

Serviços de Dados Geográficos

Danilo Furtado

Direção-Geral do Território

Agenda

1. Implementação de SDG INSPIRE em GeoServer

- Introdução ao GeoServer
- Criação de Serviços de Visualização e Descarregamento
- Extensão INSPIRE



GeoServer

Implementação de SDG INSPIRE

Introdução ao GeoServer

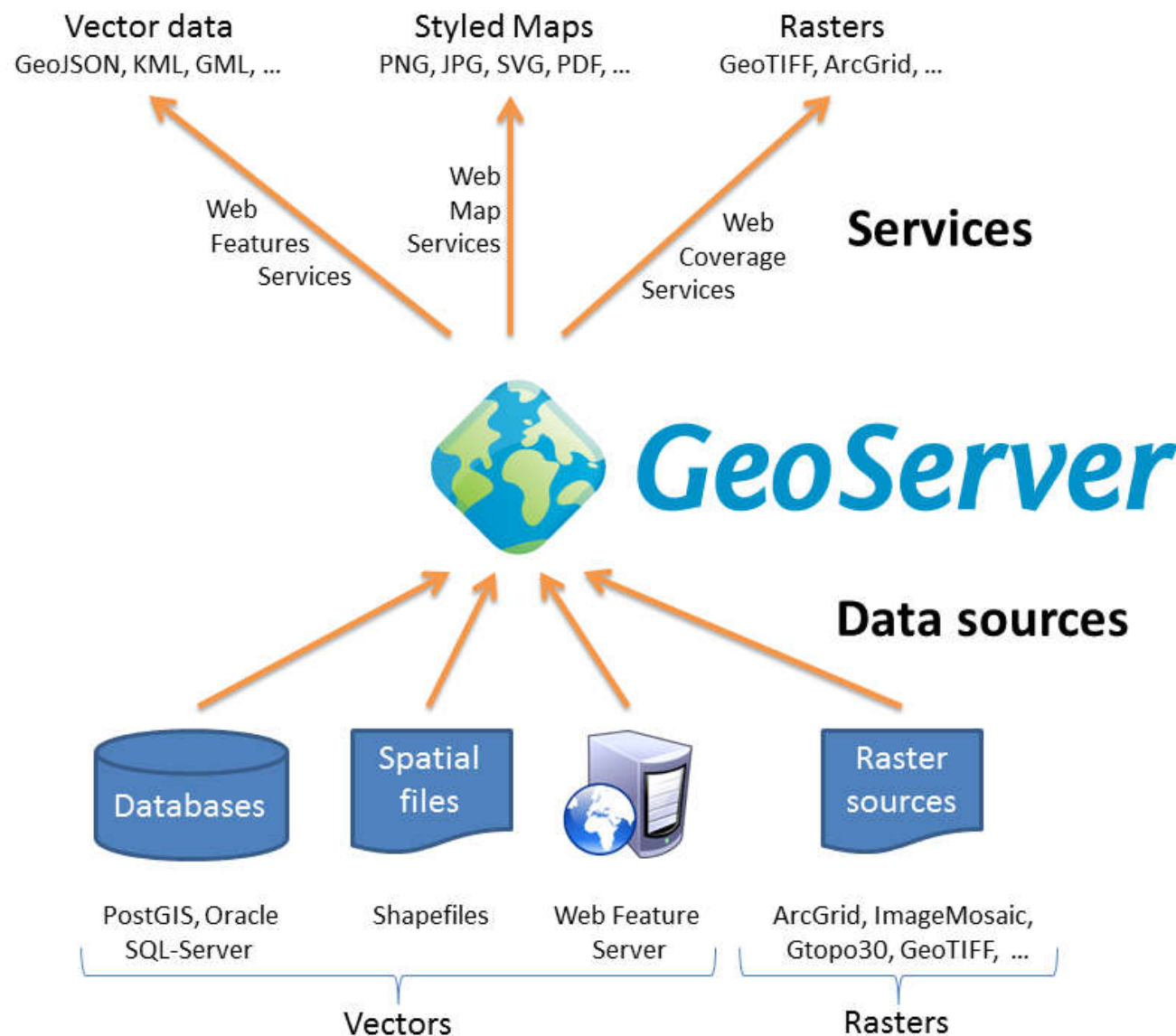
- Criado em 2001, o GeoServer é um **servidor de mapas** Java-based que permite aos utilizadores criar, editar, visualizar, transformar e publicar dados espaciais.
- É um projecto Open Source incubado pela OSGeo.
- Desenvolvido utilizando a biblioteca GeoTools.
- As correções de problemas e melhorias de recursos são realizadas com frequência.
- Possibilidade de correr em distintos sistemas operativos (Linux, Windows, Mac OS X).



Introdução ao GeoServer

- Suporte a múltiplos formatos de dados raster e vectorial.
- Suporte para Bases de Dados PostgreSQL/PostGIS e por extensões, o Oracle, MySQL, MS SQL Server, ArcSDE.
- Compatível com as especificações do OGC (WMS, WFS, WCS, etc).
- Suporte a projecções em tempo real.
- Pré-visualização integrada utilizando OpenLayers;
- Utiliza SLD (Styled Layer Descriptor) e CSS (Cascading Style Sheets) para representação de simbologias.
- Integração com o QGIS - **GeoCat Bridge for QGIS** (pago)
- Documentação em: <http://docs.geoserver.org/stable/en/user/index.html>

Introdução ao GeoServer



Introdução ao GeoServer

- Extensível

Vector Formats

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

Output Formats

- Excel
- Image Map
- OGR
- XSLT
- DXF
- JPEG Turbo

Miscellaneous

- Chart Symbolizer
- Control Flow
- Cross Layer Filtering
- CSS Styling
- GeoSearch
- CAS
- Monitor (Core, Hibernate)
- Importer (Core, BDB Backend)
- INSPIRE
- Printing

Coverage Formats

- GDAL
- Image Pyramid
- JPEG2K
- JDBC Image Mosaic

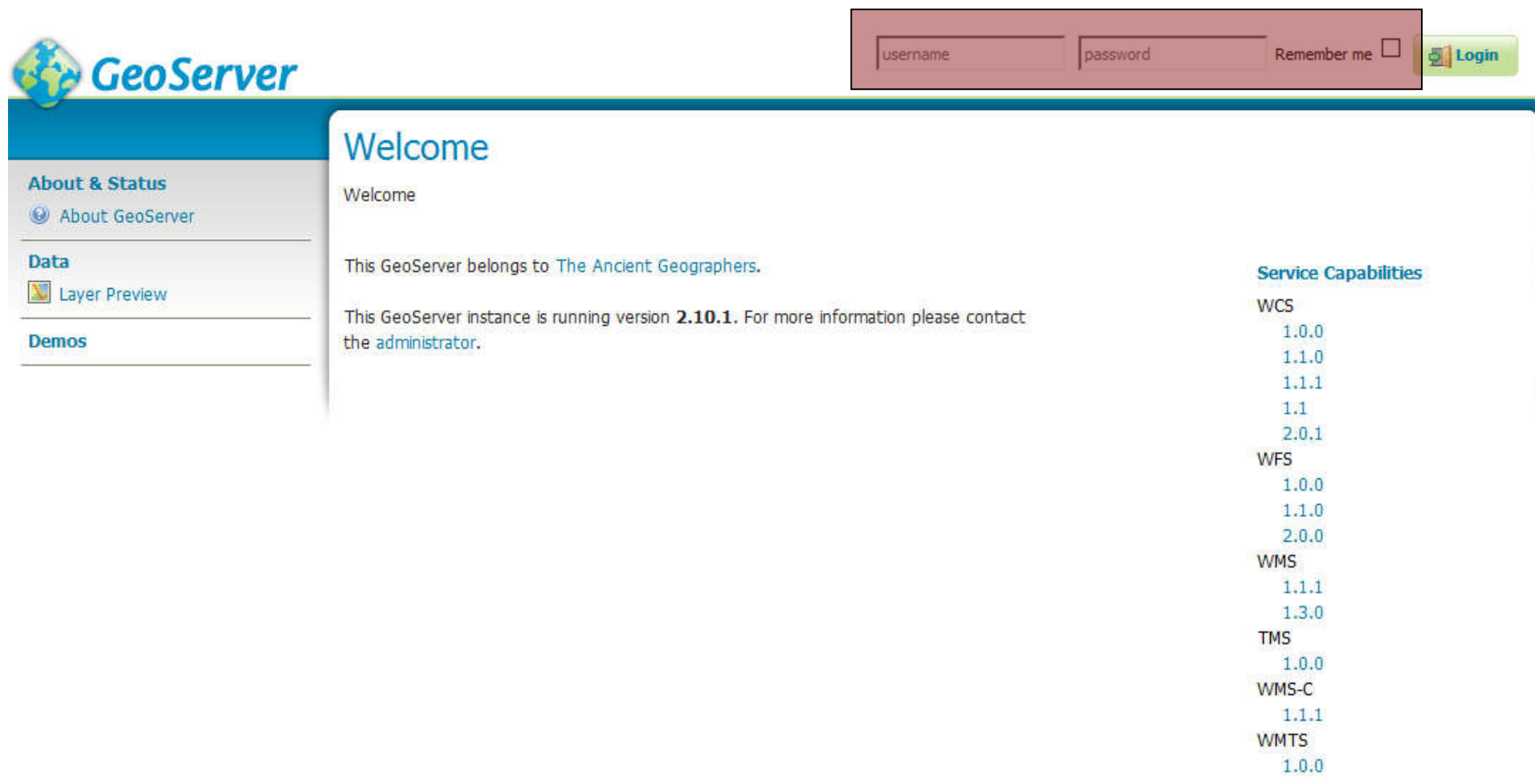
Services

- CSW
- WCS 2.0 EO
- WPS
- WPS Hazelcast

Introdução ao GeoServer

- Acesso ao GeoServer Web Administration Interface:

<http://localhost:8080/geoserver/web/>



The screenshot displays the GeoServer Web Administration Interface. At the top left is the GeoServer logo. On the top right, there is a login box with fields for 'username' and 'password', a 'Remember me' checkbox, and a 'Login' button. The main content area is titled 'Welcome' and contains the following text: 'Welcome', 'This GeoServer belongs to [The Ancient Geographers](#).', and 'This GeoServer instance is running version **2.10.1**. For more information please contact the [administrator](#).' On the left side, there is a sidebar menu with sections: 'About & Status' (containing 'About GeoServer'), 'Data' (containing 'Layer Preview'), and 'Demos'. On the right side, there is a 'Service Capabilities' section listing the following services and their versions: 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), TMS (1.0.0), WMS-C (1.1.1), and WMTS (1.0.0).

GeoServer

username password Remember me ☐ Login

Welcome

Welcome

This GeoServer belongs to [The Ancient Geographers](#).

This GeoServer instance is running version **2.10.1**. For more information please contact the [administrator](#).

About & Status

- About GeoServer

Data

- Layer Preview

Demos

Service Capabilities

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

TMS

- 1.0.0

WMS-C

- 1.1.1

WMTS

- 1.0.0

Introdução ao GeoServer

Logged in as admin. [Logout](#)

About & Status

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

Data

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

Services

- CSW
- WMTS
- WCS
- WFS
- WMS

Settings

- Global
- Image Processing
- Raster Access

Tile Caching

- Tile Layers
- Caching Defaults
- Gridsets
- Disk Quota
- BlobStores

Security

- Settings
- Authentication
- Passwords
- Users, Groups, Roles
- Data
- Services

Demos

Tools

Welcome

Informações do ambiente GeoServer

19 Layers [Add layers](#)
9 Stores [Add stores](#)
7 Workspaces [Create workspaces](#)

Gestão dos dados espaciais

Configuração dos serviços OGC

Configurações gerais

Visão geral

Serviços cache

Configurações de segurança

links para exemplos de aplicações

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
TMS
1.0.0
WMS-C
1.1.1
WMTS
1.0.0

Descrição (metadados) dos serviços disponíveis









Introdução ao GeoServer

- **Layer preview:** permite visualizar uma lista de temas com as seguintes informações:

Layer Preview

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

<< < 1 > >> Results 1 to 22 (out of 22 items)

Type	Name	Title	Common Formats	All Formats
	tiger:poly_landmarks	Manhattan (NY) landmarks	OpenLayers KML GML	Select one
	tiger_roads	Ma		
	tiger:giant_polygon	World rectangle	OpenLayers KML GML	Select one
	nurc:Img_Sample	Manhattan (NY) points of interest	OpenLayers KML GML	Select one
	nurc:mosaic	North America sample imagery	OpenLayers KML	Select one
	nurc:mosaic	mosaic	OpenLayers KML	Select one
	nurc:Arc_Sample	A sample ArcGrid file	OpenLayers KML	Select one
	nurc:Pk50095	Pk50095 is a A raster file accompanied by a spatial data file	OpenLayers KML	Select one

Formato tema

Título do tema


Formatos de visualização e **download**

workspace e nome do tema

- Permite efectuar o download dos temas em vários formatos.

Introdução ao GeoServer

- Configurações



GeoServer

Logged in as admin. [Logout](#)

About & Status

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

Data

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

Services

- CSW
- WCS
- WFS
- WMS

Settings

- Global
- JAI
- Coverage Access

Tile Caching

- Tile Layers
- Caching Defaults
- Gridsets
- Disk Quota

Security

- Settings
- Authentication
- Passwords
- Users, Groups, Roles
- Data
- Services

Demos

Tools

Contact Information

Set the contact information for this server.

Contact

Claudius Ptolomaeus

Organization

The ancient geographes INC

Position

Chief geographer

Address Type

Work

Address

Address Delivery Point

City

Alexandria

State

ZIP code

Country

Egypt

Address Electronic Mail Address

Telephone

Fax

Email

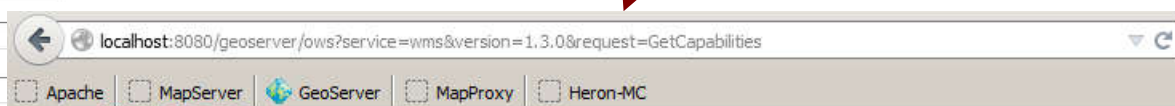
claudius.ptolomaeus@gmail.com

[Submit](#)

[Cancel](#)

- Informações de contacto.

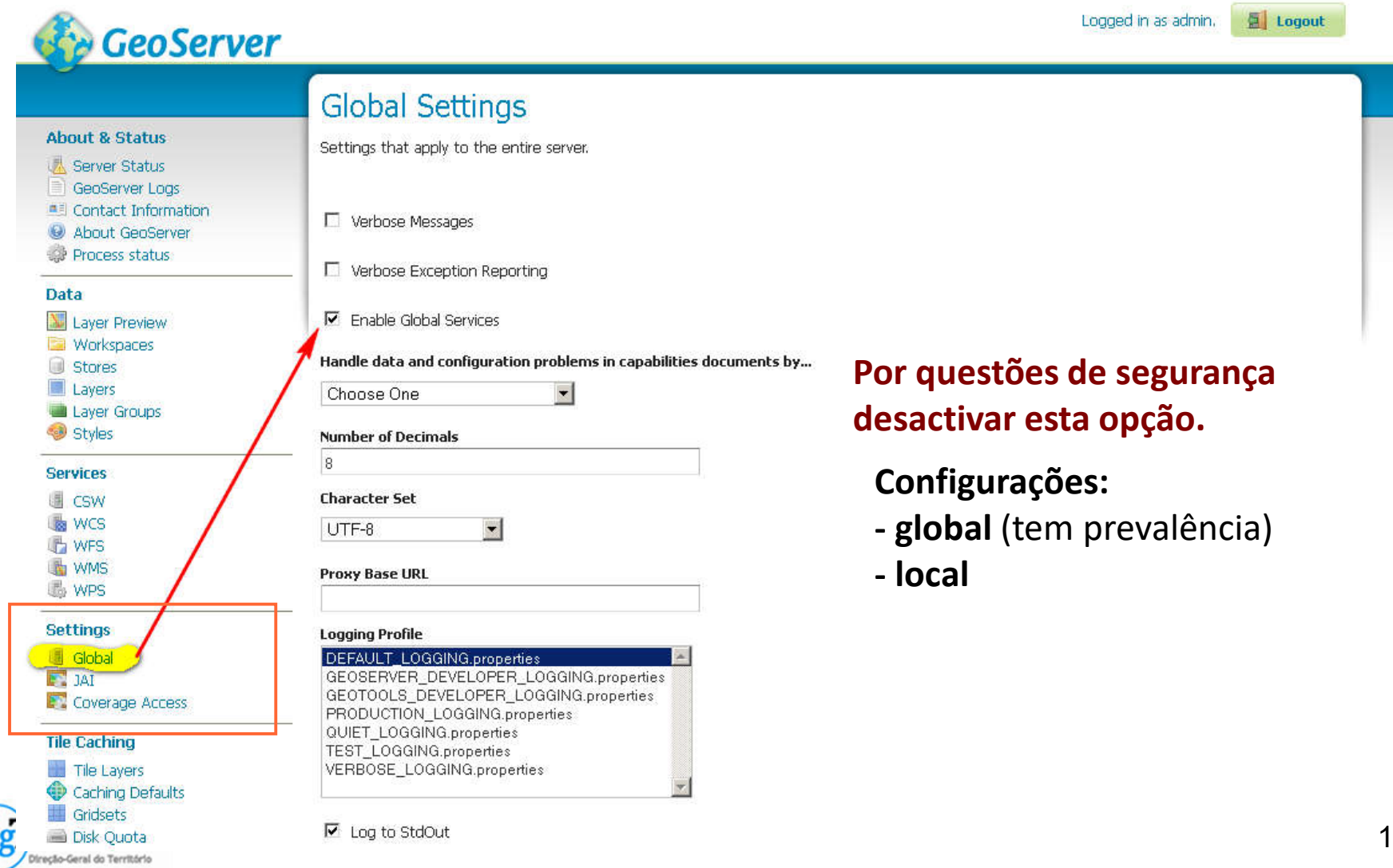
- Metadados para os serviços OGC.



```
- <ContactInformation>
- <ContactPersonPrimary>
  <ContactPerson>Claudius Ptolomaeus</ContactPerson>
  <ContactOrganization>The ancient geographes INC</ContactOrganization>
</ContactPersonPrimary>
<ContactPosition>Chief geographer</ContactPosition>
- <ContactAddress>
  <AddressType>Work</AddressType>
  <Address/>
  <City>Alexandria</City>
  <StateOrProvince/>
  <PostCode/>
  <Country>Egypt</Country>
</ContactAddress>
<ContactVoiceTelephone/>
<ContactFacsimileTelephone/>
<ContactElectronicMailAddress>claudius.ptolomaeus@gmail.com</ContactElectronicMailAddress>
```

Introdução ao GeoServer

- Configurações



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
- WCS
- WFS
- WMS
- WPS

Settings

- Global**
- JAI
- Coverage Access

Tile Caching

- Tile Layers
- Caching Defaults
- Gridsets
- Disk Quota

Global Settings

Settings that apply to the entire server.

- ☐ Verbose Messages
- ☐ Verbose Exception Reporting
- ☒ Enable Global Services

Handle data and configuration problems in capabilities documents by...

Choose One

Number of Decimals

8

Character Set

UTF-8

Proxy Base URL

Logging Profile

DEFAULT_LOGGING.properties
GEOSERVER_DEVELOPER_LOGGING.properties
GEOTOOLS_DEVELOPER_LOGGING.properties
PRODUCTION_LOGGING.properties
QUIET_LOGGING.properties
TEST_LOGGING.properties
VERBOSE_LOGGING.properties

☒ Log to StdOut

Por questões de segurança desactivar esta opção.

Configurações:

- global (tem prevalência)
- local

d-g
Direção-Geral do Território

Introdução ao GeoServer

- Configurações



- Configurar metadados globais comuns a todos os workspaces
 - Metadados
 - Maintainer
 - Online resource
 - Title
 - WMS Limited SRS list (3763, 4326, 4258, 3857). Caso contrário é apresentado todos os SRS que o Geoserver suporta (cerca de 4000).
 - WMS Settings → Queryable e Opaque
 - Maximum number of features (WFS)
 - Extra SRS codes for WFS 2.0 (WFS)
 - Service Level (WFS), colocar como **basic**

Introdução ao GeoServer

- Configurações - WFS
 - Por defeito, o WFS está sempre activo, pelo que caso não se pretenda disponibilizar um serviço de descarregamento, é necessário desactivar esta opção.

Web Feature Service

Manage the publishing of feature data.

Workspace

Service Metadata

☒ Enable WFS☐ Strict CITE compliance

Introdução ao GeoServer

- Configurações - WFS
 - **Basic**: só permite o download dos dados.
 - **Transactional**: além das características do Basic, permite criar, apagar e actualizar os dados no servidor.
 - **Complete**: inclui também o **lock** da entidade a editar.

Service Level

- ☐ Basic
- ☒ Transactional
- ☐ Complete

Introdução ao GeoServer

- Configurações - WFS
 - Nº máximo de entidades permitidas para descarregamento.

Features

Maximum number of features

1000000

Maximum number of features for preview (Values ≤ 0 use the maximum number of features)

50

- ☐ Return bounding box with every feature
- ☐ Ignore maximum number of features when calculating hits

Introdução ao GeoServer

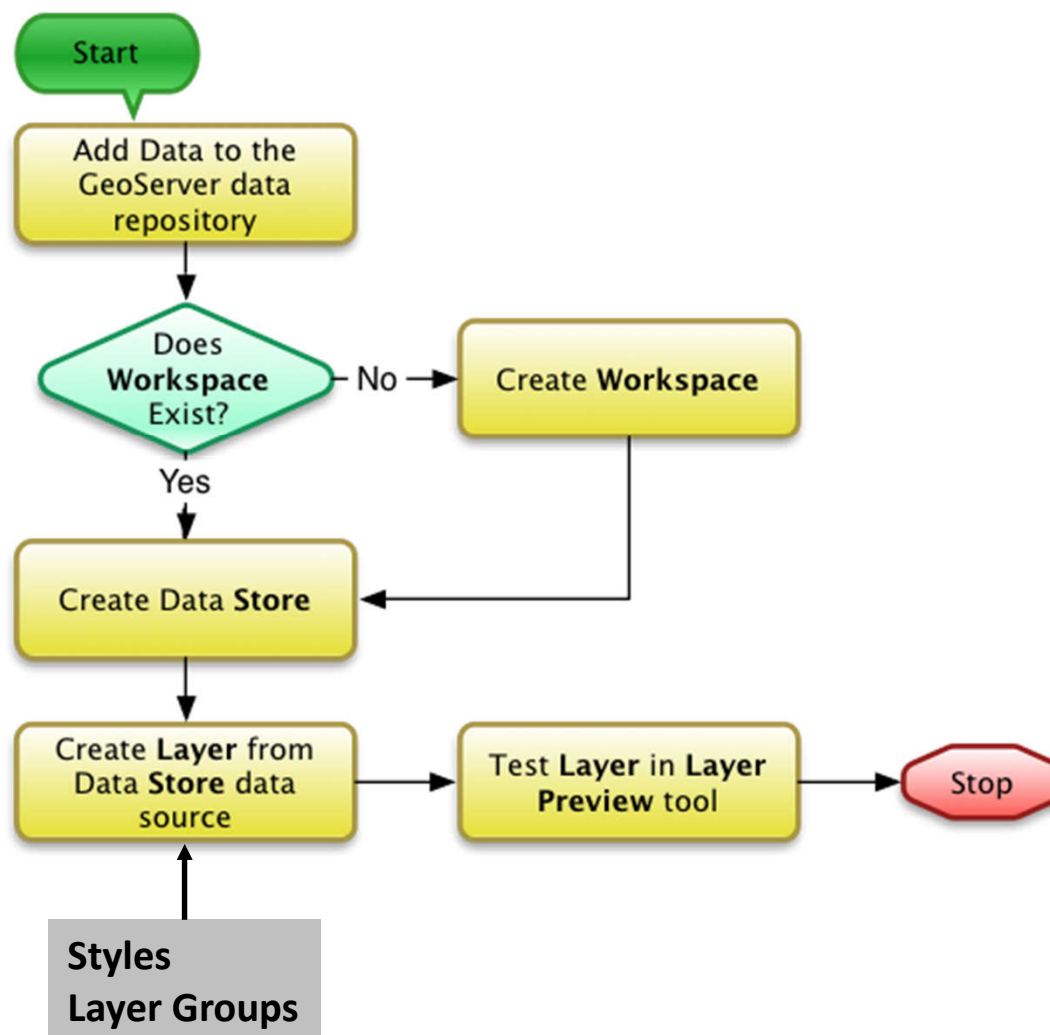
- Configurações - WFS
 - O WFS 1.1.0 e 2.0 permitem transformação on-the-fly para outros SRS.

Extra SRS codes for WFS capabilities generation

4326, códigoEPSG, códigoEPSG

Introdução ao GeoServer

- Workflow de carregamento dos dados



Introdução ao GeoServer

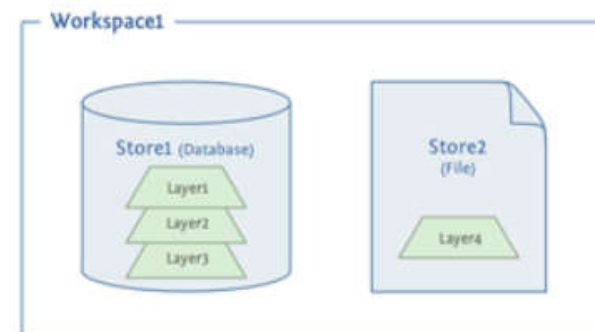
- Conceitos
 - **Workspace:** área utilizada para agrupar temas semelhantes.
 - Pode-se associar quantos temas quisermos a um workspace
 - Podem existir vários temas com o mesmo nome desde que estejam em workspaces diferentes.
 - O nome de um tema é dado pelo par **workspace:layer** (eg. topp:states).

Com a configuração **Global**

workspace layer

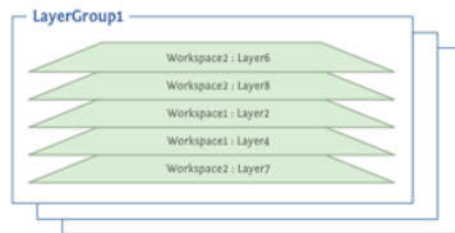


- **Store:** repositório de dados e indica ao GeoServer a forma de se ligar a eles.
 - Uma store tem de estar numa workspace.
- **Layers:** raster, vectores ou WMS.



Introdução ao GeoServer

- Conceitos
 - **Layers Group:** permite compor um mapa a partir dos diferentes temas.



- **Styles:** por defeito via SLD - Styled Layer Descriptor.
 - Existe uma extensão para css - Cascading Style Sheets (compacto).
 - **QGIS exporta para sld.**

Style Editor

Edit the current SLD style. The editor can provide syntax highlight and be brought to full screen. Click on the "validate" button to verify the style is a valid SLD document.

Name
lung

Workspace
▼

Format

SLD ▼ Format only editable for new styles

Copy from existing style

Choose One ▼ Copy ...

```
1 <?xml version="1.0" encoding="ISO-8859-1"?>
2 <StyledLayerDescriptor version="1.0.0" xmlns="http://www.opengis.net/sld"
3   xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:xsi="http://www.w3.org/2001/XMLSchema"
4   xsi:schemaLocation="http://www.opengis.net/sld http://schemas.opengis.net/sld/1.0.0
5   /StyledLayerDescriptor.xsd">
6   <name>lung</name>
7   <isDefault>false</isDefault>
8   <title>A small red flag</title>
9   <abstract>A sample of how to use an SVG based symbolizer</abstract>
10
```

CSS Styles

Create and modify GeoCSS styles.

1 No CSS file was found for this style. Please make sure this is the style you intended to edit, since saving the CSS will destroy the existing SLD.

• Editing style: population

• Previewing on layer:

topostates

• Create new CSS style

• Set style "population" as the

default style for layer

"topostates"

• Change layer associations for

the style.

Submit

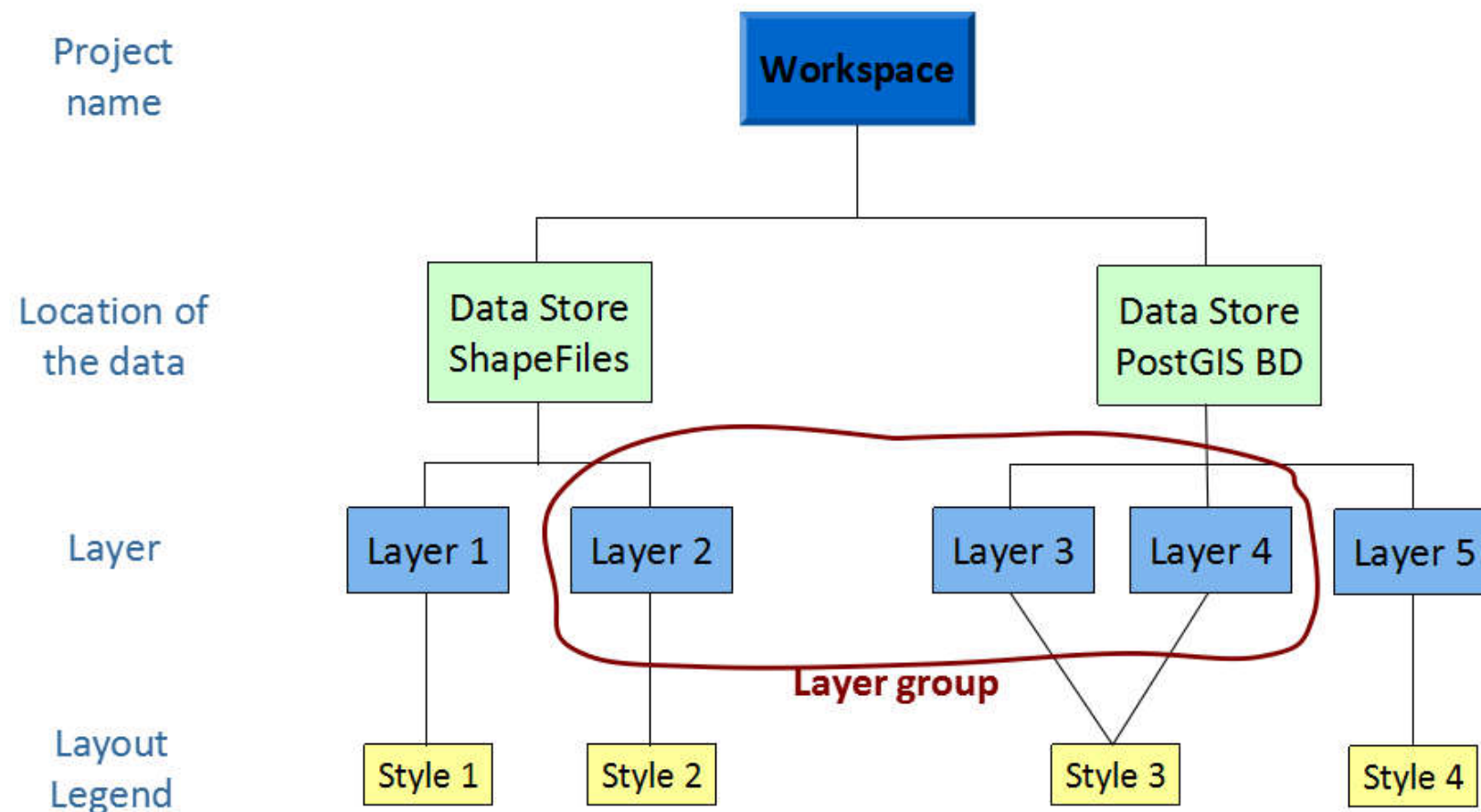
Introdução ao GeoServer

- SLD - Styled Layer Descriptor

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<StyledLayerDescriptor version="1.0.0"
  xsi:schemaLocation="http://www.opengis.net/sld StyledLayerDescriptor.xsd"
  xmlns="http://www.opengis.net/sld"
  xmlns:ogc="http://www.opengis.net/ogc"
  xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <NamedLayer>
    <Name>Simple point</Name>
    <UserStyle>
      <Title>Simple point</Title>
      <FeatureTypeStyle>
        <Rule>
          <PointSymbolizer>
            <Graphic>
              <Mark>
                <WellKnownName>circle</WellKnownName>
                <Fill>
                  <CssParameter name="fill">#FF0000</CssParameter>
                </Fill>
              </Mark>
              <Size>6</Size>
            </Graphic>
          </PointSymbolizer>
        </Rule>
      </FeatureTypeStyle>
    </UserStyle>
  </NamedLayer>
</StyledLayerDescriptor>
```

Introdução ao GeoServer

- Conceitos



Criação de Serviços de Dados

- Workspace



Workspaces

Manage GeoServer workspaces

- [Add new workspace](#) **2**
- [Remove selected workspace\(s\)](#)

<< < 1 > >> Results 1 to 7 (out of 7 items) Search

<input type="checkbox"/>	Workspace Name	Default
<input type="checkbox"/>	cite	✓
<input type="checkbox"/>	it.geosolution	
<input type="checkbox"/>	nurc	
<input type="checkbox"/>	sde	
<input type="checkbox"/>	sf	
<input type="checkbox"/>	tiger	
<input type="checkbox"/>	topp	

New Workspace

Configure a new workspace

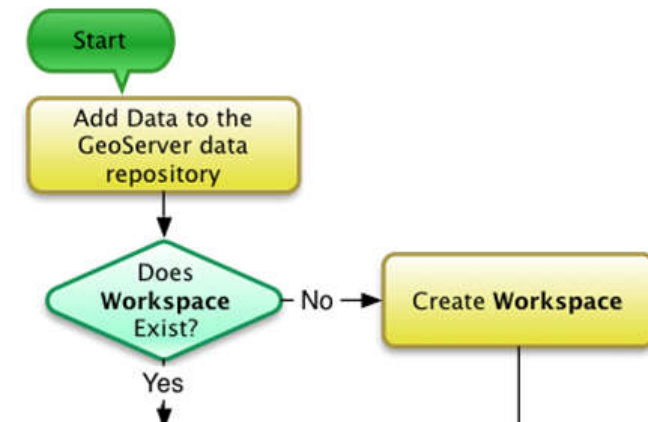
3

Name
dgt

Namespace URI
http://dgterritorio.pt/dgt
The namespace uri associated with this workspace

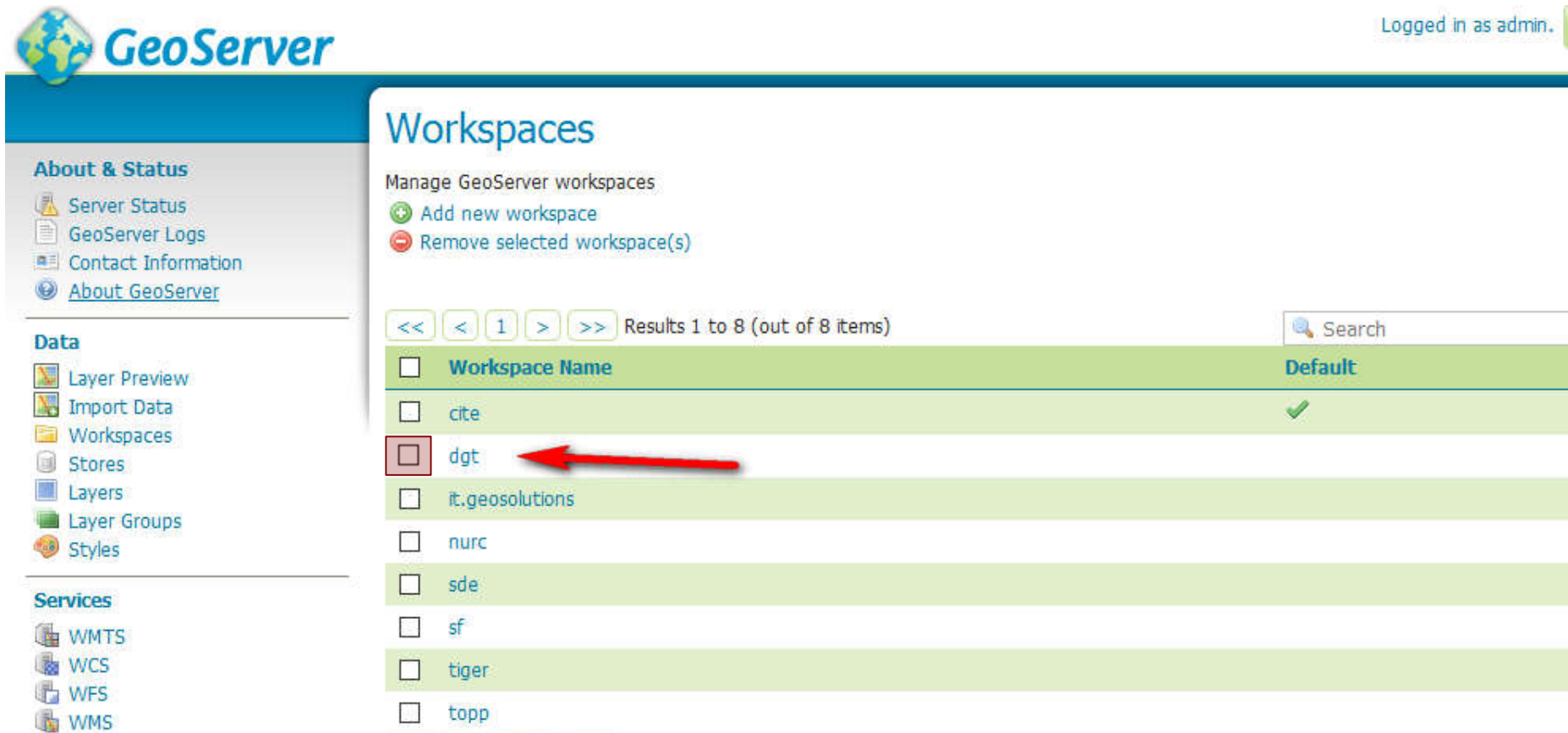
☐ Default Workspace

Submit **Cancel**



Criação de Serviços de Dados

- Workspace



The screenshot displays the GeoServer Web Console interface. The top navigation bar includes the GeoServer logo and the text "Logged in as admin.". The left sidebar contains a menu with sections: "About & Status" (Server Status, GeoServer Logs, Contact Information, About GeoServer), "Data" (Layer Preview, Import Data, Workspaces, Stores, Layers, Layer Groups, Styles), and "Services" (WMTS, WCS, WFS, WMS). The main content area is titled "Workspaces" and shows a list of existing workspaces. A red arrow points to the "dgt" workspace, which is highlighted with a red border. The "cite" workspace is marked as the default with a green checkmark.

Workspaces

Manage GeoServer workspaces

- + Add new workspace
- Remove selected workspace(s)

<< < 1 > >> Results 1 to 8 (out of 8 items) Search

<input type="checkbox"/>	Workspace Name	Default
<input type="checkbox"/>	cite	✓
<input checked="" type="checkbox"/>	dgt	
<input type="checkbox"/>	it.geosolutions	
<input type="checkbox"/>	nurc	
<input type="checkbox"/>	sde	
<input type="checkbox"/>	sf	
<input type="checkbox"/>	tiger	
<input type="checkbox"/>	topp	

Criação de Serviços de Dados

- Workspace – Edit

GeoServer

4

About & Status

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

Data

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

Services

- WCS
- WFS
- WMS

Edit Workspace

Edit existing workspace

Name

Namespace URI

The namespace uri associated with this workspace

Default Workspace

☒

Settings

Enabled

☐

Services

- ☐ WCS
- ☐ WFS
- ☐ WMS

**Metadados
Global ou local**

Criação de Serviços de Dados

- Workspace – Edit

The screenshot shows the GeoServer web interface. The top navigation bar includes the GeoServer logo, a 'Logged in as admin' status, and a 'Logout' button. The left sidebar contains a tree of navigation links: 'About & Status' (Server Status, GeoServer Logs, Contact Information, About GeoServer), 'Data' (Layer Preview, Import Data, Workspaces, Stores, Layers, Layer Groups, Styles), 'Services' (WMTS, WCS, WFS, WMS), 'Settings' (Global, Image Processing, Raster Access), 'Tile Caching' (Tile Layers, Caching Defaults, Gridsets, Disk Quota, BlobStores), and 'Security' (Settings, Authentication, Passwords, Users, Groups, Roles). The main content area is titled 'Web Map Service' and includes a 'Manage map publishing' link. The 'Workspace' section shows 'dgt'. The 'Service Metadata' section has checkboxes for 'Enable WMS' (checked) and 'Strict CITE compliance' (unchecked). Below this are text input fields for 'Maintainer' (http://www.dgterritorio.pt), 'Online resource' (http://mapas.dgterritorio.pt/geoserver/web), and 'Title' (DGT Web Map Service). An 'Abstract' text area contains 'Implementação de um serviço WMS.'. The 'Fees' field is 'sem restrições'. The 'Access Constraints' field is 'nenhum'. The 'Current Keywords' list includes 'WMS', 'INSPIRECORE', and 'infoMapAccessService [ISO]', with a 'Remove selected' button. The 'New Keyword' field contains 'infoMapAccessService'. The 'Vocabulary' field is empty, and there is an 'Add Keyword' button at the bottom.

Criação de Serviços de Dados

- Workspace – Edit

The screenshot shows a web interface for editing a workspace. On the left is a sidebar with 'Data' and 'Services' icons, and a menu with 'Demos' and 'Tools'. The main content area is divided into several sections:

- Authority URLs for the root WMS Layer**: A table with columns 'Authority Name' and 'Authority URL'. It contains one entry: 'DGT' with URL 'http://www.dgterritorio.pt'. There is a 'Remove' button and an 'Add new authority URL' button.
- Root Layer Identifiers**: A table with columns 'Authority' and 'Identifier'. It contains one entry: 'DGT' with identifier 'PT_DGT_CAOP2016'. There is a 'Remove' button and an 'Add new layer identifier' button.
- Limited SRS list**: A text box containing the values '3763, 4326, 4258, 3857'.
- ☒ Output bounding box for every supported CRS
- INSPIRE**:
 - ☒ Create INSPIRE ExtendedCapabilities element
 - Language: 'por' (selected from a dropdown)
 - Service Metadata URL: '/xml&outputSchema=http://www.iso211.org/2005/gmd'
 - Service Metadata Type: 'CSW GetRecord by ID request' (selected from a dropdown)

At the bottom are 'Submit' and 'Cancel' buttons.

Criação de Serviços de Dados

- Stores



Logged in as admin.

Stores

Manage the stores providing data to GeoServer

- Add new Store 2
- Remove selected Stores

<< < 1 > >> Results

<input type="checkbox"/>	Data Type	Workspace
<input type="checkbox"/>		nurc
<input type="checkbox"/>		nurc
<input type="checkbox"/>		nurc
<input type="checkbox"/>		tiger
<input type="checkbox"/>		sf
<input type="checkbox"/>		sf
<input type="checkbox"/>		topp
<input type="checkbox"/>		topp
<input type="checkbox"/>		nurc

<< < 1 > >> Results



About & Status

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

Data

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

Services

- WMTS
- WCS
- WFS
- WMS

Settings

- Global
- Image Processing
- Raster Access

New data source

Choose the type of data source you wish to configure

3

Vector Data Sources

- CSV - Comma delimited text file
- Directory of spatial files (shapefiles) - Takes a directory of shapefiles and exposes it as a data source
- PostGIS - PostGIS Database
- PostGIS (JNDI) - PostGIS Database (JNDI)
- Properties - Allows access to Java Property files containing Feature information
- Shapefile - ESRI(tm) Shapefiles (*.shp)
- Web Feature Server (NG) - Provides access to the Features published a Web Feature Service (when supported / allowed).

Raster Data Sources

- ArcGrid - ARC/INFO ASCII GRID Coverage Format
- GeoTIFF - Tagged Image File Format with Geographic information
- Gtopo30 - Gtopo30 Coverage Format
- ImageMosaic - Image mosaicking plugin
- WorldImage - A raster file accompanied by a spatial data file

Other Data Sources

- WMS - Cascades a remote Web Map Service

Criação de Serviços de Dados

- Stores - SHP



New Vector Data Source

Add a new vector data source

Shapefile
ESRI(tm) Shapefiles (*.shp)

Basic Store Info

Workspace *

dgt

Data Source Name *

caop

Description

☒ Enabled

Connection Parameters

Shapefile location *

file:data/example.extension [Browse...](#)

DBF charset

ISO-8859-1

☒ Create spatial index if missing/outdated

☐ Use memory mapped buffers (Disable on Windows)

☒ Cache and reuse memory maps (Requires 'Use Memory mapped buffers' to be enabled)

Shapefile location

Name	Last modified	Size
coverages/	28/jan/2017 17:15	
data/	7/fev/2017 4:49	
demo/	28/jan/2017 17:15	
gwc/	28/jan/2017 17:15	
gwc-layers/	11/fev/2017 15:47	
layergroups/	28/jan/2017 17:15	
layouts/	28/jan/2017 17:15	
legendsamples/	29/jan/2017 16:57	
logs/	28/jan/2017 17:15	
palettes/	28/jan/2017 17:15	
plugIns/	28/jan/2017 17:15	
security/	28/jan/2017 18:34	
styles/	7/fev/2017 4:49	

[Save](#) [Cancel](#)

Direção-Geral do Território

Criação de Serviços de Dados

- Stores – Raster Tiff



The screenshot shows the GeoServer web interface. On the left is a sidebar with navigation links: About & Status, Data, Services, and Settings. The main area displays the 'Add Raster Data Source' dialog. The 'Basic Store Info' section has 'Workspace' set to 'dgt' and 'Data Source Name' set to 'ortos'. The 'Connection Parameters' section has 'URL' set to 'file:data/example.extension'. A 'URL' dialog box is open, showing a file browser with a table of files. A red arrow points from the 'file:data/example.extension' URL in the main dialog to the '431_4_21_15.tif' file in the URL dialog's file list.

Add Raster Data Source

Description

GeoTIFF
Tagged Image File Format with Geographic info

Basic Store Info

Workspace *

dgt

Data Source Name *

ortos

Description

☒ Enabled

Connection Parameters

URL *

file:data/example.extension

Browse...

URL

Data directory: GeoServer_Data_Dir/ data/

Name	Last modified	Size
PorNorte-PT/	11/fev/2017 17:10	
431_4_21_15.tif	29/dez/2016 1:14	33,9M

Criação de Serviços de Dados

- Layer

New Layer

Add a new layer

You can create a new feature type by manually configuring the attribute names and types. [Create new feature type...](#)
Here is a list of resources contained in the store 'Norte'. Click on the layer you wish to configure

<< < 1 > >>

Results 1 to 1 (out of 1 items)

Search

Published	Layer name	Action
	PorNorte-PT	Publish

<< < 1 > >>

Results 1 to 1 (out of 1 items)

Criação de Serviços de Dados

- Layer

The screenshot shows the 'Edit Layer' interface with four tabs: 'Data', 'Publishing', 'Dimensions', and 'Tile Caching'. The 'Publishing' tab is active. Below the tabs is the 'Basic Resource Info' section, which includes a 'Name' field with the value 'PorNorte-PT', a 'Title' field with the value 'PorNorte-PT', and two checkboxes: 'Enabled' (checked) and 'Advertised' (checked). The 'Advertised' checkbox is highlighted with a red box. Red curved arrows point from text labels to specific elements: one from 'Keywords', 'CRS', and 'Bounding Boxes' to the 'Data' tab; another from 'Simbologia' and 'Atributos' to the 'Publishing' tab; and a third from 'Esconder o tema: capabilities' and 'preview' to the 'Advertised' checkbox.

- Keywords
- CRS
- Bounding Boxes

Simbologia
Atributos

Esconder o tema:
- capabilities
- preview

Criação de Serviços

Edit Layer

Edit layer data and publishing

dgt:PorNorte-PT

Configure the resource and publishing information for the current layer

Data

Publishing

Dimensions

Tile Caching

Edit Layer

Basic Resource Info

Name

PorNorte-PT

☒ Enabled

☒ Advertised

Title

PorNorte-PT

Abstract

Dados IHRU

Keywords

Current Keywords

PorNorte-PT

features

IHRU

Remove selected

New Keyword

Vocabulary

Add Keyword

Metadata links

No metadata links so far

Add link *Note only FGDC and TC211 metadata links show up in WMS 1.1.1 capabilities*

Data links

No data links so far

Add link



Direção-Geral do Território

Coordinate Reference Systems

Native SRS

UNKNOWN

ETRS89_Portugal_TM06...

Declared SRS

EPSG:3763

Find...

EPSG:ETRS89 / Portugal TM06...

SRS handling

Force declared

Bounding Boxes

Native Bounding Box

Min X

Min Y

Max X

Max Y

-127.096,8068700 -301.702,029313 173.081,7938279 278.541,6694684

Compute from data

Compute from SRS bounds

Lat/Lon Bounding Box

Min X

Min Y

Max X

Max Y

-8,849925542431 40,819198085690 -6,745756730782 41,819636603058

Compute from native bounds

Curved geometries control

☐ Linear geometries can contain circular arcs

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

Feature Type Details

Property	Type	Nullable	Min/Max Occurrences
the_geom	MultiPolygon	true	0/1
OID_	Integer	true	0/1
Name	String	true	0/1
FolderPath	String	true	0/1
SymbolID	Integer	true	0/1
AltMode	Integer	true	0/1
Base	Double	true	0/1
Clamped	Integer	true	0/1
Extruded	Integer	true	0/1
Snippet	String	true	0/1
PopupInfo	String	true	0/1
Shape_Leng	Double	true	0/1
Shape_Area	Double	true	0/1

Criação de Serviços de Dados

Edit Layer

Edit layer data and publishing

dgt:PorNorte-PT

Configure the resource and publishing information for the current layer

Data Publishing Dimensions Tile Caching

HTTP Settings

Caching Settings

☐ Response Cache Headers

Cache Time (seconds)

WFS Settings

Feature Settings

Per-Request Feature Limit

Maximum number of decimals

NumberMatched skip

☐ Skip the counting of the numberMatched attribute

Extra SRS codes for WFS capabilities generation

☐ Override WFS wide SRS list

WMS Settings

Layer Settings

☒ Queryable

☐ Opaque

Default Style

polygon



Additional Styles

Available Styles
burg
capitals
cite_lakes
dem
generic
giant_polygon
grass
green
line
poi

Selected Styles

Default Rendering Buffer

Default WMS Path

Authority URLs for this WMS Layer

No authority URLs so far

Add new authority URL

Layer Identifiers

No layer identifiers so far

Add new layer identifier

WMS Attribution

Attribution Text

Attribution Link

Logo URL

Logo Content Type

Logo Image Width

Logo Image Height

Auto-detect image size and type

KML Format Settings

Default Regioning Attribute

Default Regioning Method

Features Per Regioned Tile

Save


Cancel


Criação de Serviços de Dados

- Layer

Layers

Manage the layers being published by GeoServer








 Add a new layer

 Remove selected layers

<< < 1 > >>

Results 1 to 20 (out of 20 items)

Search

<input type="checkbox"/>	Type	Title	Name	Store	Enabled	Native SRS
<input type="checkbox"/>		A sample ArcGrid file	nurc:Arc_Sample	arcGridSample	✓	EPSG:4326
<input type="checkbox"/>		North America sample imagery	nurc:Img_Sample	worldImageSample	✓	EPSG:4326
<input type="checkbox"/>		Pk50095	nurc:Pk50095	img_sample2	✓	EPSG:32633
<input checked="" type="checkbox"/>		PorNorte-PT	<u>dgt:PorNorte-PT</u>	Norte	✓	EPSG:3763
<input type="checkbox"/>		Spearfish archeological sites	sf:archsites	sf	✓	EPSG:26713
<input type="checkbox"/>		Spearfish bug locations	sf:bugsites	sf	✓	EPSG:26713
<input type="checkbox"/>		World rectangle	tiger:giant_polygon	nyc	✓	EPSG:4326

Criação de Serviços de Dados

- Layer Preview

About & Status

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

Data

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

Services

- WMTS
- WCS
- WFS
- WMS

Layer Preview

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

<< < 1 > >> Results 1 to 23 (out of 23 items) Search

Type	Title	Name	Common Formats	All Formats
Image	PorNorte-PT	dgt:PorNorte-PT	OpenLayers KML GML	Select one
Image	A sample ArcGrid file	nurc:Arc_Sample		
Image	North America sample imagery	nurc:Img_Sample		
Image	Pk50095	nurc:Pk50095		
Image	mosaic	nurc:mosaic		
Image	Spearfish archeological sites	sf:archsites		

Criação de Serviços de Dados


- Serviços OGC – documento GetCapabilities


Welcome


Welcome

This GeoServer belongs to [The Ancient Geographers](#).

20 Layers	Add layers
10 Stores	Add stores
8 Workspaces	Create workspaces

 The master password for this server has not been changed from the default. It is **highly** recommended that you change it now. [Change it](#)

 The administrator password for this server has not been changed from the default. It is **highly** recommended that you change it now. [Change it](#)

 No strong cryptography available, installation of the unrestricted policy jar files is recommended

This GeoServer instance is running version **2.10.1**. For more information please contact the [administrator](#).

Service Capabilities

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
TMS
1.0.0
WMS-C
1.1.1
WMTS
1.0.0

- Recursos:

- GeoServer User Manual

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

- GeoServer Training Modules

- <http://geoserver.geo-solutions.it/edu/en/>

- INSPIRE Support

Serviços de Dados Geográficos

Danilo Furtado

Direção-Geral do Território