



Visita guiada pelo GeoServer

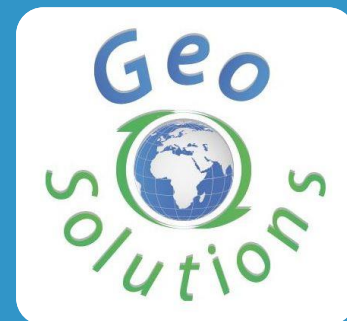
Nuno Oliveira
GeoSolutions





GeoSolutions

- Founded in late 2006
- Expertise
 - Image Processing, GeoSpatial Data Fusion
 - Java, Java Enterprise, C++, Python
 - JPEG2000, JPIP, Advanced visualization
 - Web Based Mashups, Mobile Solutions
 - OGC, ISO, INSPIRE Standards
- Supporting/Developing FOSS4G projects
 - MapStore, GeoServer, GeoNetwork
 - CKAN, GeoNode
- Clients
 - UN FAO (CIOK, FIGIS, NRL, FORESTRY, ESTG), UN WFP, World Bank, DLR, EUMETSAT, JRC, ARPAT, NATO CMRE
 - Private Companies all over the world



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Conteúdo

- **Overview do projeto GeoServer**
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 - Ciclo de *release*
 - *Core*, extensões e *community modules*
- **Core**
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 - *SQL Views*
- **Extensões**
 - INSPIRE e App-Schema
 - Monitorização
 - Control Flow
- **Community modules**
 - GeoFence
 - Clustering
 - Monitorização da instancia



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Overview do projeto GeoServer



GeoServer

<http://geoserver.org/>

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.



Download 

Stable

2.12.0
Nightly

Maintenance

2.11.3
Nightly

Development

Master

Desenhado a pensar na interoperabilidade e para ser fácil de instalar e configurar !



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GeoServer Web UI



GeoServer

Logged in as admin.

Logout

About & Status

- Server Status
- GeoServer Logs
- Contact Information
- About GeoServer
- Process status

Data

- Layer Preview
- Workspaces
- Stores
- Layers
- Layer Groups
- Styles

Services

- CSW
- WMTS
- OS-EO
- WCS
- WFS
- WMS

Welcome

Welcome

This GeoServer belongs to [GeoSolutions](#).

124 Layers

Add layers

56 Stores

Add stores

12 Workspaces

Create workspaces

Please read the file `security/masterpw.info` and remove it afterwards. This file is a **security risk**.

The default user/group service should use digest password encoding.

Strong cryptography available

This GeoServer instance is running version **2.13-SNAPSHOT**. For more information please contact the [administrator](#).

Service Capabilities

CSW

2.0.2

WCS

1.0.0

1.1.0

1.1.1

1.1

2.0.1

WFS

1.0.0

1.1.0

2.0.0

WMS

1.1.1

1.3.0

WPS

1.0.0



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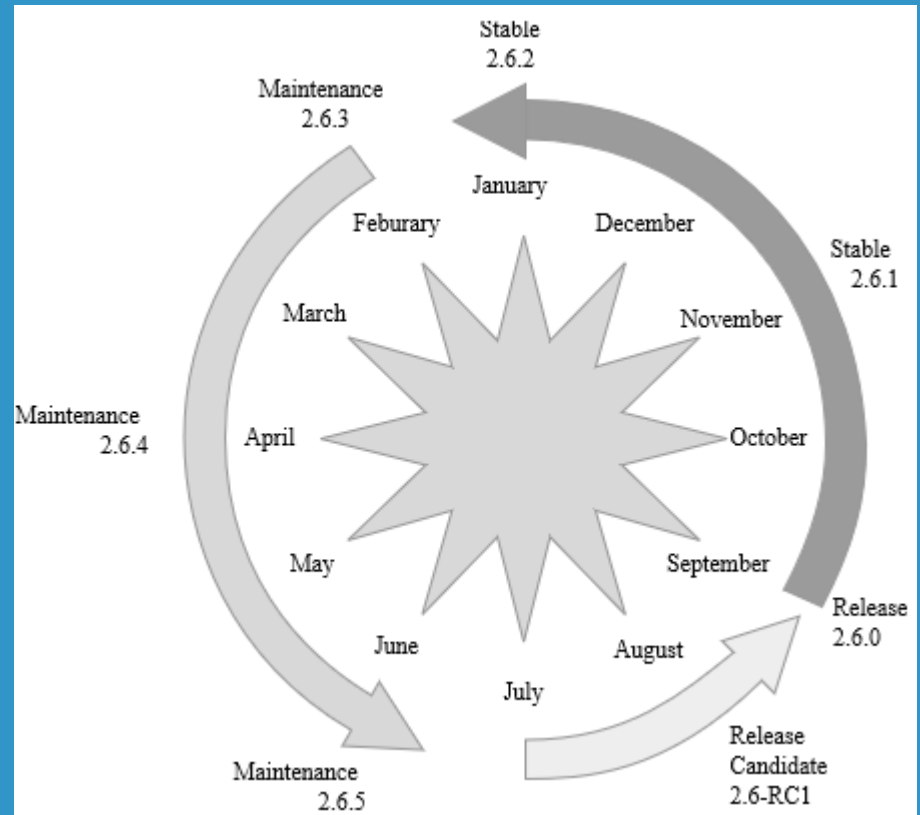
Recursos

- Documentação <http://docs.geoserver.org/>
 - Manual do utilizador
 - Manual do programado
 - Manual sobre a documentação
- Código <https://github.com/geoserver>
- Issues <https://osgeo-org.atlassian.net>
- Comunidade <http://geoserver.org/comm>
 - Uma mailing lists para programadores e outra para utilizadores



Ciclo de *Release*

- Ciclo de *release* de 6 meses:
 - *Maintenance*
 - *Stable*
 - *Development*
- Plano de *release*:
<https://github.com/geoserver/geoserver/wiki/Release-Schedule>





Funcionalidades *Core*

Packages



[Platform Independent Binary](#)

Operating system independent runnable binary.



[Windows Installer](#)

Installer for Windows platforms.



[Mac OSX Installer](#)

DMG for OSX platforms.



[Web Archive](#)

Web Archive (war) for servlet containers.

Documentation



[User Guide HTML](#)

Export of GeoServer user guide.



[Javadoc](#)

API documentation.

Source Code



[zip | tar.gz](#)

Source code packages for tag [2.12.0](#).



[GitHub](#)

Browse source code on GitHub.



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Extensions

<http://docs.geoserver.org/stable/en/user/extensions/index.html>

Extensions



Extensions

GeoServer Extension downloads.

Vector Formats

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

Miscellaneous

- Chart Symbolizer

Coverage Formats

- GDAL
- GRIB
- Image Pyramid
- JDBC Image Mosaic
- JPEG2K
- NetCDF

Output Formats

- DXF
- Excel
- Image Map
- JPEG Turbo



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Community Modules

<http://docs.geoserver.org/stable/en/user/community/index.html>

Community



Community Modules

Experimental community modules.

Index of /geoserver/2.12.x/community-latest/

[../](#)

geoserver-2.12-SNAPSHOT-activeMQ-broker-plugin.zip	19-Nov-2017	14:07
geoserver-2.12-SNAPSHOT-aggregate-plugin.zip	19-Nov-2017	14:07
geoserver-2.12-SNAPSHOT-authkey-plugin.zip	19-Nov-2017	14:07
geoserver-2.12-SNAPSHOT-colormap-plugin.zip	19-Nov-2017	14:07
geoserver-2.12-SNAPSHOT-dds-plugin.zip	19-Nov-2017	14:07
geoserver-2.12-SNAPSHOT-dyndimension-plugin.zip	19-Nov-2017	14:07
geoserver-2.12-SNAPSHOT-gdal-wcs-plugin.zip	19-Nov-2017	14:07
geoserver-2.12-SNAPSHOT-gdal-wps-plugin.zip	19-Nov-2017	14:07



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Funcionalidades *Core*



SQL Views

<http://docs.geoserver.org/stable/en/user/data/database/sqlview.html>

New Layer chooser

Add layer from

Here is a list of resources contained in the store 'postgis'. Click on the layer you wish to configure

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

Published	Layer name	
✓	parks	Publish again
✓	pgstates	Publish again
	bc_parks_2001	Publish
	bc_roads	Publish
	newvector	Publish
	zips00	Publish

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

You can also create a new feature type by manually configuring the attribute names and types. [Create new feature type...](#)
On databases you can also create a new feature type by configuring a native SQL statement. [Configure new SQL view...](#)

SQL Views

<http://docs.geoserver.org/stable/en/user/data/database/sqlview.html>

Create new SQL view

Define a new SQL view and configure its identified and geometry columns

View Name

SQL statement

```
select gid, state_name, persons, the_geom from  
pgstates where state_name ilike '%n%'
```


SQL Views

<http://docs.geoserver.org/stable/en/user/data/database/sqlview.html>

Attributes

Refresh

Name	Type	SRID	Identifier
gid	Integer		<input checked="" type="checkbox"/>
state_name	String		<input type="checkbox"/>
persons	BigDecimal		<input type="checkbox"/>
the_geom	MultiPolygon	4326	<input type="checkbox"/>

SQL Views

<http://docs.geoserver.org/stable/en/user/data/database/sqlview.html>

View Name

popstates

SQL statement

```
select gid, state_name, the_geom from pgstates where
persons between %low% and %high%
```

SQL view parameters

Guess parameters from SQL

Add new parameter

Remove selected

<input type="checkbox"/>	Name	Default value	Validation regular expression
<input type="checkbox"/>	high	100000000	^[0-9]+\$
<input type="checkbox"/>	low	0	^[0-9]+\$

REST API

<http://docs.geoserver.org/stable/en/user/rest/api>

- Ponto de entrada:
 - `http://<host>:<port>/geoserver/rest`
- Todas as entidades têm uma representação:
 - HTML
 - JSON
 - XML
- Utilizada em pipelines de publicação de dados, aplicações WEB (MapStore2), aplicações terceiras, etc ...

Extensões



INSPIRE e App-Schema

<http://docs.geoserver.org/stable/en/user/extensions/inspire/index.html>

- A extensão INSPIRE permite configurar os meta-dados necessários para se ser conforme com a norma INSPIRE.

INSPIRE

☒ Create INSPIRE ExtendedCapabilities element

Language
eng ▼

Service Metadata URL

Service Metadata Type
Online ISO 19139 ServiceMetadata document ▼

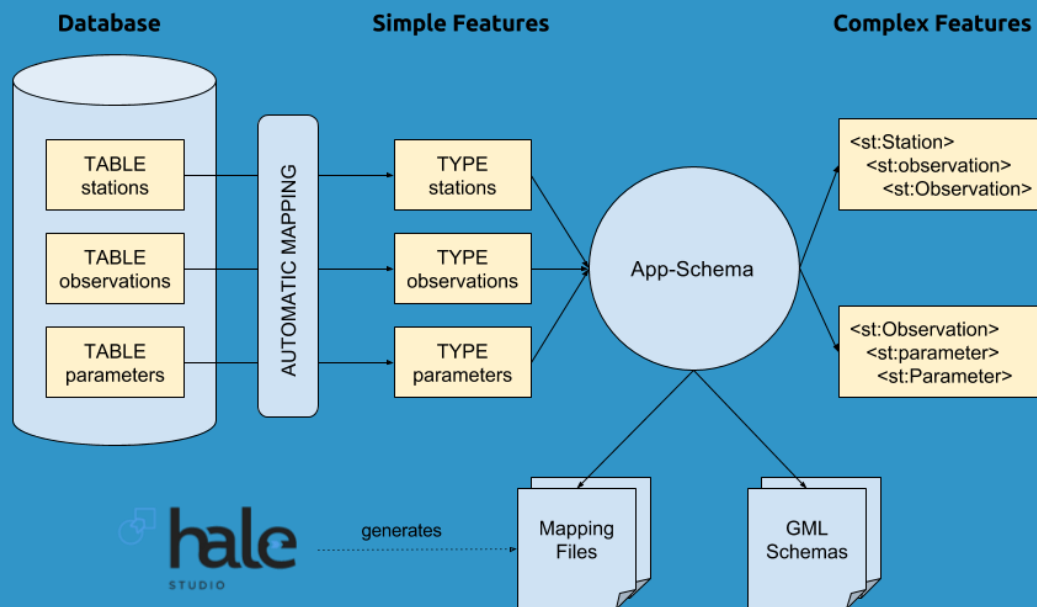
Spatial Dataset Identifiers

Code	Namespace	Metadata URL
<input type="text" value="abba"/>	<input type="text" value="abba"/>	<input type="text" value="abba"/>

INSPIRE e App-Schema

<http://docs.geoserver.org/stable/en/user/data/app-schema/index.html>

- A extensão App-Schema permite disponibilizar dados através do serviço WFS que correspondam aos schema XML definidos pela norma INSPIRE.



INSPIRE e App-Schema

<http://docs.geoserver.org/stable/en/user/data/app-schema/index.html>

```
...
<st:Station gml:id="station.13">

  <st:stationCode>ALS</st:stationCode>
  <st:stationName>Alessandria</st:stationName>

  <st:observation>
    <st:Observation gml:id="observation.1">
      <st:timestamp>2016-12-19T11:26:40Z</st:timestamp>
      <st:value>20.0</st:value>

      <st:parameter>
        <st:Parameter gml:id="parameter.1">
          <st:parameter>temperature</st:parameter>
          <st:unit>C</st:unit>
        </st:Parameter>
      </st:parameter>

    </st:Observation>
  </st:observation>

  <st:observation>
    <st:Observation gml:id="observation.2">
      <st:timestamp>2016-12-19T11:27:13Z</st:timestamp>
      <st:value>155.0</st:value>
    </st:Observation>
  </st:observation>
</st:Station>
```

Monitorização

<http://docs.geoserver.org/stable/en/user/extensions/monitoring/index.html>

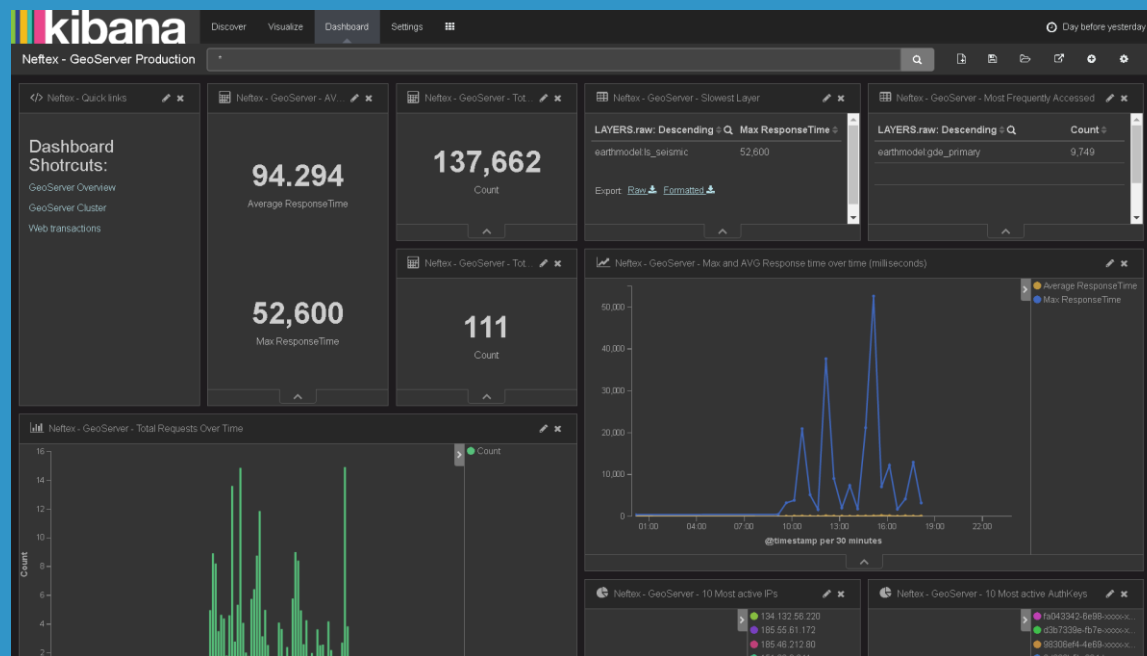
- Permite criar ficheiros de monitorização sobre cada pedido (request) que é executada pelo GeoServer.

```
<#escape x as x?xml>
<Request id="${id!""}">
  <Service>${service!""}</Service>
  <Version>${owsVersion!""}</Version>
  <Operation>${operation!""}</Operation>
  <SubOperation>${subOperation!""}</SubOperation>
  <Resources>${resourcesList!""}</Resources>
  <Path>${path!""}</Path>
  <QueryString>${queryString!""}</QueryString>
  <#if bodyAsString??>
    <Body>
      ${bodyAsString}
    </Body>
  </#if>
  <HttpMethod>${httpMethod!""}</HttpMethod>
  <StartTime>${startTime?datetime?iso_utc_ms}</StartTime>
  <EndTime>${endTime?datetime?iso_utc_ms}</EndTime>
```

Monitorização

<http://docs.geoserver.org/stable/en/user/extensions/monitoring/index.html>

- Os ficheiros criados podem depois serem consumidos por uma infraestrutura de monitorização.



Control Flow

<http://docs.geoserver.org/stable/en/user/extensions/controlflow/index.html>

- Permite gerir os pedidos que são executados pelo GeoServer.

```
# if a request waits in queue for more than 60 seconds it's not worth executing,
# the client will likely have given up by then
timeout=60
# don't allow the execution of more than 100 requests total in parallel
ows.global=100
# don't allow more than 10 GetMap in parallel
ows.wms.getmap=10
# don't allow more than 4 outputs with Excel output as it's memory bound
ows.wfs.getfeature.application/msexcel=4
# don't allow a single user to perform more than 6 requests in parallel
# (6 being the Firefox default concurrency level at the time of writing)
user=6
# don't allow the execution of more than 16 tile requests in parallel
# (assuming a server with 4 cores, GWC empirical tests show that throughput
# peaks up at 4 x number of cores. Adjust as appropriate to your system)
ows.gwc=16
```

Community Modules



GeoFence

<http://docs.geoserver.org/latest/en/user/community/geofence-server/index.html>

- Estende o sistema de segurança do GeoServer com a possibilidade de autorizar um utilizador a ver apenas uma certa área, permite autorização baseada no IP do utilizador, esconder atributos por utilizador, etc ...

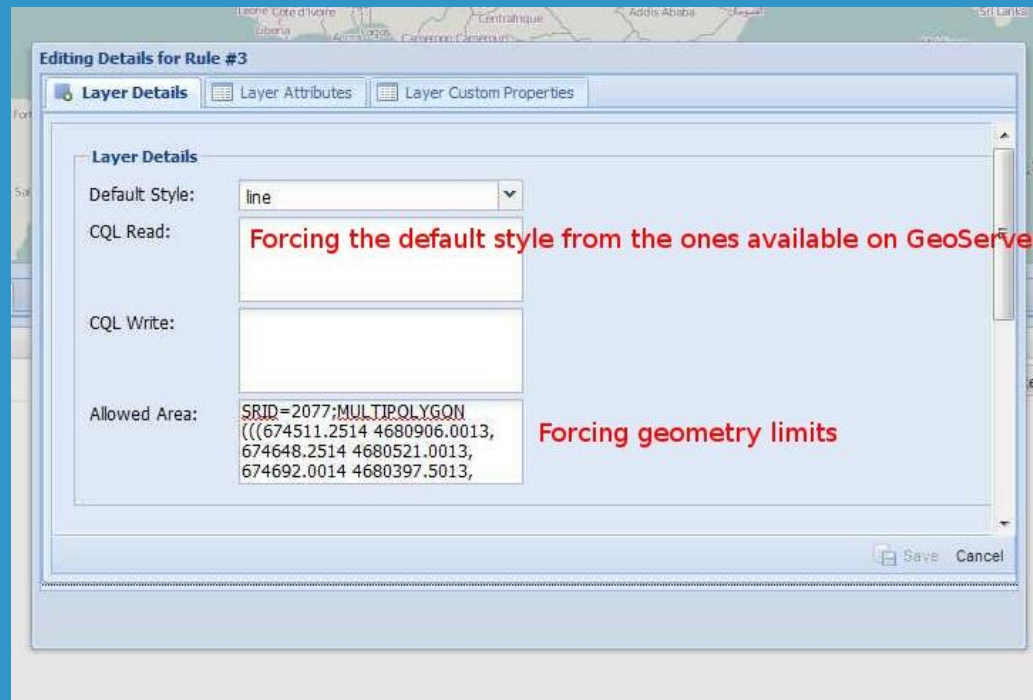
User Management Groups Instances Rules										
	User	Group	Instance	Service	Request	Workspace	Layer	Grant		
0	admin	*	*	*	*	*	*	LIMIT	Edit rule	Details
1	tiger	*	default-gs	*	*	tiger	*	ALLOW	Edit rule	Details
3	tiger	*	default-gs	*	*	*	*	DENY	Edit rule	Details
6	*	*	default-gs	*	*	topp	gboundaries	ALLOW	Edit rule	Details
7	*	*	default-gs	*	*	topp	*	DENY	Edit rule	Details
9	*	*	default-gs	*	*	it.geosolutions	tasmania_roads	ALLOW	Edit rule	Details
10	*	*	*	*	*	*	*	ALLOW	Edit rule	Details

Page 1 of 1

Displaying 1 - 7 of 7 Add Rule

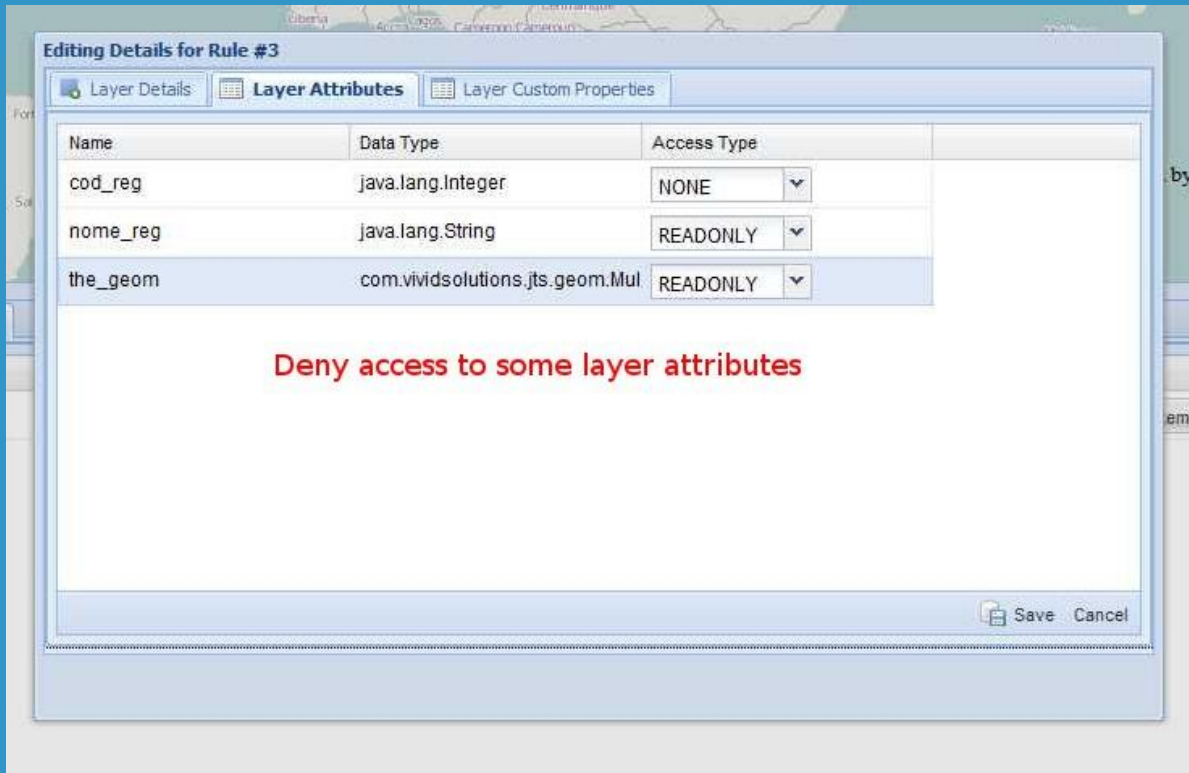
GeoFence

<http://docs.geoserver.org/latest/en/user/community/geofence-server/index.html>



GeoFence

<http://docs.geoserver.org/latest/en/user/community/geofence-server/index.html>



Name	Data Type	Access Type
cod_reg	java.lang.Integer	NONE
nome_reg	java.lang.String	READONLY
the_geom	com.vividsolutions.jts.geom.Mul	READONLY

Deny access to some layer attributes



Save Cancel

GeoFence

















<http://docs.geoserver.org/latest/en/user/community/geofence-server/index.html>

GeoFence Server

Configure rules and settings for the internal GeoFence server.

-  Add new rule
-  Remove selected rules

Results 1 to 6 (out of 6 items)

<input type="checkbox"/>	P	Role	User	Service	Request	Workspace	Layer	Access	
<input type="checkbox"/>	0	tiger_view	*	WMS	*	tiger	*	ALLOW	 
<input type="checkbox"/>	1	*	tiger_admin	*	*	tiger	*	ALLOW	  
<input type="checkbox"/>	2	*	*	*	*	tiger	*	DENY	  
<input type="checkbox"/>	3	*	*	*	*	sf	archsites	DENY	  
<input type="checkbox"/>	4	*	*	*	*	sf	*	ALLOW	  
<input type="checkbox"/>	6	*	*	*	*	*	*	DENY	 

Results 1 to 6 (out of 6 items)

Clustering

<http://docs.geoserver.org/stable/en/user/community/jms-cluster/index.html>

- O *community module jms-cluster* permite sincronizar de forma automática várias instancias do GeoServer.

Clustering Configuration Settings

Setting and cluster

URL of the broker to connect **1**

Name of this instance (generated UUID) **2**
1b8b58ff-c104-4d2c-a3fb-03c2ff2ab82f

Name of this instance's group **3**
geoserver-cluster

The name of the topic (Default 'geoserver') **4**
VirtualTopic.geoserver

enable/disable **5**

enable/disable **6**

enable/disable **7**

enable/disable **8**

enable/disable **9**

Save **10**

Master enabled: false

Slave enabled: false

Slave connection: enabled

Read Only: disabled

Embedded broker: enabled

Clustering

<http://docs.geoserver.org/stable/en/user/community/backuprestore/index.html>

- Permite fazer o *backup* de uma instancia do GeoServer e fazer o restauro desse *backup* na mesma instancia ou noutra instancia.

Backup & Restore

New Backup/Restore Execution

Provide target archive full path *

/tmp/full_backup.zip Browse...

Filter by Workspace (optional)

(all) ▼

Perform a new GeoServer Backup

Backup Options

- ☒ Overwrite Existing Archive
- ☒ Skip Failing Resources

Start Backup Cancel

Mandatory Fields *

Perform a new GeoServer Restore

Restore Options

- ☒ Dry-Run
- ☐ Skip Failing Resources

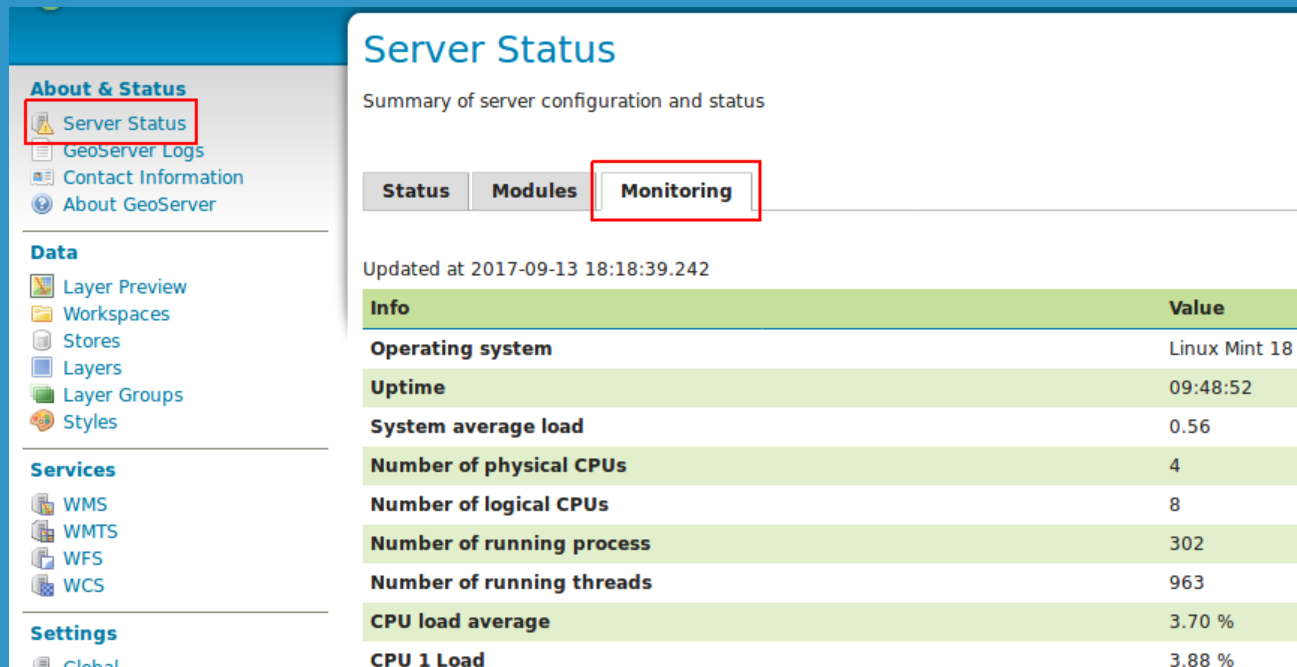
Start Restore Cancel

Mandatory Fields *

Monitorização da instancia

<http://docs.geoserver.org/stable/en/user/community/status-monitoring/index.html>

- Permite obter informação básica sobre o máquina onde a instancia do GeoServer está a correr.

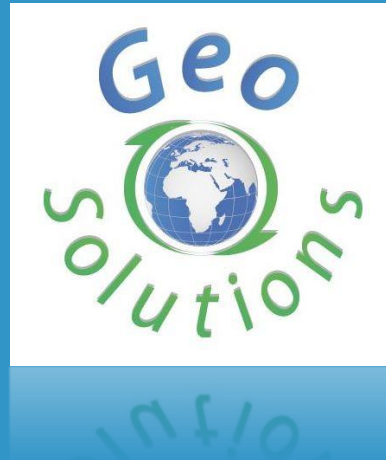


Server Status
Summary of server configuration and status

Updated at 2017-09-13 18:18:39.242

Info	Value
Operating system	Linux Mint 18
Uptime	09:48:52
System average load	0.56
Number of physical CPUs	4
Number of logical CPUs	8
Number of running process	302
Number of running threads	963
CPU load average	3.70 %
CPU 1 Load	3.88 %

That's all!



Questões?

info@geo-solutions.it



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