Managing data for holiday farms in Sardinia with OpenCms

Antonio Cordeddu
Agriturismolchnos – Home Page
Agriturismolchnos – what is

The project has been thought out, developed and managed by my company, Coranto Informatica.

The web site Agriturismolchnos (www.agriturismoloichnos.com), is used for the collection of data related to the 800 or so holiday farms of Sardinia (Italy).

Upon registration the client can enter and modify data pertaining to their business.
Agriturismolchnos – a brief history

2004 - The project starts
2005 - The website is on-line
2007 – It was imported to OpenCms
2010 – We decided to upgrade the website
Agriturismoolchnos – upgrade

Objectives:

• Complete integration on OpenCms
• Use of features of OpenCms
• Use of OAMP Modules
Agriturismolchnos – upgrade

Features:

• Use of Lucene search engine
• Multilingual format
• Use of Alkacon OAMP Webform
• Use of Alkacon OAMP Webuser registration
Agriturismolchnos – upgrade

We need to import the external relational database MySQL to OpenCms's Content Type Custom
Data import to OpenCms

The process of data import between different systems is of the utmost importance in the IT field.

We were looking for a way of doing this without having to write any lines of code.

How is this done?
Talend Open Studio – what is

• It's an open source solution for data integration.
• It improves the efficiency of data integration and job design through a graphical development environment.
• It enables deployment with prebuilt connectors to all source and target systems.
• It supports all types of data integration, data migration and data synchronization operations.
Data import to OpenCms

1) Creation of xsd content definition in OpenCms;
2) Creation of the job on Talend Open Studio;
3) Configuration of the scheme in Talend Open Studio;
4) Data export from the source through Talend Open Studio;
5) Data import to OpenCms.
Database model
First step - Content definition xsd

```xml
<!--
  XSD file for the FarmHoliday content type
-->
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified">
  <xsd:include schemaLocation="opencms://opencms-xmlcontent.xsd"/>
  <xsd:element name="FarmHolidays" type="OpenCmsFarmHolidays"/>

  <xsd:complexType name="OpenCmsFarmHolidays">
    <xsd:sequence>
      <xsd:element name="FarmHoliday" type="OpenCmsFarmHoliday"/>
    </xsd:sequence>
  </xsd:complexType>

  <xsd:complexType name="OpenCmsFarmHoliday">
    <xsd:sequence>
      <xsd:element name="Name" type="OpenCmsString" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="ManagerName" type="OpenCmsString" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="Town" type="OpenCmsString" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="Province" type="OpenCmsString" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>
```
First step- Content definition xsd

Registering the Content Type

<resourceTypes>
  <type class="org.openoms.file.types.CmsResourceTypeXmlContent" name="province" id="3001">
    <mappings>
      <mapping suffix=".pro"/>
    </mappings>
    <param name="schema="/system/modules/com.agriturismoinfns/schemas/province.xsd"></param>
  </type>
  <type class="org.openoms.file.types.CmsResourceTypeXmlContent" name="townlist" id="3002">
    <mappings>
      <mapping suffix=".list"/>
    </mappings>
    <param name="schema="/system/modules/com.agriturismoinfns/schemas/townlist.xsd"></param>
  </type>
  <type class="org.openoms.file.types.CmsResourceTypeXmlContent" name="farmholiday" id="3003">
    <mappings>
      <mapping suffix=".holiday"/>
    </mappings>
    <param name="schema="/system/modules/com.agriturismoinfns/schemas/Farm_holiday.xsd"></param>
  </type>
</resourceTypes>
First step- Content definition xsd
Registering the Content Type

```xml
type class="org.opencms.file.types.CmsResourceTypeXmlContent" name="farmholiday" id="3003">
  <mappings>
    <mapping suffix=".holiday"/>
  </mappings>
  <param name='schema'>/system/modules/com.agriturismoichnos/schemas/farm_holiday.xsd</param>
</type>
```
Second step - creation of the job on TOS
Second step - creation of the job on TOS – MySQL input configuration
Second step - creation of the job on TOS - XML output
Third step – configuration of the scheme in TOS
Third step – configuration of the scheme in TOS

<table>
<thead>
<tr>
<th>XML Tree</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FarmHolidays</td>
<td></td>
</tr>
<tr>
<td>@xmlns:xsi</td>
<td></td>
</tr>
<tr>
<td>@xsi:noNamespaceSchemaLocation</td>
<td><a href="http://www.w3.org/2001/XMLSchema-instance">http://www.w3.org/2001/XMLSchema-instance</a></td>
</tr>
<tr>
<td>FarmHoliday</td>
<td></td>
</tr>
<tr>
<td>@language</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>R</td>
</tr>
<tr>
<td>ManagerName</td>
<td></td>
</tr>
<tr>
<td>Town</td>
<td></td>
</tr>
<tr>
<td>Province</td>
<td></td>
</tr>
<tr>
<td>Place</td>
<td></td>
</tr>
<tr>
<td>PathPhoto</td>
<td></td>
</tr>
<tr>
<td>link</td>
<td></td>
</tr>
<tr>
<td>@type</td>
<td>WEAK</td>
</tr>
<tr>
<td>target</td>
<td></td>
</tr>
<tr>
<td>uuid</td>
<td>aaaaaaaaa-bbbb-cccc-dddd-eeeeeeeeee</td>
</tr>
</tbody>
</table>
Third step – configuration of the scheme in TOS

![Link target table]

<table>
<thead>
<tr>
<th>XML Tree</th>
<th>Related Column</th>
<th>Node Status</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FarmHolidays</td>
<td></td>
<td></td>
<td><a href="http://www.w">http://www.w</a>...</td>
</tr>
<tr>
<td>@xmlns:xsi</td>
<td></td>
<td>-</td>
<td>opencms://sys...</td>
</tr>
<tr>
<td>@xsi:noNamespaceSchemaLocation</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FarmHoliday</td>
<td>loop element</td>
<td></td>
<td>it</td>
</tr>
<tr>
<td>@language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>NomeAzienda</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ManagerName</td>
<td>NomeGestore</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Town</td>
<td>NomeComune</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Province</td>
<td>NomeProvincia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Third step – configuration of the scheme in TOS
Third step – configuration of the scheme in TOS

![Configuration Diagram]

- **Basic settings**
  - Split output in several files
  - Create directory if it does not exist
  - Create empty element if needed
  - Create associated XSD file
  - Advanced separator (for numbers)
- **Dynamic settings**
  - Split output in several files
  - Rows in each output file
- **View**
  - Encoding
  - Don't generate empty file
  - !StatCatcher Statistics

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**Advanced settings**

- Fast but memory-consuming (Dom+J)
- UTF-8
Fourth step - data export from the source through TOS
Fourth step - data export from the source through TOS

```xml
<?xml version="1.0" encoding="UTF-8"?>
<FarmHolidays xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="opencms://system/modules/com.agriturismoichnos,
  <FarmHoliday language="en">
    <Name>Su Zinnibiri</Name>
    <ManagerName>CONCAS Anna</ManagerName>
    <Town>Arbus</Town>
    <Province>Medio Campidano</Province>
    <Place>Loc. Campu Prama</Place>
    <PathPhoto>
      <link type="WEAK">
        <target>/sites/default/agriturismoIchnos/img/default.jpg</target>
        <uuid>aaaaaaaa-bbbb-cccc-dddd-eeeeeeeeee</uuid>
      </link>
    </PathPhoto>
    <OpeningPeriod>Annuale</OpeningPeriod>
```
Fifth step - data import to OpenCms
Fifth step - data import to OpenCms

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Baita del Corbezzolo</td>
</tr>
<tr>
<td>Manager Name</td>
<td>Biancu Agostino G.</td>
</tr>
<tr>
<td>Town</td>
<td>Arbus</td>
</tr>
<tr>
<td>Province</td>
<td>Medio Campidano</td>
</tr>
<tr>
<td>Place</td>
<td>Loc. Bau Prumu - Cuccuru Cauili</td>
</tr>
<tr>
<td>PathPhoto</td>
<td>/agriturismoIchnos/img/default.jpg</td>
</tr>
<tr>
<td>Opening Period</td>
<td>Annuale, Invernale, Prima/verile, Estiva, Autunnale</td>
</tr>
</tbody>
</table>
Final remarks – Search Lucene

Field configuration overview: farm_holidays_field

Field configuration actions
- Edit field configuration
- Add new field
- Delete field configuration

Field configuration
- Name: farm_holidays_field_configuration
- Description: The field configuration for farm holidays - simple search

Fields
Fields (9)

<table>
<thead>
<tr>
<th>E</th>
<th>M</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>FarmPhone</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EdName</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ManagerName</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FarmPhone</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fleece</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProvName</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Showcase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Town</td>
</tr>
</tbody>
</table>
Final remarks – Search Lucene

La Ricerca effettuata ha individuato 36 Aziende Agrituristiche con Alghero

Cuccureddu
di Cuccureddu Giovanni P.
Loc. Guardia Grande, 84 - Alghero - Sassari
Tel. 079-919111

Baida Santos
di Piras Maddalena
Reg. Gutierrez, Podere 3 - Alghero - Sassari
Tel. 079-999053

Serraona
di Liperi Leonardo
Loc. Guardia Grande - Podere 56 - Alghero - Sassari
Tel. 079-919141

Naturabio
di Boci Enrico
Reg. Guardia Grande - Alghero - Sassari
Tel. 079-919204

>>> Dettaglio
We hope to see you in Sardinia, known above all for its beautiful sea.
... but there's much more to Sardinia than just sea ...
Thank you