


	<i>Holistic Project</i>	
Version: 1.0 Date: 26/06/2015	<i>Administrator Manual</i>	State: final





ADMINISTRATOR MANUAL

INSTALLATION AND SETTING

	<i>Holistic Project</i>	
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1. Introduction

1.1. Goal

The goal of this document is to describe technical specification needed for the Holistic Software and its modules.

1.2. Structure of the document



The document is arranged in chapters where information is described in detail with figures and schemas to help the administrator to install and set the software.

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2. Description of the System

The System allows to gather and send seismic information related to the building and to send them through tablet.

Information is send to a console where operators will manage them accordingly.

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2.1. Requirements

The solution has server and software requirements in order to work properly. In any case, Internet have to be present since this software is a Web Application.

2.2. Server

1. Hardware

The following requirements are referred to the server used for test purposes so they represent a certified solution that work properly. Other server with lower characteristics could work as well. The server is needed for the development of the System A, such as the Web Application.

- CPU: Xeon W3520 @ 2.67 GHz
- RAM: 4 Gb
- HD: 200 Gb

The server can be also virtualized.

2. Software

The software architecture is based on the following components (they are all freely available online):



- Microsoft Windows Server 2003 R2 (32/64 bit) Enterprise Ed.
- Microsoft Framework .NET 4.0
- Microsoft Internet Information Server – IIS – ver. 6.0 or superior
- Phyton 2.7

2.3. Operator client

There are not particular pre-requirements. The web application is used by a Web browser and it is needed a video board of at least 1024x768 pixel resolution.

2.4. Smartphone or Tablet to use with the App

- OS: Android 4.x
- GPRS and WiFi connection to the Internet
- Photocamera
- GPS
- Reasonable memory space to store photos and save the compiled forms

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3. Database
































The DBMS used is PostGresSql (GPL license) with the PostGIS extension.



- PostGresSql ver. 9.3
- PostGIS 2.1

Please install the version indicated here if possible.

3.1. Tables

Here are the table inside the application database.

 accesso
 accesso_token
 dec_comuni
 dec_nazioni
 dec_province
 dec_regioni
 dec_sez01_posedificio
 dec_sez02_ultimo_int
 dec_sez03_materiale_princ
 dec_sez05_fenomeni_franosi
 dec_sez05_morfologia_sito
 dec_sez06_destinazione_uso
 dec_sez08_tipo_evento
 dec_sez08_tipo_interv
 dec_sez10_sist_res_ca
 dec_sez11_sist_res_c
 dec_sez14_copertura
 dec_sez19_hol
 dec_sez22_conoscenza
 dec_sez23_hol_livello
 dec_sez24_pioggia
 dec_sez24_rumore
 dec_sez24_vento
 decodifica
 decodifica_lingua
 schedo
 segnalazione_a
 segnalazione_a_s12
 segnalazione_g
 spatial_ref_sys
 storico



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3.1.1. Tables description

- **accesso:** it contains data of users and profiles.
- **accesso_token:** it is a log for information on accesses for the Token of 30 hours
- **dec_comuni:** codify values, combo and option button considering the language
- **dec_province:** codify values, combo and option button considering the language
- **dec_regioni:** codify values, combo and option button considering the language
- **dec_nazioni:** codify values, combo and option button considering the language
- **dec_sezxx:** codify values, combo and option button considering the language
- **decodifica:** codify label, titles, etc, outside the revelation form, considering the language
- **decodifica_lingua:** register available languages
- **segnalazione_a:** register alfanumerical information in the form
- **segnalazione_a_s12:** register alfanumerical information in the section 12 of the form
- **segnalazione_g:** store the geographical information (position) of the form
- **spatial_ref_sys:** manage the coordinate system
- **storico:** stores a copy of saved/modified data to log activities on data and users that manage them.

4. Mapping

The cartographic mapping is managed by the GeoServer mapping engine version 2.5 (GPL license)

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5. The Application

5.1. Development environment

The Holistic system back-office is a Web application developed with different programming languages: ASP.NET e C#.

JavaScript is used for the libraries OpenLayer, ExtJS, GeoExt, JQuery. It is used in pages for all functions that need an interface with existing libraries, for mapping, service call and data representation.

5.2. Libraries and components

The system uses different libraries and components, some proprietary and some under GPL license.

5.3. Third parts components

5.3.1. OpenSource Components

The following projects are developed in Open Source and are available online:

- OpenLayers
- ExtJS
- JQuery

5.3.2. Components that are not OpenSource

The following libraries are commercially available and used in the context of the project.

Such libraries are called with a HXW namespace:

- DataFlow.dll
- Posta.dll
- Gestione.dll



These libraries are a property of Helix S.r.l. and are used in ASP.NET pages. Such libraries have a series of functions, partially used inside the project.

The following .dll uses Microsoft e Oracle libraries:

- System.Data.OracleClient.dll
- MySql.Data.dll
- System.Data.SqlServerCe.dll

5.3.3. Libraries generated by the application

The project generates the following library: holistic.dll.

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6. Site structure

The site is organized in the root directory and the its subdirectories that host procedures and data of the following procedures.

6.1. Allegati folder

In this folder photo, documents and other data related to the form are uploaded. Attachments are renamed with a code that corresponds to the code of the form.

6.2. Bin folder



It contains libraries used and generated by the ASP.NET component of the application.

6.3. CS folder

It contains the Web pages of the web application back-office.

6.4. NewSite folder

It contains graphical files.

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7. Application Tier

The Application Tier control the system application and execute the predefined procedures. In this layer are the Web Services and the rest of the logic of the system. Web Service and the other procedures are used for sending and receiving data.



7.1. Web services

The wsholi.asmx file is the container of the service for the management of data and is composed by several functions. Functions available can be seen by a URL like this: <http://sitename/wsholi.asmx> the result is similar to the following image.

WsHoli

The following operations are supported. For a formal definition, please review the [Service Description](#).

- [CreaJson_Decodifica](#)
- [CreaJson_DecodificaStore](#)
- [FotoSalva](#)
- [GetAvvioApp](#)
- [GetCredAcc](#)
- [GetElenco](#)
- [GetElencoLingua](#)
- [LogInA](#)
- [LogOut](#)
- [SegnalazioneElimina](#)
- [SegnalazioneInterroga](#)
- [SegnalazioneSalva](#)
- [SegnalazioneStampa](#)
- [Segnalazione_AllegatiFoto_Del](#)
- [Segnalazione_AllegatiFoto_Get](#)
- [Segnalazione_Allegati_Del](#)
- [Segnalazione_Allegati_Get](#)
- [SetEditCredAccSing](#)
- [SetStatoCredAccSing](#)
- [Test](#)



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8. Localization

The database is ready for localization with different Language.

In order to modify text of pages in a language different from Italian, you have to add Database records with translations.

Different languages are available both for Web application than for the Mobile App. User can choose his preferred language.

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9. Installation process



9.1. Web Application

To install the Web Application follow these steps:

1. Verify the compliance with hardware and software requirements
2. Extract the HolisticDelivery.zip file in a folder
3. Install the PostGresSQL ver. 9.3 database management system. Download it from url: <http://www.postgresql.org/download/windows/>
4. Install the PostGis extension ver. 2.1.2
Download from url: http://postgis.net/windows_downloads

Among the extracted files from HolisticDelivery.zip there is a file named holistic.sql that have to run to build the database.

5. Install GeoServer ver. 2.5 from url: <http://geoserver.org/release/2.5.0/>
- Run “Geoserver Web Admin Page” to access to the Geoserver configuration
 - Create a Workspace named “holistic”. The namespace URI have to be the one associated to the workspace. It can be the organization DNS.

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Edit Workspace


Edit existing workspace

Name

Namespace URI





The namespace uri associated with this workspace



Default Workspace

Settings 

Enabled

Services

-  WCS
-  WFS
-  WMS
-  WPS

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Edit Vector Data Source

Edit an existing vector data source

PostGIS
PostGIS Database

Basic Store Info

Workspace *

holistic ▼

Data Source Name *

holistic

Description

holistic

Enabled

Connection Parameters

host *

localhost

port *

3307

database

holistic

schema

public

user *

postgres

passwd



.....

Namespace *

www.helix.it

Expose primary keys

- Create a Store named “holistic” for the connection to the PostGIS and to access to datasource. Connection parameters have to be the one actually used in the server

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When you finish, it should appear a record correctly inserted inside the “stores”

Stores

Manage the stores providing data to GeoServer

[+ Add new Store](#)
[- Remove selected Stores](#)

<input type="checkbox"/>	Data Type	Workspace	Store Name	Type	Enabled?
<input type="checkbox"/>		holistic	holistic	PostGIS	✓

- Creation of “segnalazioni_g” and ”segnalazioni_ga” layers starting from the availability of layers defined through the Store

New Layer

Add a new layer

Add layer from

[You can 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...](#)

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

Published	Layer name	Action
✓	segnalazione_g	Publish again
✓	segnalazione_ga	Publish again
	accesso	Publish
	accesso_token	Publish
	dec_comuni	Publish
	dec_nazioni	Publish



In the layer list have to appear the following layers:

Layers

Manage the layers being published by GeoServer

[+ Add a new resource](#)
[- Remove selected resources](#)

<input type="checkbox"/>	Type	Workspace	Store	Layer Name	Enabled?	Native SRS
<input type="checkbox"/>		holistic	holistic	segnalazione_g	✓	EPSG:4326
<input type="checkbox"/>		holistic	holistic	segnalazione_ga	✓	EPSG:4326

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6. Create a root folder in the Web folder and copy here the content of the "Portale" folder
7. In IIS create a website that point to the root folder created in the previous point with the name you want.
8. In IIS set ASP.NET ver. 4.x as default
9. Set the web.config file (that is inside the root folder of the portal). In the file are present some sections for the management of some functions of the portal. They have to be modified with the right information for the specific installation.

Email management rules:

```

-----
<Posta>
  <add key="SmtpServer" value="xxxx.xxxx.xx"/>    <add key="SmtpPort"
  value="25"/>    <add key="MittenteAssistenza" value="xxxxx@xxxxxx.xx"/>
  <add key="MittenteBuono" value="xxxxxx@xxxxxx.xx"/>    <add
  key="DestinatarioAssistenza" value="xxxxxxx@xxxxxxx.xx"/>
</Posta>
-----

```

where:

- SMTPSERVER = address of email server
- SMTPPort = port of the SMTP protocol of the email server
- MittenteAssistenza = email address that will appear as sender of the mail
- MittenteBuono = actual email address that send the email
- DestinatarioAssistenza = email address where you want to receive automatic mails of system management

Database connection:



```

-----
<connectionStrings>
  <add name="Princ" connectionString="Server=localhost;      Port=3307;
Database=holistic;User Id=xxxxxxx;Pwd=xxxxxxxxxxx"/>
</connectionStrings>
-----

```

where:

- IP is the IP address of the dataserer (if different from localhost)
- Port is the port of the dataserer (if different from 3307)

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- Database it is the database name (if different from holistic)
- User Id
- Pwd

10. Test the Web application from URL : <http://IPofthserver/cs/index.html>.

9.1.1. Logo customization

In the Newsite folder are present the logos and images used in the portal pages. It is sufficient to override such files with others of the partner taking care that: the name, format and dimension of the file have to remain the same.

9.2. APP

In order to install the mobile app you have to copy the APK file inside the smartphone or tablet and thus launched. At the first run the app will ask for the IP of the server.