



4-Evoltree ISS Information System Local Sharing interface (Sharing Data)

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1. Introduction

The ISS sharing interface is a local web interface that allows the ISS local administrators to configure data sharing for the Evoltree Network.

The main goal of this interface is to create archives of the datasets, to send them on the central server, and to maintain them updated regarding the update of local files and databases.

2. Login to the ISS Sharing Interfaces

To use the ISS sharing interface functionalities the first step is to log-in.

To do it you just have to fill in you username and password.

Username and password are the same as used on the geonetwork interface.

ISS Sharing tool

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Username	<input type="text" value="username"/>
Password	<input type="password" value="●●●●●●"/>
Send :	<input type="button" value=""/>



3. Main Page

According to your profile, the main page, and the header menu will show you the available actions you can do.

These two parts (Main page content and header) present the links pointing to the main functionalities of the interface :

Parameters : A restricted area for the local administrator to manage the central interfaces parameters.

Resources : This is the main functionality to configure the data sharing.

Management : A restricted area for the local administrator to manage the web interface operations.



Logout : Unlog the user and quit the user session.

ISS Sharing tool



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Main menu

[Parameters](#): Database parameters, SSH connexion parameters, SMTP parameters, and others

[Resources](#): To list and manage the resources sharing

[Management](#): Force operation like updating the sharing resources on the central server and others



4. Data Sharing

Sharing data is the main functionality of the interface.

The goal is to provide parameters about the datasets to the interface in order to access the data and make a sharing copy updated and accessible for the Evoltree partners.

You can access to the data sharing clicking on the link “Resources”.

Doing so, the list of the current resources configuration is displayed.

It is possible to find a resource.

To create a new sharing :

For map

For database

For file and directory

And to manage the existing share, or update,

or delete them.



Resources List

Resource

Send resource parameters :

Identifiant	Type	Integrated	Integrity Check	Create Date	Update Date	Check Date	State	Owner	Version	Operations
Ventoux-M-106		1	1900-01-01T00:00:00	2008-06-03T08:34:25	2008-04-25T15:08:29	2008-08-05T15:24:41	1	fbachraty	1	
Ventoux-M-103		1	1900-01-01T00:00:00	2008-06-02T08:54:15	2008-04-25T15:08:57	2008-08-05T15:24:41	1	fbachraty	7	
Ventoux-M-102		1	1900-01-01T00:00:00	2008-06-02T08:52:57	2008-12-18T10:04:55	2008-08-05T15:24:41	1	fbachraty	5	
Ventoux-M-104		1	1900-01-01T00:00:00	2008-06-03T08:29:57	2008-12-18T10:04:54	2008-08-05T15:24:41	1	fbachraty	1	
Ventoux-F-107		0	1900-01-01T00:00:00	2008-06-04T11:53:27	2008-06-02T08:30:21	2008-08-05T15:24:41	1	fbachraty	1	



4.1. Find a Resource in the Sharing Resources List

In the Resource list it is not possible to see what are the datasets already included in the sharing list. However, this information is very useful to avoid sharing the same data both, or to find the right configuration, or to update sharing parameters for example.

To easily find if a data is already shared you can make a search on the top of the page.

The keyword can be the name of a file, the name of a directory, the name of a map, or the name of a database table.



Resources List

Resource
 Send resource parameters :



Identifiant	Type	Integrated	Integrity Check	Create Date	Update Date	Check Date	State	Owner	Version	Operations
Ventoux-f-1		0	1900-01-01T00:00:00	2008-06-02T08:39:31	2008-05-16T10:54:05	2008-08-05T15:24:41	1	admin	2	



Resources List

Resource
 Send resource parameters :



Identifiant	Type	Integrated	Integrity Check	Create Date	Update Date	Check Date	State	Owner	Version	Operations
Ventoux-M-103		1	1900-01-01T00:00:00	2008-06-02T08:54:15	2008-04-25T15:08:57	2008-08-05T15:24:41	1	fbachraty	7	



Resources List

Resource
 Send resource parameters :



Identifiant	Type	Integrated	Integrity Check	Create Date	Update Date	Check Date	State	Owner	Version	Operations
Ventoux-D-101		1	1900-01-01T00:00:00	2008-06-02T08:41:42	1970-01-01T01:33:28	2008-08-05T15:24:41	1	bachratyf	18	



4.2. File or Directory Sharing

The most common share will concern files and directories because this is the most simple way to share data, and all can be included in a single archive (complete database dump, maps, excel files, pdf files, and all other kind of files)

To create a file or directory is simple

You just have to fill in the path of the file or the path of the directory

Then click a first time on the send resource parameters button.

This will check if the path is correct and if the file is accessible.

The status result is displayed at the bottom of the page.

Once all is ok, you can check the save resource parameters option and click on send resource parameters.

This will save the resource parameters and start the sharing of the file or directory resources.

Create or Update a resource sharing

Files

Path of the resource: /var/www/SSH/DemoISS/Data/Files

Owner name: bachratyf

Integrated resource:

Save resource parameters:

Send resource parameters:

Files informations

Name of the File or Directory : Files

Size of the File or Directory : 88196 octets

File or Directory Available : True

Note :

The path of the resource must be readable for all in order that the web interface can read data.

Don't share directory or file with accent or space on the name.

Avoid to share directory with many subdirectories.

Avoid to share directory including archive file (.zip,.rar,.tar,...)



4.3. Database Sharing

The database sharing tool allows you to share the result of a SQL query to make a dump of a part of your ISS internal database.

If you want to share a complete database it will be better to make a real database dump and to share it as a file share.

To make a database share you have to specify the information necessary for the interface to connect to the database, including the type of database.

You also have to enter a SQL query that will be executed to get the data you want to share.

You have the possibility to check the integration parameters if you want that partners can make their own query on the SQL result *.

Then click a first time on the send resource parameters button.

This will check if all parameters are correct.

Database Available: True

identif	broaderidentif	labelen	definitionen	labelfr	definitionfr	createdate	changedate
120008	120000	Fortnightly	fortnightly	Bi-hebdomadaire	bi-hebdomadaire	2008-07-08T09:00:00	2008-07-08T09:00:00
120010	120000	Biannually	biannually	Bi-annuel	bi-annuel	2008-07-08T09:00:00	2008-07-08T09:00:00
120013	120000	Irregular	irregular	irrégulier	irrégulier	2008-07-08T09:00:00	2008-07-08T09:00:00
119000		Image type	type of picture	Type d'image	type de photo	2008-04-01T09:00:00	2008-04-01T09:00:00
100001	100000	Minimum	minimum value (m)	Minimum	valeur minimum (m)	2008-04-01T09:00:00	2008-04-01T09:00:00
100002	100000	Maximum	maximum value (m)	Maximum	valeur maximum (m)	2008-04-01T09:00:00	2008-04-01T09:00:00
101001	101000	No management	no forest management	Aucune gestion	absence de gestion forestière	2008-04-01T09:00:00	2008-04-01T09:00:00
101002	101000	Silviculture	forest silviculture management	Sylviculture	pratique d'une sylviculture	2008-04-01T09:00:00	2008-04-01T09:00:00
101003	101000	Ecological engineering	ecological and sustainable forest management	Ingénierie écologique	gestion forestière écologique et durable	2008-04-01T09:00:00	2008-04-01T09:00:00

The status result is displayed at the bottom of the page. And if the query SQL is correct you will see the first ten results of it.

If all is ok, you can check the save resource parameters option and click on send resource parameters.

This will save the resource parameters and start the sharing of the SQL result resources.

Note :

The export format is the 'csv' format where the field separator is ',' so if your dataset include some ',' on the field that can be an issue.



SQL query induce to use “BaseName/TableName” and 'Value' as example :

```
select * from "EspeciesCountry" where "Country" = 'An'
```

Avoid to make dump with more than 65 000 records.

Avoid to make dump with size larger than 10 Mo.

***Database integration functionality is deactivated for security.**

4.4. Map Sharing

The Map sharing tool allows you to share your geotif raster and your shapefile vector. Other map formats can be shared using the file sharing functionality.

a) Vector

To share a vector you need to click on the button Vector.

You also have to specify the EPSC projection code used for the vector map. EPSG:4326 is the one for latitude/longitude.

The next step is to fill in the bounding box of the map.

Finally you have to specify the path to the different files (.shp,.shx,.dbf)

You have the possibility to check the integration parameters if you want that partners can see the map on the central Geoserver (Note that Geoserver doesn't have privilege access control).

Then click a first time on the send resource parameters button.

This will check if all parameters are correct.

The status result is displayed at the bottom of the page.

If all is correct, you can check the save resource parameters option and click on send resource parameters.

This will save the resource parameters and start the sharing of the map result resources.

Create or Update a resource sharing

Maps

Kind of the map: Raster Vector

SRS name of the map:

Bounding box:

Raster Files

TIF path for the map:

TFW path for the map:

Vector Files

SHP path for the map:

SHX path for the map:

DBF path for the map:

Owner name:

Integrated resource:

Save resource parameters:

Send resource parameters:

Maps informations

Maps files available : True

Integrable : True



b) Raster

To share a raster you need to check the button Raster.

You also have to specify the EPSC projection code used for the vector map. EPSG:4326 is the one for latitude/longitude.

The next step is to fill in the bounding box of the map.

Finally you have to specify the path to the different files (.tif,.tfw)

You have the possibility to check the integration parameters if you want that partners can see the maps on the central Geoserver (Note that Geoserver doesn't have privilege access control).

Then click a first time on the send resource parameters button.

This will check if all parameters are correct.

The status result is displayed at the bottom of the page.

If all is ok you can check the save resource parameters option and click on send resource parameters.

This will save the resource parameters and start the sharing of the map resources.

Kind of the map Raster Vector

SRS name of the map

Bounding box

Raster Files

TIF path for the map

TFW path for the map

Vector Files

SHP path for the map

SHX path for the map

DBF path for the map

Owner name

Integrated resource

Save resource parameters

Send resource parameters :

Maps informations

Maps files available : True

Integrable : True

Note :

Bad bounding box cause map integration failure.



4.5. Update Data Sharing Parameters

The same forms are used to create and update the sharing resources so refer to the sharing resource creation to get more detail about the update of sharing resources parameters.

The data integration parameter is definitive, you can update it after data sharing creation. If necessary you have to delete the sharing and to create a new one.

4.6. Delete Data Sharing

When you delete a data sharing the parameters are deleted and the related archive is dropped of the local file system.

The copy present on the central server will be deleted as soon as the first batch execution following the deletion of the sharing.

Note that you can force the deletion of the central copy using the “Delete old resource” functionality on the management part. Refer to management part to get more details.

4.7. Link metadata and datasharing

After the save of the sharing parameters a line will be added on the ressource list just remember the identifiant of the data sharing.

Ventoux-M-140		1	1900-01-01T00:00:00	2008-09-10T15:58:10
---------------	--	---	---------------------	---------------------

Finally you have to make the link between the data sharing and the metadata

To do that just edit the metadata describing the data and complete the online ressource part.

OnLine resource	
URL	<input type="text" value="evoltree.eu/.../index.php?part=sharingresources&uid=ISS-T-100"/>
Protocol <input type="checkbox"/>	<input type="text" value="Web address (URL)"/>
Description <input type="checkbox"/>	<input type="text" value="Description"/>

You just have to set the description part

and to complete the URL adresse that is pointing to the ISS central sharing web interface

The adresse on the template look like this one :

<http://www.evoltree.eu/CentralTool/index.php?part=sharingresources&uid=>

You just have to complete it with the datasharing identifiant

<http://www.evoltree.eu/CentralTool/index.php?part=sharingresources&uid=Ventoux-M-140>

You can create the data sharing before or after the metadata creation.

The data sharing are updates at least ones a week so the sharing will be effectives later the next monday.

5. Parameters

This part describes all the parameters used by the ISS sharing interface.

Including :

The ISS name

Connexion parameters for the database where resource sharing parameters are stored.

SSH connexion parameters used to send archive on the central server.

That can include ssh public and private key path

SMTP parameters for making e-mail report to the administrator when errors occur.

Local work path is the base directory where the interface will store the archives.

Distant path is the path where the ssh connexion will copy the archive.

Interface central url is used to send the alert message to the central site, when new data sharing is created for exemple.

User table name is the name of the table where user information is stored.



Parameters

ISS Name	<input type="text" value="Ventoux"/>
Database Type	<input type="text" value="pgsql"/>
Database DNS or IP	<input type="text" value="127.0.0.1"/>
Database Port	<input type="text" value="5432"/>
Database Name	<input type="text" value="evoltreeisswebinterface"/>
Database Username	<input type="text" value="fbachraty"/>
Database Password	<input type="password" value="●●●●●●"/>
SSH DNS or IP	<input type="text" value="127.0.0.1"/>
SSH Username	<input type="text" value="fbachraty"/>
SSH Password	<input type="password" value="●●●●●●"/>
SSH Port	<input type="text" value="22"/>
SSH PublicKey	<input type="text"/>
SSH PrivateKey	<input type="text"/>
SMTP From	<input type="text" value="Fabien Bachraty:Fabien.Bachraty@avignon.inra.fr"/>
SMTP Host	<input type="text" value="ssl://smtp.avignon.inra.fr"/>
SMTP Port	<input type="text" value="465"/>
SMTP User	<input type="text" value="fbachraty"/>
SMTP Password	<input type="password" value="●●●●●●"/>
Local Work Path	<input type="text" value="/var/www/SSH/DemoISS"/>
Distant Work Path	<input type="text" value="/var/www/SSH/DemoCentral"/>
Interface Central URL	<input type="text" value="http://127.0.0.1/CentralTool/index.php"/>
User Table Name	<input type="text" value="users"/>
Change ISS parameters :	<input type="button" value=""/>

6. Management

This part concerns the functionalities to force the system to update the local or the central server archive.

ISS Sharing tool



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Management

[Update archives resources](#): Update the archives if the originals sources are updated

[Delete old resources](#): Delete the archives present on the central server but still not existing in the ISS

[Update sharing resources](#): Update the archive on the central server

[Update sharing file if updated](#): Update the local resources archives and update the central server

[Check central file integrity](#): Check the synchronisation between local and distant archives

[Clear temporary files](#): Force the delete of the temporary files used to create and update archives

[Update user table](#): Force the synchronisation of the user information from the central site



6.1. Update Archives Resources

Clicking on this link will make the sharing interface try to update all the local archives if the original sources (files, maps, databases) were updated.

At the end of the operations the result status will be displayed at the bottom of the page.

6.2. Delete Old Resources

This functionality is used to force the deletion on the central server of the archives already deleted on the local ISS, when a data sharing was deleted for exemple.

At the end of the operations the result status will be displayed at the bottom of the page.

6.3. Update Sharing Resources

This operation will try to synchronise the archives source present on the local ISS with the archives present on the central server.

At the end of the operations the result status will be displayed at the bottom of the page.

6.4. Check Central File Integrity

This is a simple test to check if the local system of archives and the central one are correctly synchronised. (Synchronisation test is done on archives size and not on date because the ISS server

and the central server will not necessarily have the same time)

At the end of the operations the result status will be displayed at the bottom of the page.

6.5. Clear Temporary Files

This is a simple functionality to force the cleaning of the temporary directory which is used to create archives.

At the end of the operations the result status will be displayed at the bottom of the page.

6.6. Update User Table

This operation will download the latests release of user's information on the central server and will update the local user table witch is used for the local login

7. Batch and Alert Management

The batch mechanism is automatically launched once a week or once a day in the ISS sharing interface side to update the resource archives looking at the original files and updated data. Then, this tool sends the updated archives on the central server. Similarly, once a day or once a week a batch procedure is automatically launched on the central server side to check the index, check the keyword on metadata, integrate and update the resources. This is a completely planned check.

7.1. Alert

The goal of the alert method is the same but this method is synchronised. When a data sharing parameter set changes on an ISS, the archive is automatically updated and send to the central server. And then a signal is sent to the central interface to check index, and data integration and so on.

7.2. Conclusion

The alert mechanism is dynamic and avoids for the user to wait from batch execution to see his data sharing. The batch is a security to make a complete planned check.

7.3. E-Mail Reports

When you use the management interface on the central sharing interface you get the status result at the bottom of the web page, but when a batch or an alert is executed this is not possible. However it is very useful to know if an error has occured during data integration for example. This is why batch and alert methods generate emails to advertise the central administrator.

The batch procedure creates a complete status e-mail indicating the detailed result of each operations done and failed. The alert generates e-mail only if errors occurs to avoid too much e-mail generating.

8. Logout

This link permits to unlog the user and quit the user session.

It is better to unlog before closing your web browser because otherwise your connexion will stay alive as long as your session stays on the server (depending on the server configuration). The risk is that anybody using your web history can use your account.

9. Known Issues

a) Sharing Resource and Size/Authorisations

When a new sharing is created, time is necessary :

- To create the archive
- To send the archive to the central server
- To index the new archive in the central server system
- To integrate the new resource on the central server if necessary

The total time is directly related to the size of the resource and also to the quality of the ISS internet connexion.

In addition of the necessary time, connexion can be lost and cause an error in the archive present on the central server. In that case, the archive will automatically be sent during the next batch execution.

But if a resource is still in error after two batch executions you may have to check if enough place is still available on the central server. And if the resource is too big, you have to delete it from the ISS sharing interface and consider another mechanism to transfer and share the archive.

If necessary have a look to the directory and file's authorisation.

An advice is to avoid to share dataset (archive) larger than 50Mo for internet transfert.

b) File and Directory Resources

There is an issue in the package that manage the archives.

This issue induce a bad management of archive including many subdirectories or archive including other archives. That induce also a bad management of archive including accentuated path.

c) Database Resources

The database export permits easy sharing of the result of a SQL query. This is a dump of a SQL query that is stored in 'csv' format using ',' separator between fields.

Error can occur if fields contains ','

d) Map Integration

Geoserver is a map server that is totally separated from the Geonetwork tool.



The access to integrated map in Geoserver is free for all internet user, and there is no way to control map access on Geoserver.

So be careful when you choose to integrate a map on the central server, since everyone will be allowed to see and consult it on Geoserver, independently of metadata authorisations.

Note : This is for map integration on Geoserver, no problem for common map sharing and database integration.

e) Integration Consideration

Data integration should be restricted to some datasets and maps that are really interesting to be in direct access and consultation. This can only be possible for a small set of resources because it induces an important cost on the central server to update the data integrated (maps and databases).

f) Group and Data Integration

Note that for data security a data will be shared only if the ISS metadata owner and the resource owner are members of the same ISS.