

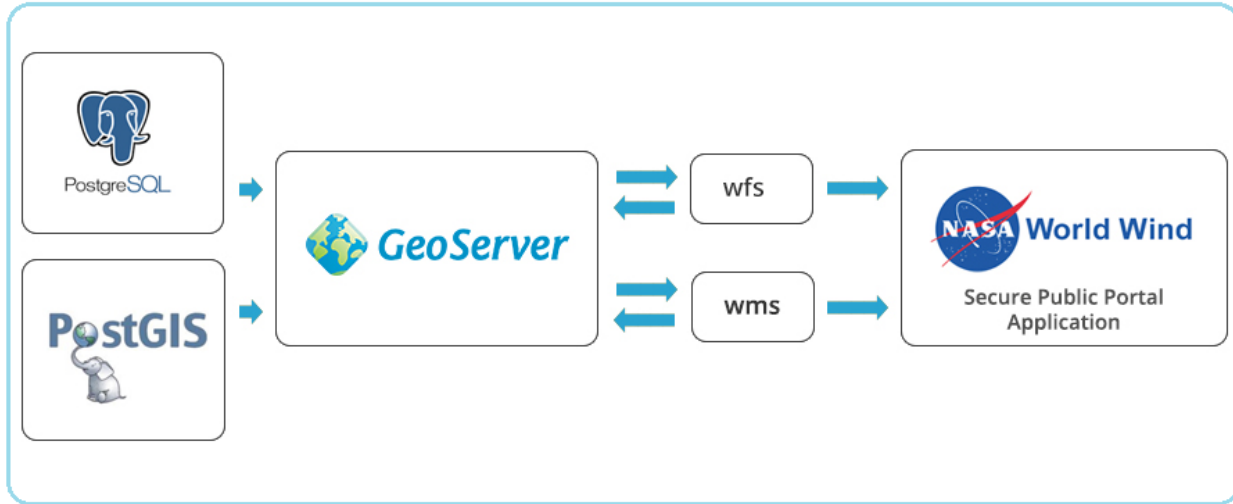
Secure Public Portal Application Specification Document



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1. Flowchart



2. Database Server

Table below lists the hardware and software configuration for both Staging and warehouse servers

2.1 Hardware requirements

Specification	Details
Model	Intel ® Xeon® CPU E5-2637 v3 @ 3.50GHz
No of Processor	2
No of Cores	4
Memory	8 GB
Hard Disk	250 GB minimum

Storage requirement listed above projects the yearly growth of World wind application. Backup and log retention period will be 7 days for a week as per the standards.



2.2 Software requirements

Specification	Details
Operating System	CentOS release 6.8 (final)
Database	PostgreSQL 9.5.5
GeoServer	Version 2.11.1
Tomcat	Version 8

3. Application Server

3.1 Hardware requirements

Specification	Details
Model	Intel® Xeon® CPU E5-2637 v3 @ 3.50GHz
No of Processor	2
No of Cores	4
Memory	8 GB
Hard Disk	250 GB minimum

3.2 Software requirements

Specification	Details
Operating System	CentOS release 6.8 (final)
Java	Version 8
Tool	Eclipse
Server	Apache Tomcat 8.0
Apache	Version 2.2.15

Software	Functionality	Project Use	Purpose
PostgreSQL	An open source object-relational database built for Linux	Used to store the user data	PostgreSQL has a lot of capability. Built using an object-relational model, it supports complex structures and a breadth of built-in and user-defined data types. It provides extensive data capacity and is trusted for its data integrity.
Java	Programming language	Underlies most other code within the Project	Java is secure, reliable and fast & free to download.
PostGIS	Adds geographic object support to PostgreSQL, essentially allowing geo-referencing of database objects	Allowed database to key and search items based on geographic location	PostGIS is an open source RDBMS which is very powerful and OGC compliant. PostGIS is an extension of the O-R database PostgreSQL that supports geographic objects. PostGIS includes a large number of functions for spatial/topology analysis that extends PostgreSQL itself.
Geo Server	A platform for web publishing of spatial data which is open source and interactive maps.	The basic framework for publishing map data used by this project	GeoServer is feature rich, standards OGC compliant which allows users to share and edit geospatial data. It is designed for interoperability and It is open source software server and developed in Java. It publishes data from any spatial data source and to achieve that to publish as Web/Service, Geoserver needs to be configured to use Postgis as back-end and geoserver as front-end to render the spatial data.
JavaScript	An object- oriented programming language with fast dynamic interpreters	An essential core script used in almost all webpages.	Very easy to learn. It is a scripting, lightweight programming language, and it can be easily embedded into HTML pages.



Openlayer	Browser-based and desktop client.	Open Layers provides the base for a browser-based mapping client	Open Layers is very easy to put a dynamic map consisting of markers and tiles in a web page. It is further extended to use geographic information of all types. It is free Open Source JavaScript.
Apache-Tomcat	An open source implementation of Java Server pages and Java Servlet.	Used for communication between server and client side of web applications	Apache is HTTP Server and generally known as Apache. In the preliminary growth of the World Wide Web Apache (web server software) played an important role. An open community of developers has designed & developed it by under the auspices of the Apache Software Foundation.
WMS	Web Mapping Service Requests	Displaying static maps on Web browser.	The OGC Web Map Service (WMS) specification defines an HTTP interface for requesting georeferenced map images from a server. GeoServer supports WMS 1.1.1, the most widely used version of WMS, as well as WMS 1.3.0.
WFS	Web Feature Service	Modifying and exchanging vector format geographic information	The Web Feature Service (WFS) is a standard created by the Open Geospatial Consortium (OGC) for creating, modifying and exchanging vector format geographic information on the Internet using HTTP. A WFS encodes and transfers information in Geography Markup Language (GML), a subset of XML. The current version of WFS is 2.0.0. GeoServer supports versions 2.0.0, 1.1.0, and 1.0.0.

Appendix

Objects Summary

S.NO	Object	Count
1	Workspaces	5
2	Layers	43
3	Tables	54
4	Columns	1009



Workspaces List

S.No	Workspace Name
1	BASE_WMS
2	FAC_WMS
3	LAND_MGT_WMS
4	ENVIRON_WMS
5	PSAP_WMS

Layers List

S.NO	Layers	Workspaces:TableName
1	CityLimits	BASE_WMS:CityLimits
2	Buiding	BASE_WMS:building
3	Fire Stations	BASE_WMS:firestation
4	Hospitals	BASE_WMS:hospital
5	Railroads	BASE_WMS:railroad
6	Schools	BASE_WMS:schools
7	Address	BASE_WMS:site_address
8	City Limits	BASE_WMS:spr_city_limits
9	Streets	BASE_WMS:street_centerline
10	Rivers	ENVIRON_WMS:Rivers
11	WQLW Channels	ENVIRON_WMS:WQLW
12	Local Wetlands	ENVIRON_WMS:local_wetlands
13	National Wetlands Inventory	ENVIRON_WMS:natl_wetlands
14	Wellhead Time of Travel Zones	ENVIRON_WMS:wellhead_zones
15	Rivers	FAC_WMS:Rivers
16	Street Curbs	FAC_WMS:curbs
17	Other facilities	FAC_WMS:otherfacilities
18	Maintenance Holes	FAC_WMS:san_node_all
19	Sanitary Mains	FAC_WMS:san_pipe_main
20	Storm Mains	FAC_WMS:stm_main
21	Storm Maintenance Holes	FAC_WMS:stm_nodes_all
22	Snow Routes	FAC_WMS:street_centerline
23	Springfield Building	LAND_MGT_WMS:buildingswheight
24	Springfield Owned Property	LAND_MGT_WMS:cityownedproperty
25	SpringfieldDeeds	LAND_MGT_WMS:deeds



26	Springfield Easements	LAND_MGT_WMS:easements
27	Building Footprint	LAND_MGT_WMS:eugbuilding
28	Rivers	LAND_MGT_WMS:hydropoly
29	Parks	LAND_MGT_WMS:parks
30	PLSS Sections	LAND_MGT_WMS:plsssection
31	Taxlots	LAND_MGT_WMS:taxlots
32	WQLW Channels	LAND_MGT_WMS:wqlw_channel
33	Fire Reporting Areas Map Pages	PSAP_WMS:FireReportingAreas
34	Fire Station	PSAP_WMS:FireStationPolygons
35	Law Agency	PSAP_WMS:LawAgency
36	Law Beats	PSAP_WMS:LawBeats
37	Law Geo Proximity	PSAP_WMS:LawGeoProximity
38	Fire Agency	PSAP_WMS:fire_agency
39	Fire District	PSAP_WMS:fire_district
40	Fire Geoproximity	PSAP_WMS:fire_geo_proximity
41	Law Reporting Areas	PSAP_WMS:law_reporting_areas
42	Law Response Plan Areas	PSAP_WMS:law_response_plan_areas
43	Tow Zones	PSAP_WMS:tow_zones

Geo Spatial Tables/Features List

S.No	Table Name	Total Attributes	Total Features
1	boat_landings	2	5
2	building	12	37372
3	buildingswheight	5	35461
4	citylimits	4	24
5	cityownedproperty	13	241
6	curbs	19	5950
7	deeds	20	2814
8	easements	31	4217
9	eugbhd	8	108526
10	eugbuilding	36	26
11	fireprotectionarea	8	34
12	firestation	15	160
13	helicopter_landing_zones	15	248
14	hospital	15	5
15	hydrants	24	2000
16	hydroline	8	25922



17	hydropoly	6	6112
18	landmark	3	43
19	local_wetlands	27	257
20	natl_wetlands	6	9812
21	otherfacilities	15	1840
22	parks	12	478
23	planimetric	2	67258
24	plsssection	2	4844
25	pointcloud_formats	3	0
26	railroad	11	992
27	rasters	1	0
28	rivers	9	6
29	san_node_all	41	8642
30	san_pipe_main	54	29084
31	san_pressure_line	52	76
32	san_pump_sta	38	28
33	san_service_line	52	16417
34	schools	15	104
35	sit_address	48	46616
36	slope_ugp	2	3
37	spatial_ref_sys	5	5435
38	spr_city_limits	6	1
39	spr_ugb	7	1
40	stm_main	52	11804
41	stm_nodes_all	44	19179
42	stm_service_line	52	681
44	street_centerline	44	3144
43	strom_button	14	28865
45	surface_water	52	119
46	taxlots	53	157442
47	ugb_slope	1	1
48	us_gaz	6	1074
49	us_lex	6	2938
50	us_rules	3	4369
51	wellhead_zones	7	174
52	wqlw_channel	8	149
53	wqlw_rivers	5	13
54	zoning	10	314