomcat 7.0.41 Server - http://tomcat.apache.			
Path to executabl	e:			
"C:\tools\Tomca	t 7.0\bin\Tomcat7.exe" //RS//Tomcat7			
Startup typ <u>e</u> :	Manual 🗸			
Service Status: Started				
<u>Start</u> <u>Stop</u> <u>P</u> ause <u>R</u> estart				
	OK Cancel Apply			

Downloading OpenESSENCE and GeoServer WAR Files

Now that Java, PostgreSQL, and Tomcat have been installed and configured, you will need to have the current versions of the OpenESSENCE and GeoServer Web Application Archive (WAR) files. These files will be deployed in the next section.

- The OpenESSENCE WAR file was included in the ZIP file that you downloaded in a previous step (Step 7 in *Creating a New Database* section, page 20), so you should already have the WAR file on your computer. The file name is openessence.war. In this step, just ensure that you have this file.
- 2. Download the GeoServer WAR file from the GeoServer web site.

In your browser, go to <u>http://geoserver.org/display/GEOS/Download</u>.

Click **Stable** to download the official stable release of GeoServer, version 2.3.4.



 Select the Web Archive download format. The download will start automatically. Ignore any forms that may be presented.

The WAR file will be zipped (compressed). Double-click the zip file to access the WAR file.

Stable GeoServer 2.3.4 Released on 28/7/2013 **Download format** Documentation Binary (OS independent) HTML Documentation Web Archive PDF Documentation A Windows Installer API Documentation Mac OS X Installer Release Notes Change Log Source Code

Deploying OpenEssence and GeoServer to Tomcat

This section will describe how to deploy the OpenESSENCE WAR file and the GeoServer WAR file to Tomcat and set up the OpenESSENCE site configuration directory.

- 1. Stop Tomcat if it is currently running. Apache Tomcat 7.0 Tomcat7 Properties General Log On Logging Java Startup Shutdown You can do this through the **Services** control panel or through the Tomcat Configuration Service Name: Tomcat7 Display name: Apache Tomcat 7.0 To tool (described in the previous section). Apache Tomcat 7.0.41 Server - http://tomcat.apache. Description: Path to executable: "C:\tools\Tomcat 7.0\bin\Tomcat7.exe" //RS//Tomcat7 Startup type: Automatic Service Status: Started Start S<u>t</u>op Pause Restart
- 2. Delete previous OpenESSENCE and GeoServer deployments (if any):
 - Look in <tomcat home>\webapps
 - Delete any files or folders that start with openessence Or geoserver
 - Look in <tomcat home>\work\Catalina\localhost
 - Delete any files or folders that start with openessence or geoserver

• • • • tools •	Tomcat 7.0 • webapps	•	- 49	Search webapps	-	-	
Organize 🔹 💝 Open	Burn New folder	¢			- HE		
📩 Favorites	Name	*		Date modified	Type		
E Desktop	docs			7/2/2013 3:32 PM	File folder		
🔒 Downloads	ageoserver			7/3/2013 6:08 PM	File folder		
L Google Drive	🕌 manager			7/2/2013 3:32 PM	File folder		
My Box Files) openessence			7/3/2013 5:48 PM	File folder		
1 Recent Places	ROOT			7/2/2013 3:31 PM	File folder		
📕 git	geoserver.war			12/21/2011 11:56	WAR File		
🙀 Libraries	openessence.war	8	What is locking th	is file?	WAR File		
Documents Documents Music Pictures			Add to archive Add to "webapps. Compare with Ara				
🚼 Videos			Queue for Compa	rison			
Computer			Send to	•			
Local Disk (C:)			Cut				
OVD RW Drive (D			Сору				
🖏 Galaxy Nexus	0		Create shortcut				
Network			Delete		_		
-	• L		Kename				
4 items selecte	ed Date modified: 12/21/2	4	Properties				

ОК

Cancel

Apply

X

3. Copy or move the openessence.war and geoserver.war files (that you downloaded in the previous sections) into:

<tomcat home>\webapps



Restart Tomcat to deploy the war files.
 When started, Tomcat will expand the openessence.war file into the following directory:

<tomcat home>\webapps\openessence

It will do the same for geoserver.war.

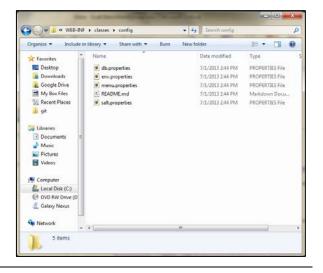
🏷 Apache Tomcat 7	7.0 Tomcat7 Properties
General Log On L	ogging Java Startup Shutdown
Service Name:	Tomcat7
Display <u>n</u> ame:	Apache Tomcat 7.0 Tomcat7
Description:	Apache Tomcat 7.0.41 Server - http://tomcat.apache.
Pat <u>h</u> to executable	e:
"C:\tools\Tomcat	7.0\bin\Tomcat7.exe" //RS//Tomcat7
Startup typ <u>e</u> :	Automatic 👻
Service Status:	Stopped
<u>S</u> tart	Stop Pause Restart
	OK Cancel Apply

5. Stop Tomcat (so we can cleanly edit some configuration files).

X Apache Tomcat 7.0 Tomcat7 Properties General Log On Logging Java Startup Shutdown Tomcat7 Service Name: Display name: Apache Tomcat 7.0.41 Server - http://tomcat.apache. Description: Path to executable: "C:\tools\Tomcat 7.0\bin\Tomcat7.exe" //RS//Tomcat7 Startup type: Automatic Service Status: Started Start Stop Pause <u>R</u>estart Cancel OK Apply

6. Find the following directory:

<tomcat home>\webapps\openessence\WEB-INF\classes\config



7. Edit the db.properties file using Wordpad.

At the end of the db.url line, make sure the database name is openessence.

Change the value for db.password to the password you used when installing PostgreSQL.

NOTE: Lines starting with the # sign are comments and are ignored.

db.driverClass=org.postgresql.Driver db.url=jdbc:postgresql://localhost:5432 db.username=postgres db.password=password

8. (Optional)

If you want to specify:

- Web Map Server other than the default (/geoserver/wms). This is the URL that the client should use for WMS service requests. Using a relative URL is recommended so that you do not run into cross-origin issues.
- Stale data cleanup other than the default (1 minute). This indicates how often old data should be removed, in PostgreSQL interval syntax. See <u>http://www.postgresql.org/docs/current/</u> <u>static/datatype-</u> <u>datetime.html#DATATYPE-INTERVAL-</u> <u>INPUT</u> for syntax details. The value for this property should not include the word "interval".

Using a text editor such as Notepad, create a file called map.properties in the folder:

```
<tomcat
home>\webapps\openessence\WEB-
INF\classes\config
```

Add wmsserver and/or postgres.cleanup properties as shown (you do not need the comment lines that start with #).

9. Make sure the PostgreSQL service is started.

wmsserver is the Web Map Server location URL the client
should use for WMS service requests.
Using a relative URL is recommended so that
we don't run into cross-origin issues.
postgres.cleanup is How often old data should be removed,
in PostgreSQL interval syntax.
wmsserver=/geoserver/wms
postgres.cleanup=1 minute

10. Restart Tomcat.

General Log On	Logging Java Startup Shutdown
Service Name:	Tomcat7
Display <u>n</u> ame:	Apache Tomcat 7.0 Tomcat7
Description:	Apache Tomcat 7.0.41 Server - http://tomcat.apache.
"C:\tools\Tomca Startup typ <u>e</u> :	at 7.0\bin\Tomcat7.exe" //RS//Tomcat7 Automatic
Service Status:	Stopped
<u>S</u> tart	

GeoServer Site Configuration

OpenEssence uses the GeoServer web application to providing mapping capabilities. Some configuration of GeoServer is necessary.

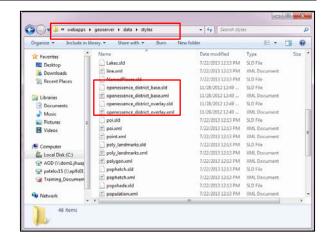
 From the OpenESSENCE ZIP folder that you downloaded in a previous section (*Creating a New Database* section, step 7, page 20), copy the following four files:

```
openessence_district_base.sld
openessence_district_base.xml
openessence_district_overlay.sld
openessence_district_overlay.xml
```

into the following directory:

<tomcat home>\webapps\geoserver\data\styles

These files are GeoServer styles that will be used with the demo version of OpenESSENCE.

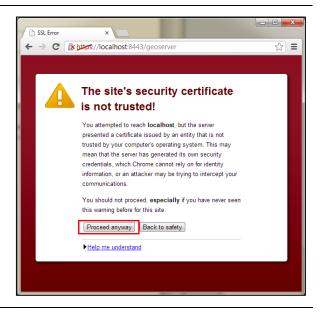


2. Log into GeoServer by opening your browser and going to

https://localhost:8443/geoserver

NOTE: You will see a warning about the site security certificate not being trusted. This is because we set up a self-signed certificate for SSL communication with the server.

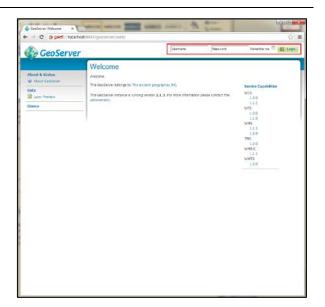
Because we know this is our site, click **Proceed anyway** (we are using Chrome as the browser; your browser may display a slightly different message).



3. Log into GeoServer.

The default login information is:

user: admin password: geoserver



4. Change the admin password by clicking on Users under Security.

	er		
	Welcome		
About & Status	vivekome		
E Server Status GeoServer Logi #1 Centact Information	This GeoServer belongs t	e The ancest prographes 3iC.	Service Capabilities
About Cecterver	19 Lavers	O Add layers	WC5 1.0.0
Cota	9 Stores	O Add stores	1.1.1 WFS
Layer Preven	7 viorispaces	O Create marketaces	1.0.0
Vorkspaces			1.1.0
I Layers	The GeoServer Instance i administrator.	s running version 2.1.3. For more information please contact the	WMS 1.1.1
 Laver Gloups Cached Lavere 	and the second		1.2.0
Styles			THS 1.0.0
Sameras			WHI-C
la nes			1.4.3
ID WES			1.0.0
IB WHS			
Settings			
E Stoout			
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E Ceverage Access			
Security			
& ours			
p .utz sourty			
Service security Catalog security			
Demos			

5. From the Users list, select the **admin** user.

GeoServe	Users list			-
About & Status	Manage users known to G Add new user Remove Selected(s)	ncienter Results 1 to : (eut of 1 terms)	3. Search	
About CecSeiver Data	themane	Roke	Administrator	
Lines Devices Vorteszel Vorteszel Stores Lizero Lizero		ROLE, APRAITATION Heads 1 (c) : (out of 1 rend)	*	
Security () Junt () Junt security () Service security () Chalog security Demos				

6. Change the password and click **Save**. Note the password; it will be used again during the installation.

 G (% paints //local 	host 8443/geoservie/web//wicketontentace=Std	\$
Geo Serve	r	Logoed in as admin.
About & Status Sarwe Status Sarwe Status Sarbat Monitor Manus Ceciforue Data Sugar Naview Sarbat Monitores Sarbat Monitores Sarbat Sarbates Sarbat Sarbates Sarbat Sarbates	Edit user Vo. on votes the service, or dange the user raiks densate dansate Testers executed Centre parameter Testers executed	
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Security a users Data security Service security Catalog security	Store Cancel	
Demos		

 Next, you will need to create a workspace to hold the data store. Click Workspaces under Data.

GeoServe	er		Lopped in as admin.	5 Lopest
	Users list			
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🛍 Sarvar Status	O Add new uper			
GeoServer Logs Al Cantact Information	Remove Selected(s)			
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8. Click Add new workspace.

About & Status	Workspaces	
 About Cectarya 	Final and Final Start (out of 7 term)	Seach
Data	Workspoce Rame	Default
Sa Layer Preven	[] ste	4
Vorkoaces	E Egessietoni	
III Layon	E we	
 Laver Groups Cached Lavere 	🗊 ste	
4 Styles	2 × 2	
Services	El toper	
lik wes	EI 1000	
ID WES	er e J e >> Results 1 to 7 (out of 7 items)	
Settings	_	
E Ceverage Accase		
Security		
La courte		
Service security		
Catalog security		

.

9. Enter openessence as the name of the workspace.

Enter a namespace URI that is appropriate for your organization; for example, JHU/APL might use:

http://jhuapl.edu/openessence

Check the **Default Workspace** box.

Click **Submit** to create the workspace.

SeoServer: New Workspace	- Windows Internet Exp	lorer provided by Johns Hopk	ins APL			00
- C + Https://loca	host 8443/geoserver/we	h/?wicketbookmaikable?age	starge 👻 😨 Certificate Erro	r 💐 🏘 📈 🔀 G	oogle	
Favorites 🛛 🏫 🞇 Syste	m Dashboard - JIRAPL	Resource & Management	😋 Amazon.com, Inc. (Alv	Z ARL What Is SAGES	3 😰 JHU-APL SSLVPN Acces	55
* 🏉 SAGES	/manager	GeoServer: Ne X	@ OpenESSENCE De		1 🖶 + Page + Safety +	Tools • 🔞
					Lopped in as admin.	2 Logos
🚱 GeoSer	ver					-
	New	Workspace				
About & Status		e a new workspace				
A Server Status	Conngun	e a new workspace				
GeoServer Logs	Name					
Contact Information Ahout GeoServer	openes	sence				
	Namesp					
Data		uapl.edu/openessence				
Layer Preview Workspaces		respace un associated with th	his workspace			
Stores		Workspace				
Lavers	P					
Layer Groups	Submit	Concel				
Styles						
Services						
WCS						
ID WFS						
Settings Gobal						
GODAL 3AI						
Coverage Access						
Tile Caching						
Tile Layers						
Caching Defaults						
Disk Quata						
			11			_

Next, you will need to create a data store.
 Click Stores under Data.

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11. Click Add new Store.

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12. Select PostGIS – PostGIS Database.



- 13. Enter the following data source information:
 - Data Source Name the name you want to give your data store. For example oedemo
 - **Description** a short description of the data store
 - Database enter openessence
 - Schema enter public
 - User enter postgres
 - Passwd enter your PostGres user password

Scroll down and click Save.

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- 14. Choose layers to publish. G ... 🗟 🏘 📩 💽 Goog # What Is SAGES @ IHU - 🏉 SAI 🗿 * 🔯 * 🖾 📾 * Page * Safety * 63 We will use district_geometry from the GeoServer openessence database as the base layer. New Layer Add a new lay Click Publish next to district_geometry. dd layer from . ults 0 to 0 (out of 0 items) Layer name 2 ate report plus ata_case_rep aved_queries
- 15. On the Edit Layer form, scroll down to the Coordinate Reference Systems section. Click Find next to Declared SRS.

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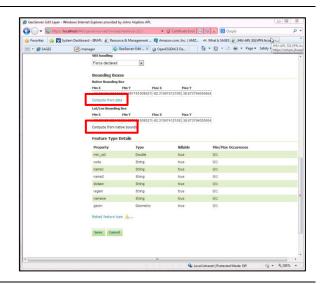
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16. In the **Search** box, type 4326 and press ENTER. In the results list, click **4326**.

Select a	coordinate system. Use the search box to narrow the list X
Code	Description
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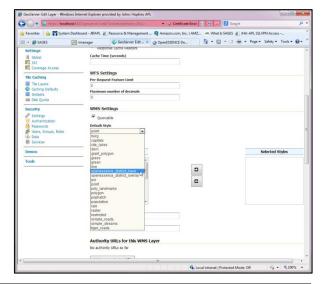
17. Click Compute from data and Compute from Native Bounds.



18. Choose a style for the layer.

Click the **Publishing** tab. Scroll down to **Default Style** under **WMS Settings**. Select the **openessence_district_base** style.

Press Save to save the layer.



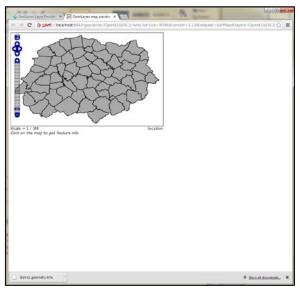
19. Click **Layer Preview** to verify that the layer works properly.

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20. Scroll down and click **OpenLayers** next to openessence:district_geometry.

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	-	tasmania		OpenLayers KML	Select one	
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21. You will see the layer displayed. This is the district_geometry layer.

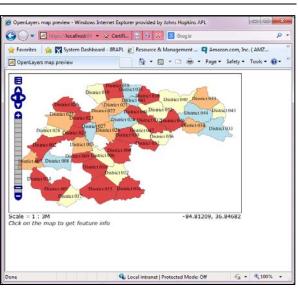


22. We now need to add an overlay layer. Repeat steps 14-20.

For step 14, select district_counts from openessence to publish.

For step 18, on the **Publishing** tab, choose openessence_district_overlay as the default style.

For step 20, click **OpenLayers** next to openessence:district_counts. The layer is shown on the right.



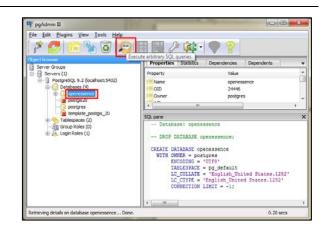
Resetting the OpenESSENCE Administrator Password

To reset the OpenESSENCE webapp administrator password (for the admin account):

Launch the PostgreSQL administrative tool by 1. Programs (2) doing the following: 🖤 pgAdmin III 📑 pgAdmin doo Location: pgAdmin3 (C:\Program Files\PostgreSQL\9.2\bin) a) Click the Windows Start button b) Start typing pgadmin in the text box c) When pgAdmin III appears in the Programs list, select it See more results pgad Shut down 🕨 × 2. Right-click your server and choose **Connect**. e Edit Plugins View Tools H / C 💼 **%** 🖉 🖉 🖉 🖊 🗱 🖓 📢 🗣 Servers (1) PostoreSOL 9.2 g details on server localhost... Do 0.00 sec 3. Enter your database password (the one х Connect to Server associated with user ID postgres). Please enter password for user postgres on server PostgreSQL 9.2 (localhost) Store password OK Help Cancel

51

 Select the database you are using.
 Click the SQL button on the toolbar to open the SQL query window.



5. Delete the text that appears automatically in the **SQL Editor** window.

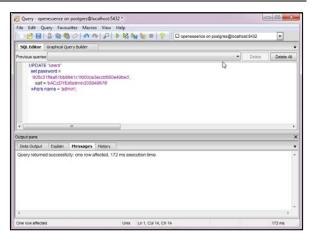
Type (or copy/paste) the following SQL command in the editor window:

```
UPDATE "users"
   set password =
'805c31ff4a51bb8641c1fd00ce3eccb680e4
9be3',
        salt =
'bACzDYExfadmin203948576'
   where name = 'admin';
```

Click **Execute Query** on the toolbar to set up the database.

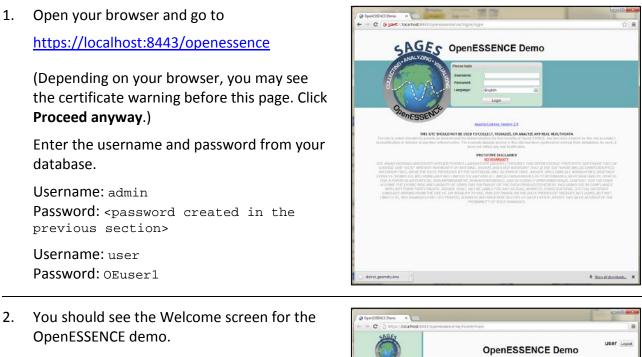
This will reset the administrator password to *admin*, for the admin account.

You should *immediately* log into OpenESSENCE and change the administrator password (see next section).

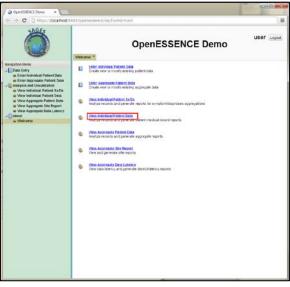


Starting OpenEssence

Once everything is installed and configured, OpenESSENCE will run whenever the Tomcat server is running. Follow the steps below to start OpenESSENCE.



To check proper operation, click **View Individual Patient Data**.



3. Click **Time Series**.



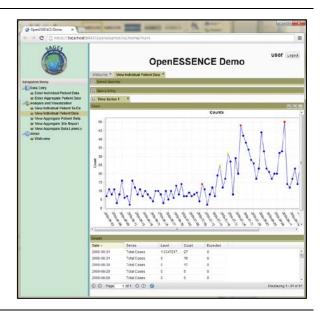
4. Choose **CDC-C1** for **Detector**.

Choose Visit Date / Daily for Resolution.

Click OK.

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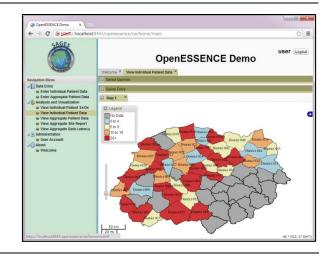
5. A time series chart should appear. This chart is based on demo data.



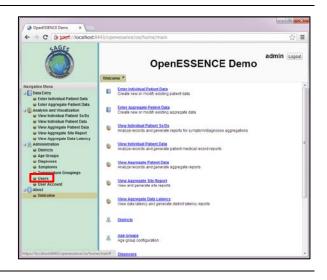
 To check the map functionality, select View Individual Patient Data from the Navigation Menu and then click Map.

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View Aggregate Patient Data	Return Visit	Select Return Visit.	V	
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	Age Group:	Select Age Group	V	
	Temperature Group:	Select Temperature Group	v	
	Symptoms:	Select Symptoms	V	
	And Symptoms:	Select And Symptoms	V	
	Diagnoses:	Select Diagnoses	V	
	And Diagnoses:	Select And Diagnoses	V	
	Accumulation:	Total Cases		
	Clear Time Serie	Charts Details Crosstab	Map	

7. The following map will be displayed.



 To change the password for the admin account, you must be logged in as admin. Select Users from the Navigation Menu under Administration.



9. Select the **admin** account from the list of users and then click **Edit** from the menu bar.

Enter the new password (and confirm). Scroll down and click **Save**.

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Navigation Menu	New_Edit_Delete				
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