# **TUTORIAL METADATA PUBLISHING TOOL**

# This tutorial is created by WP10 EHRI project

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# **Chapter 1: Introduction Metadata Publishing Tool**

The Metadata Publishing Tool (MPT) is developed by Data Archiving and Networked Services (*DANS*-KNAW) under the auspices of the European Holocaust Research Infrastructure (EHRI). The MPT is developed to help archives, libraries, museums and memorials publish their EAD files in a sustainable way. Not a one-time export or data dump, but a tool to update collections on a regular basis (how regular can be determined by the institution).

The desktop application is based on the <u>ResourceSync Framework Specification</u> and facilitates synchronisation of resources, in EHRI's case the standard EAD files. The tool helps to detect new, edited or deleted EAD files and these will be send to EHRI in an automated way.

The tool has to be installed at the start by a system administrator or knowledgeable IT-person. You can use the MPT Installation Manual <a href="http://rspub-gui.readthedocs.io/en/latest/">http://rspub-gui.readthedocs.io/en/latest/</a> to guide you through all the steps. The code of the application can be found here <a href="https://github.com/EHRI/rspub-gui">https://github.com/EHRI/rspub-gui</a>.

**Important:** To make the process work the institution will need a **webserver** to host the EAD files.

After the installation, content specialists as archivists, librarians, information specialists or curators can use the tool to select the archives/collections that the institution wants to share with EHRI. And in case of deleted archives, what it does not want to share with EHRI anymore. When this selection has been done, these archives can be synchronized with EHRI.

This tutorial will explain how to work with the tool. The tutorial is divided into four chapters. The first chapter is an introductory chapter where we will globally introduce the tool and the EHRI project. The second chapter will detail how you can prepare your institution to use the MPT-tool; what steps you need to accomplish before using the tool, etc. The third chapter will discuss and detail step by step how to do a simple selection. The fourth and final chapter will focalize on the advanced selection.

Of course, if you have any questions regarding this tutorial and/or the MPT-tool, you can contact Francesco.gelati@arch.be.

# **Introducing EHRI**

The mission of the European Holocaust Research Infrastructure (EHRI) is to support the Holocaust research community by building a digital infrastructure and facilitating human networks. EHRI provides online access to information about dispersed sources relating to the Holocaust through its online portal, and tools and methods that enable researchers and archivists to collaboratively work with such sources. In order to collect information on dispersed archives across Europe -and the rest of the world- that hold Holocaust related collections, the Encoded Archival Description (EAD) is used as the format for information dissemination.

The MPT will be used for keeping the archival collections on EHRI up to date and functions as a transportation and synchronization mechanism.

# **Introduction to Metadata Publishing Tool (MPT)**

### ResourceSync

The ResourceSync Framework Specification is developed by the <u>Open Archives Initiative</u> and it describes a synchronization framework. This is developed to create a facility between individual institutions and larger aggregators as EHRI. EHRI has developed a tool that helps this process so that collections from institutions can be send to EHRI in a sustainable way. This tool can be used outside the context of EHRI, by any organisation that needs a tool for publishing a selection of their source files for the purpose of harvesting.

The ResourceSync Framework describes the communication between the Source (EAD-file on Institutions Webserver) and the Destination (EHRI) and is aimed at synchronizing one or more EAD files. To communicate, it utilizes http, an extension on the sitemap protocol, and a xml-based format for expressing metadata, relevant for synchronization.

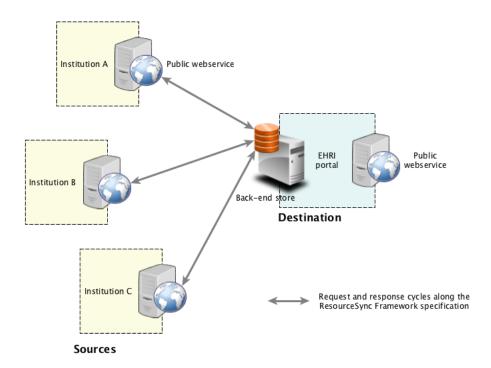


Figure 1 External logistics. The ResourceSync Framework Specification at work. Institutions expose Collections and Sitemaps metadata on their web servers. The central hub (in this case the EHRI Portal) is actively collecting resources and keeping them in sync with the aid of published sitemaps.

The ResourceSync Framework Specification helps to solve the **external logistics** when it comes to synchronizing resources between a central Destination (in our case EHRI) and various Sources (Institutions).

### From internal archival/collections descriptions to synchronizing EAD files to EHRI

After the installation and configuration of the MPT has been done by a technically skilled person, it is easily managed by archivists and other content-savvy users.

The precondition for using the MPT tool is that the institution can export valid EAD-files from its internal collection management systems. If this is not the case, you could use the EAD Conversion Tool (ECT) that EHRI developed to map archives and collections to EAD. Please contact the EHRI data integration manager, <a href="mailto:Francesco.Gelati@arch.be">Francesco.Gelati@arch.be</a>, for more information.

### The MPT helps the user to:

- Collect and import EAD-files from various places within the organization
- Select relevant EAD files for EHRI

- Create ResourceSync sitemap metadata on relevant EAD files
- Export EAD files and sitemaps to the web server
- Verify that the URL's on the institutions webserver are correct
- EAD files are synchronized between institution and EHRI

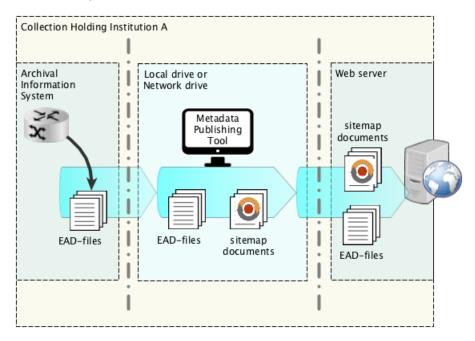


Figure 2 Internal logistics. Metadata Publishing Tool at work.

Figure 3 portrays the **internal logistics within the institution** and the role of the MPT. The situation described may be exemplary for Collection Holding Institutions (CHI's) within the EHRI infrastructure, although different situations may equally be applicable.

Before using the MPT, the institution has to prepare by exporting the relevant Holocaust EAD files from its internal collection management systems that the institution wants to share with EHRI. The EHRI portal only holds Holocaust sources, but many institutions hold bigger collections ranging over different time periods.

In this manual, the simple selection and advanced selection using the MPT are described respectively in in chapter 3 and in chapter 4. The explanations that are applicable in both cases are in both chapters. Further information can be found in the appendix, the File menu, the Preferences menu and the overall appearance of the menu.

# Chapter 2: Preparation of the EAD-files and configuration of the MPT

# **Preparation of the EAD-files**

Before you can work with the MPT, you need to export the metadata you wish to publish. For EHRI, this means all the descriptions of Holocaust relevant archives. This metadata (relevant Holocaust EAD-files) is exported by your institution from its internal collection management systems. This is because the MPT does not have access to collection management system. In this way only the relevant Holocaust EAD-files (i.e. collection descriptions) that are exported in the preparation phase, are published with the MPT and will eventually appear in the EHRI-portal. Once you have created the exports to be used by the MPT, they should be stored on a server/computer in a folder/subfolder, regrouping containing thus the prepared EAD-files.

As this step is concluded, you will be faced with the two possible forms of selection the MPT offers. The first possibility is to do a simple selection. This means that the MPT will incorporate all your prepared files without exception. This is the case for institutions which have only Holocaust-related materials or institutions that are using the MPT for the first time. The second one is the advanced selection. An institution can choose to share only a part of their prepared EAD-files (i.e. for privacy reasons, etc.). If this is the case, the tool permits the institution to only import a fraction of EAD-files it wants to share in the EHRI-portal. The advanced selection is also applicable when institutions want to add, change or remove prepared EAD-files into the EHRI-portal. In this case, the MPT will only adapt those files that need changing by means of the advanced selection.

# Two types of selection by the MPT possible:

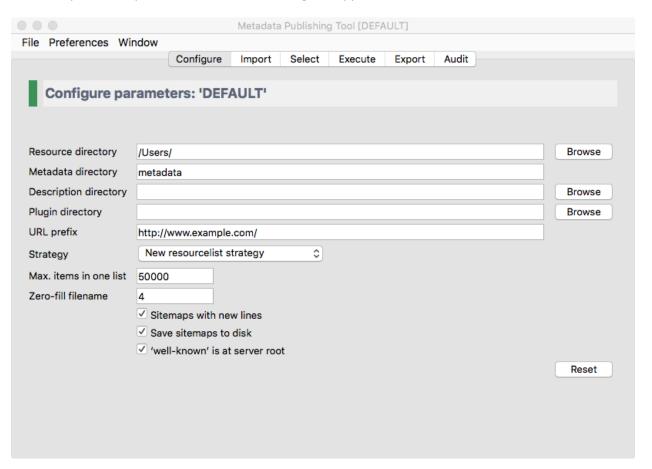
- 1. **Simple selection:** some institutions have holdings and fonds only applicable to the Holocaust and Jewish life. This means that all their EAD-files can be imported by the MPT.
- 2. **Advanced selection**: institutions which hold archival materials about various historical periods or themes, may after preparation phase, create a folder to only store the EAD-files needed for the MPT. The advanced selection permits the institutions to only select within the folderthe changed, added or deleted EAD files.

This distinction will prove to be important when using the MPT and when the synchronizing will take place. When you will come to the "selection of resources" – part, you will need to choose between a simple and an advanced selection.

# **Configuration**

Before we can choose between simple and advanced selection, we need to configure the MPT so that we can denominate where the import will be stored and which strategy will be used to import the EAD-files.

Once you have opened the tool, the following box appears:

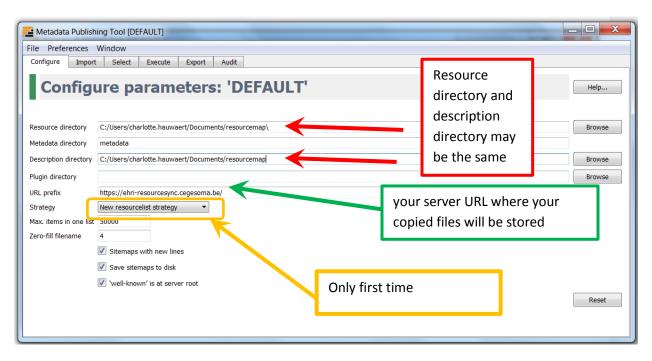


The parameters on the configuration page constitute all variables needed so that the MPT can import your (prepared) EAD-files. Once you have filled out the variables correctly, they will be saved automatically. You can also save your different configuration, for example if you do a simple selection the first time, and an advanced one the second time. You can check the appendix to look up the File menu on how to save, load and delete your previous configuration.

The following steps will be split up between the simple selection and the advanced selection. We took an institution, CegeSoma, as a study case to detail the working of the MPT. We will first start with the simple selection and then detail the advanced selection. Both chapters can be used separately. The context that is the same for both types of selections is repeated in both chapters.

# **Chapter 3: Simple selection - all the Steps**

Let's start with the simple selection. Open the MPT and an empty configuration-window will open immediately. To help you configure your selection, we have used the example of CegeSoma as you can see in the following figure: all the parameters have been filled out. We will take you step by step through them.



# **Configuration**

When you proceed to the simple selection, you have to configure the MPT first. As you can see, some parameters need to be chosen. The first thing you should choose, is the Resource directory.

### **Resource directory**

The *resource directory* should be an existing directory on the (local or network) filesystem. In the preparation phase, your institution has prepared an export of EAD-files from the collection management system that can be shared with EHRI in a specific folder (for more details, go to "Select Resources"). The resource directory should be the folder where the institute stores the prepared files (the export of EAD-files from the collection management system). For institutions with more sources regarding different historical periods, they will have prepared only the files regarding the Holocaust that can be shared with EHRI. The files should be stored in a folder on the institution's computer or server, where it then can be used by the MPT that publishes those files onto a webserver. This webserver will have a specific website address where you'll find the EAD-files that can be synchronized with (or harvested by) EHRI.

If you have used the ECT-tool prior to the MPT to convert your files into EAD-files, the ECT-tool will have given the conversion date as the name for your resource directory folder. When using the MPT and filling in the resource directory, you need to browse for this dated directory.

If you want to know more about the technicalities regarding the URL and others, you are welcome to check it out on github (https://github.com/EHRI/rspub-gui/releases).

Tip: If your files are not yet converted into an EAD-format, you can use the ECT-tool to convert your files into EAD files before you use the MPT.

### **Metadata directory**

The metadata directory is a storage space for the capability list that will be created when you execute the MPT. You can give any name you want to the metadata directory. In the example, we choose to call it "metadata". Each *Capability List* defines a set of preselected EAD-files. When using multiple *configurations* to define multiple sets from the same *resource directory* make sure that each Metadata directory gets a different name. Like md 01, md 02 etc.

If the metadata directory does not exist, it will be created during the first execution of a synchronization.

### **Description directory**

The *description directory* should be an existing directory on the (local or networked) filesystem. In this directory the document that describes the entire site, also known as .well-known/resourcesync or *Source Description* is expected to appear or will be created. If the value of description directory is left blank, the document is expected or will be created in the *metadata directory*. The button *Browse* will open a file explorer that enables you to choose the description directory.

### **Plugin directory**

The *plugin directory* is an existing directory on the (local or networked) filesystem. In this directory or its subdirectories a search for plugins will be conducted. At the moment, there are slots for plugins of type ResourceGateBuilder. If the plugin directory is left blank, no search will be conducted upon execution of a *synchronization*. The button *Browse* will open a file explorer that enables choosing the plugin directory. This option is tricky as it requires an IT-savvy person to create and run the plug ins. Please note that is an option, not a necessary feature.

### **URL** prefix

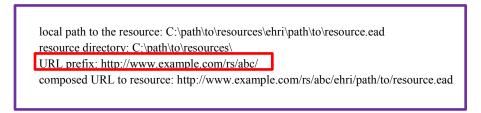
The *URL prefix* is the basename of the site, optionally followed by a path segment. This URL represents the site (or a part of your website) where de EAD-files will be stored so that EHRI can look up the site and harvest your EAD-files and put them in the EHRI-portal

local path to the resource: C:\path\to\resources\ehri\path\to\resource.ead

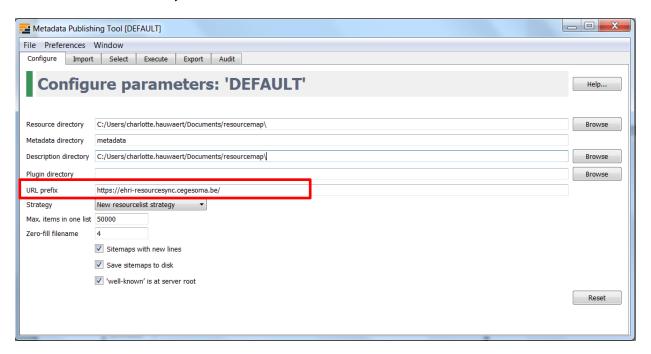
resource directory: C:\path\to\resources\
URL prefix: <a href="http://www.example.com/">http://www.example.com/</a>

composed URL to resource: http://www.example.com/ehri/path/to/resource.ead

### The URL prefix may have a path segment:



See also: Resource directory



You should replace the URL prefix with your own URL where the description directory will be stored. In concreto, the URL of the web site where your files will be copied, needs to be filled in as to give the opportunity to EHRI to find them when the automatic search has been launched. This can be done periodically.

### **Strategy**

The *strategy* defines what kind of *sitemap* documents (i.e. the list of all the website links linked to your own institution's website) will be generated when a *synchronization* is executed. At the moment you can choose between:

• **New resourcelist strategy** - At each *synchronization* run a completely new *Resource List* will be generated. If previous Resource Lists or *Capability Lists* exist in the *metadata directory* you will be asked if they can be deleted. This is the best option when you are using the MPT tool for the first time. This is thus the strategy to adopt when you are doing a simple selection.

• New changelist strategy - Will create a new *Change List* at each *synchronization* run. At the start of *synchronization*, if no Resource List exists in the *metadata directory*, will conduct the *New resourcelist strategy* automatically on first execution.

If you want to add files or delete files or add changed files, this strategy should be chosen. This option is possible with both selections, but to save some time, it would be wise to use the advanced selection when profiting from this strategy as you will "add change" to the original list.

• Incremental changelist strategy - Will increment or add any changes to an existing *Change List* with the newly found changes. At the start of *synchronization*, if no Resource List exists in the *metadata directory*. This means the new changelist will only locate the changes you made (i.e. dates, years, etc.) and compare them to the last changelist.

<u>Hint:</u> The strategy can be changed before each successive execution of a synchronization run.

### Max. items in one list

The maximum amount of items in one list. The *sitemap protocol* has an unofficial standard on how many items (links to *resources*) can be in one list. This amount can vary between 1 and 50000.

### **Zero-fill filename**

The amount of digits that generated *sitemaps* should have in their filenames. This value should be between 1 and 10.

Example of filenames with zero-fill filename set at 4:

changelist\_0000.xml
changelist\_0001.xml
changelist\_0002.xml
...
changelist\_9999.xml

With zero-fill filename set to 4, the amount of *Change Lists* can grow to 10000. This means you can execute 10000 *synchronizations* in *strategy* mode *new changelist strategy*.

#### Save sitemaps to disk

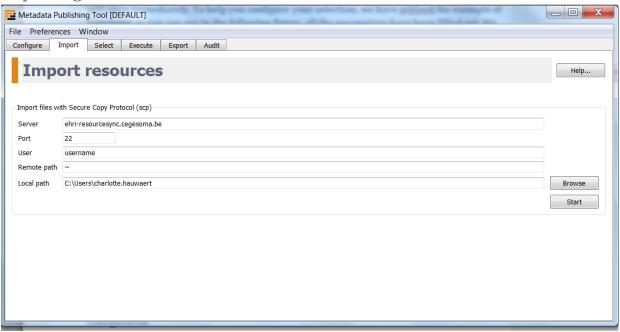
You can do a *trial run* of a *synchronization*. A trial run will report an overview of how many *resources* are affected, how many changes have been detected etc. but will not produce new *sitemaps*. Leave the checkbox unchecked for a trial run.

#### Reset

The Reset button will reset the current *configuration* to the default settings, after you confirm the warning dialog.

Caution: Resetting the current configuration also affects the currently set values on wizard pages *Import, Select* and *Export*. In all, you will thus reset the MPT in its entirety.

# **Importing Resources**

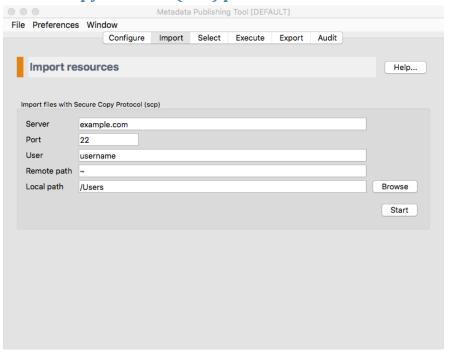


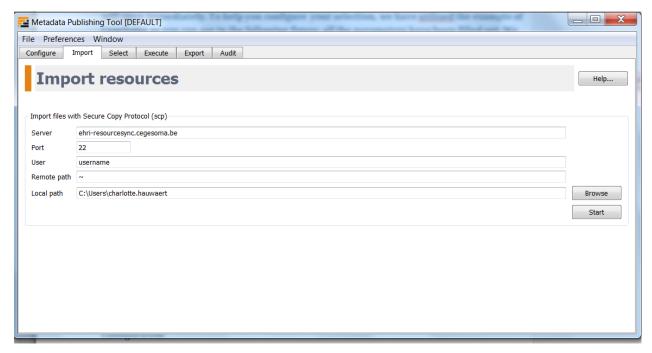
The import functionality is only necessary if your EAD files are on a server. If your files are on a local or networked drive you may skip this page of the wizard.

With the import page you can copy files from the remote server to a local or networked drive with the aid of the Secure Copy Protocol (*scp*).

Parameters on the import page are best set with the help of a technically skilled person. The variables on this page are part of the same named *configuration* as the one from the *Configuration* page and are saved automatically. Once parameters on this page are set, all you have to do when you want to import your remote files to your local environment, is press the *Start* button (and remember your password). In the following paragraphs we'll describe the import process in detail.

# **Secure Copy Protocol (SCP) parameters**





**<u>Hint:</u>** Different scp parameters can be set on each *configuration*. They are saved automatically.

<u>Server:</u> The name or IP address of the server.

Port: The port on the remote server. Default scp port is 22.

<u>User:</u> The username on the remote server.

<u>Remote path:</u> The path to the directory on the remote host. All files and folders in the remote directory will be copied recursively to the *Local path*.

<u>Local path:</u> The path to the directory on the local or networked drive that you wish to copy to. All files and folders in the directory on the **Remote path** (see above) will be copied recursively to this directory. Directories on the local path that do not exist will be created.

The button *Browse* will open a file explorer that enables choosing the local directory.

# Running an import

After pressing the *Start* button, the import execution window will open.

	Import
Import D	SEEALUT
mport	PETAGEI
Main events	
	0
Resources	
	0
Errors	
	Run Stop Close

The import execution window has three areas for reporting events:

Main events In this area main events of the import process will be reported.

**Resources** In this area files that are imported are listed.

**Errors** In this area errors that took place during the import process are reported.

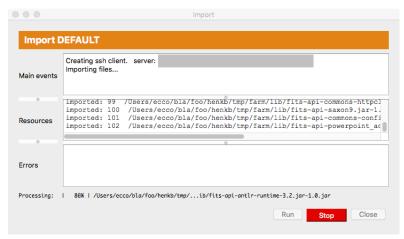
All areas can be enlarged or made smaller by grabbing the horizontal handle bars. Of course, the import execution window itself can also be reshaped.

Press the *Run* button to start the import process. A dialog appears in which you have to type your password for the remote server.

**Tip:** A password may not be needed with key-based authentication.

See for instance: Configure SSH Key-Based Authentication

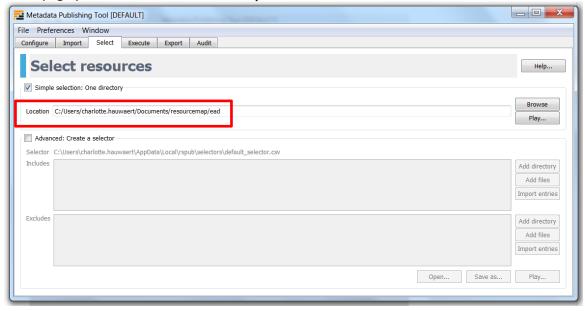
While the import process is running you may at any time press the Stop button to interrupt the process.



After the process has ended without errors the complete file and folder tree of the remote path is now on the local path.

### **Select Resources**

The moment has arrived for you to select the files your institution preselected on their own server. The MPT will now ask you which type of selection – simple or advanced – you wish to carry out. On the select page you decide which files will be *synchronized*.



Select the checkbox for *Simple selection: one directory*. Press the *Browse* button to select the directory that contains the *resources* that should be *synchronized*.

**Hint:** The selected directory should be equal to or a subdirectory of the *resource directory* that you

chose on the *Configure* page. Only *resources* that are in the *resource directory* or one of its subdirectories are subject to *synchronization*.

Press the *Play*... button if you want to get an impression of how many and which files are in the chosen directory and its subdirectories. The list and count displayed are estimates; automatically excluded files like hidden files are not excluded in this display, but will be excluded in the *synchronization*.

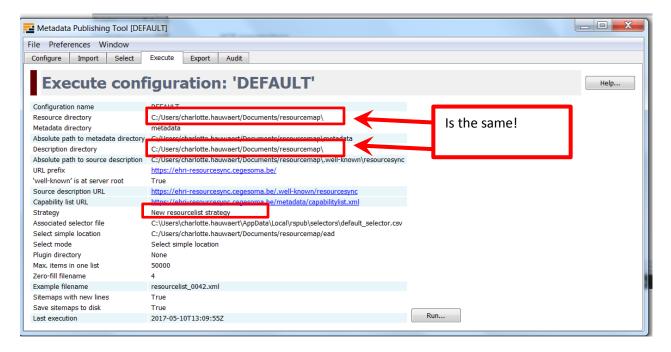
### **Execute and synchronization**

On the execute page you can inspect the parameters of the current *configuration* and start a *synchronization*.

### **Inspect parameters**

The execute page gives an overview of the value of all parameters that are involved with a *synchronization*. The parameters in boxes with a white background can directly be set on pages *Configure* and *Select*; the values in boxes with a blueish-grey background are derived or computed values.

As we stated before, with simple selection the Resource directory and the description directory should have the same address. Furthermore, you can see which strategy you choose.



### **Synchronize resources**

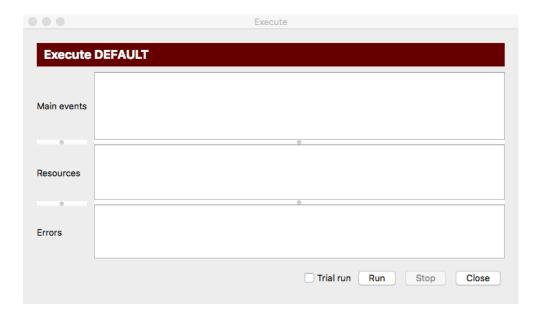
Press the *Run*... button on the execute page to start a *synchronization* run.

The synchronization window has three areas for reporting events:

**Main events:** In this area main events of the *synchronization* process will be reported.

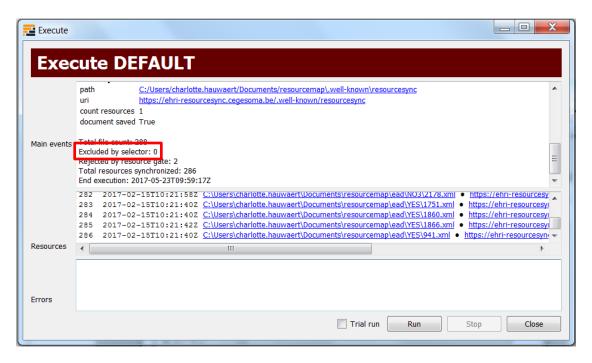
**Resources:** In this area *resources* that are *synchronize*d are listed.

Errors: In this area errors that took place during the *synchronization* process are reported.



All areas can be enlarged or made smaller by grabbing the horizontal handle bars. Of course, the synchronization window itself can also be reshaped. Press the *Run* button to start the *synchronization* process. If the chosen *strategy* is *new resourcelist strategy*, a confirmation window will appear asking if it is OK to delete existing *sitemaps* in de *metadata directory*.

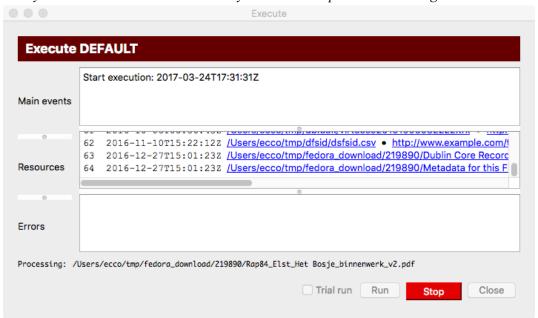
<u>Tip:</u> A *trial run* will report the number of *resource*s that are affected and all *sitemap*s that will be created, without writing them to disk.



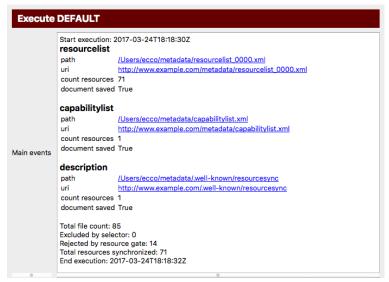
With simple selection, the excluded files by the selector should always be zero.

While the *synchronization* process is running you may at any time press the Stop button to interrupt the process.

The synchronization window while the synchronization process is running:

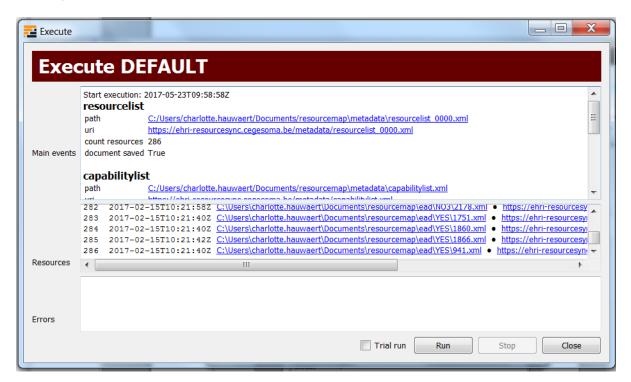


When the *synchronization* process has finished the main events of the *synchronization* process are reported.



Part of the synchronization window after the synchronization process has finished

Clicking on the paths to the *sitemaps* will open your local editor for xml-files with the contents of the *sitemap*. As long as the *sitemaps* are not exported to your web site the links to the URI's are of course stale or will not function. The default resource gate will reject hidden files and files in the *metadata directory* in case this directory is on the select path.



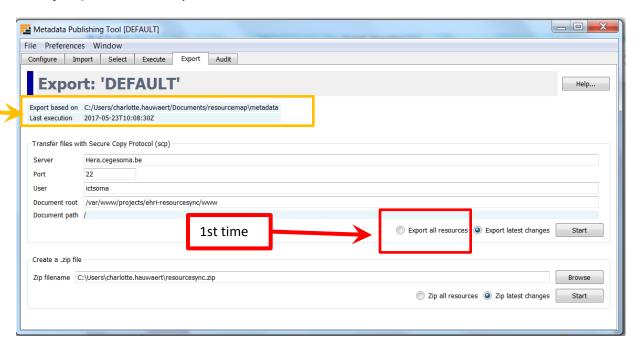
# Export resources and sitemaps to a web server

<u>Important:</u> The local *synchronization* will not publish your *resources* and *sitemaps*. For that, *resources* and *sitemaps* must be made available on a web server. The export page offers two methods to export *resources* and *sitemaps* from your local or networked drive to your web server:

- **Transfer files with SCP** Uses the Secure Copy Protocol (*scp*) to transfer files directly to your web server.
- Create a zip file This method creates a zip file of your *resource*s and *sitemaps*. You can hand over this zip file to your system administrator who should take care of publishing the contents on the web server.

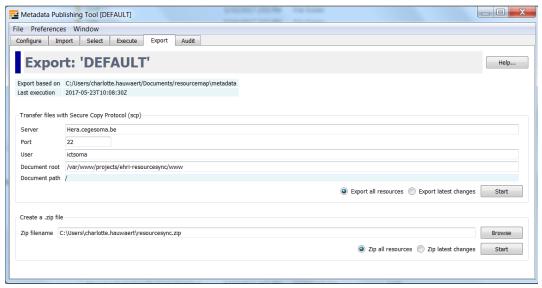
**Hint:** There are several ways to overcome problems with the exchange of files between servers and your local or network drive. One way is to use an scp client, which is described on this page. Another way is to use DropBox-like solutions. (See for instance B2DROP and WebDAV.)

<u>Attention</u>: Do not change parameters on the *Configuration page* in between a *synchronization* run and the export. The outcome of the export may be undecided if you do so. Always export *resource*s and *sitemaps* right after a fresh *synchronization* run.



The export page shows the current *configuration*, the location of the metadata the export will be based upon and at what date and time the last execution of the *synchronization* took place.

#### **Transfer files with SCP**



The parameters for export with *scp* can best be set with the help of a technically skilled person. These parameters are automatically saved with the current *configuration*.

Server: The name or IP address of the web server.

**Port:** The *scp* port on the web server. Default *scp* port is 22.

User: The username on the web server of your institution.

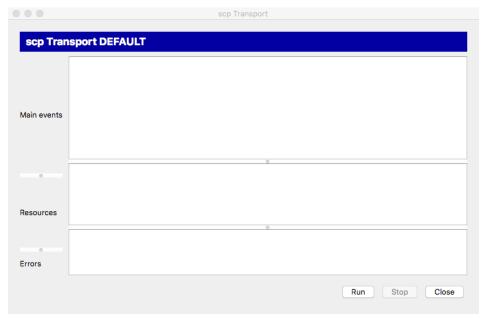
**Document root:** The document root is the folder where the website files for a domain name are stored.

With the Apache HTTP Server for instance this defaults to /var/www/html.

The *Document path*, relative to the *Document root*, is derived from the *URL prefix* you set on the *Configuration page*. (The *Document path* will be equal to the path segment of the *URL prefix*.) You have a choice between exporting all *resources* and export the latest changes.

- Export all resources will include all resources mentioned in the *sitemap* documents currently in the *metadata directory*. Useful if you want to completely update the part of your site that hosts *resources* and *sitemaps* of the current *configuration*.
- Export latest changes will only include resources that where affected according to the last *synchronization*. This will suffice in most occasions. This means that your changelists will be exported onto the server of your institution and incorporate changes, deletions, etc.

Press *Start* to open the *scp* Transport execution window.



The scp Transport execution window has three areas for reporting events:

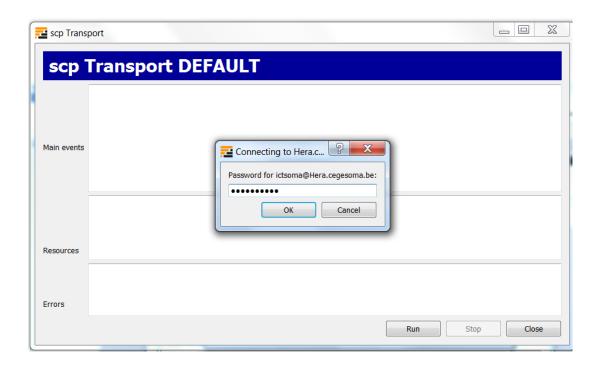
Main events: In this area main events of the export process will be reported.

**Resources:** In this area files that are exported are listed.

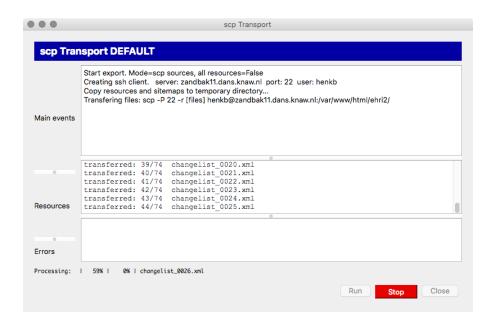
**Errors:** In this area errors that took place during the export process are reported.

Press the *Run* button to start the export process. A popup dialog will ask for the password of the user at the web server.

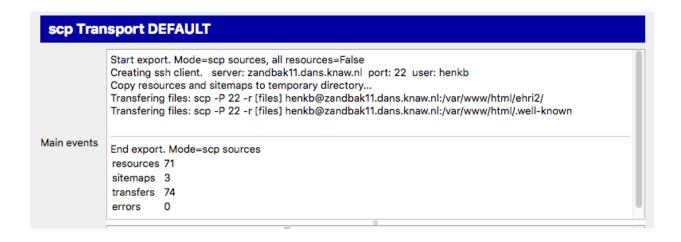
A password may not be needed with key-based authentication: keep it at hand.

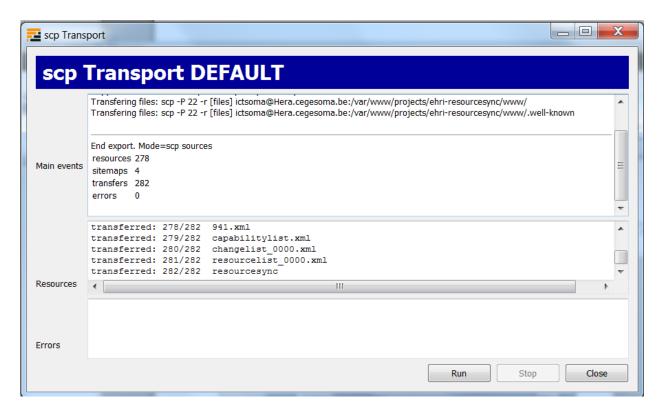


While the import process is running you may at any time press the Stop button to interrupt the process.



After the export has finished without errors your *resource*s and *sitemap*s at the web server are now up to date with the local changes after your latest *synchronization*.

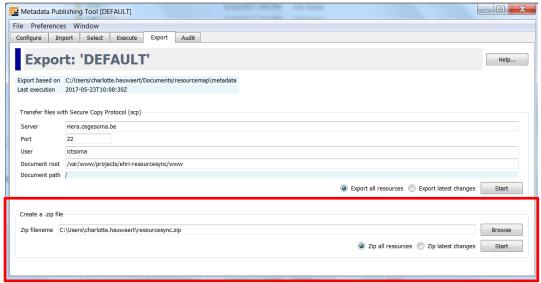




**Attention:** You need to have write access to the *Document root/Document path* at the remote server. If not, you will have received an error message in the scp Transport execution window.

Also, if your *source description* is *at server root*, you need to have write access to the *.well-know* directory at the *Document root* of the web server.

### Create a zip file

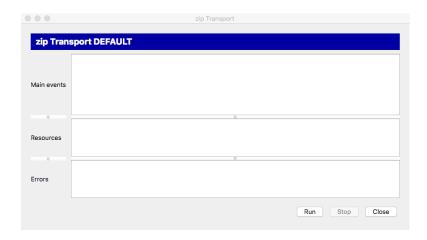


**Zip filename** Fill in the name of the zip file that will be created. Use the *Browse* button to open a file explorer that enables choosing the zip filename.

You have a choice between zipping all resources and zipping only the latest changes.

- **Zip all resources** will include all resources mentioned in the *sitemap* documents currently in the *metadata directory*. Useful if you want to completely update the part of your site that hosts *resources* and *sitemaps* of the current *configuration*.
- **Zip latest changes** will only include resources that where affected according to the last *synchronization*. This will suffice in most occasions.

Press *Start* to open the zip Transport execution window.



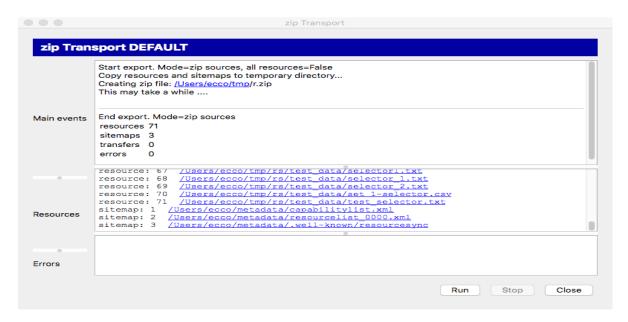
The zip Transport execution window has three areas for reporting events:

**Main events:** In this area main events of the zip process will be reported.

**Resources:** In this area files that are zipped are listed.

**Errors:** In this area errors that took place during the zip process are reported.

Press the *Run* button to start the zip process. While the zip process is running you may at any time press the Stop button to interrupt the process. You now need to hand over the zip file to the system administrator of your web server. She should take care of copying *resources* and *sitemaps* to the correct location on the web server.



**Attention:** No matter what you chose at 'well-known' at server root during Configuration, the source

description will always be in the metadata directory in the zip file. Your system administrator should take care to place it in the correct location on the web server. Either keep it in the metadata directory ('well-known' at server root was set to False) or copy it to the {Document root}/.well-known/resourcesync ('well-known' at server root was set to True).

### **Audit**

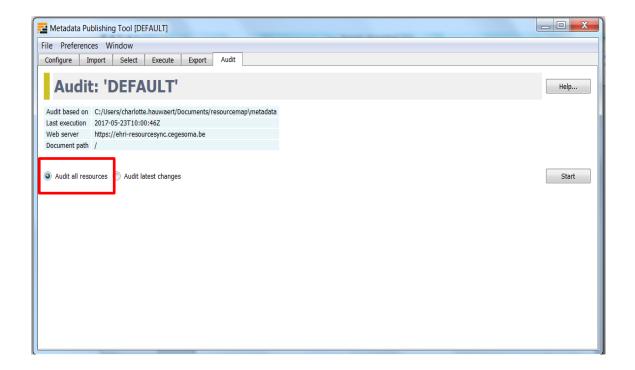
The audit page enables verification of the *sitemap* and *resource* URL's on your web server. After a successful audit, you can rest assure that your *ResourceSync* site is healthy.

The audit page shows the current *configuration*, the location of the metadata the audit will be based upon, at what date and time the last execution of the *synchronization* took place, the web server that is being tested and the *Document path* for documents of the current *configuration*.

### The audit process

You have a choice between auditing all resources and auditing the latest changes.

- **Audit all resources** will include all resources mentioned in the *sitemap* documents currently in the *metadata directory*. Useful if you want to completely audit the part of your site that hosts *resources* and *sitemaps* of the current *configuration*.
- **Audit latest changes** will only include resources that where affected according to the last *synchronization*



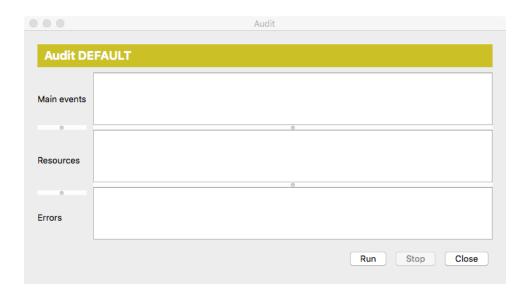
All *sitemaps* will be included in the audit, no matter what choice you made for included *resources*. Press *Start* to open the Audit execution window.

The Audit execution window has three areas for reporting events:

Main events: In this area, main events of the audit process will be reported.

Resources: In this area URL's that are being checked are listed

**Errors:** In this area errors that took place during the audit process are reported.

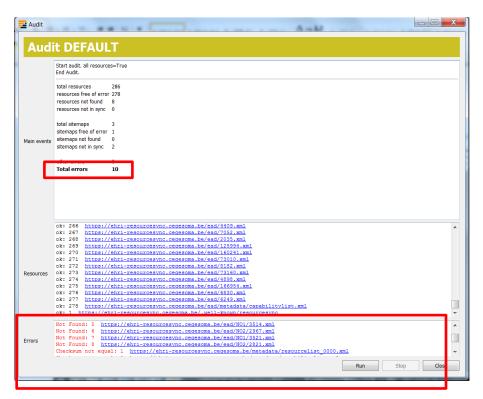


Press the *Run* button to start the audit process.

While the audit process is running you may at any time press the  ${\rm Stop}$  - button to interrupt the process.

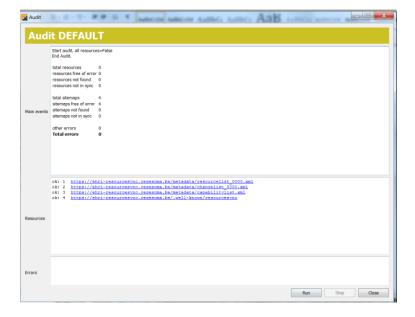
The audit was successful if the **Total errors** in the display reports 0 errors.

If the audit was not successful, try to analyze the reported errors and adjust *Configuration* and/or repeat the *Export* process.



In this particular example, we see that the audit indicated 10 errors. This is due to the fact that the export was not executed. The audit can only audit if the export has been executed.

If everything is well executed, the audit should come back without errors:



To import sources, you have two options: by creating a site or by creating a zip-file. Keep in mind that both have to be sent to the data integration manager at EHRI (<a href="mailto:Francesco.Gelati@arch.be">Francesco.Gelati@arch.be</a>) so that EHRI can incorporate your files into the EHRI portal.

The first option of importing sources is by creating a website. This website is created by the MPT itself once you have completed all the procedures until the audit. If it is your first time using the MPT, you need to give the website address to EHRI by sending it to the data integration manager at EHRI (<a href="mailto:Francesco.Gelati@arch.be">Francesco.Gelati@arch.be</a>). Once this is done, EHRI will automatically remember the website and can than search the web to find the address again and to compare it to see if you uploaded changes.

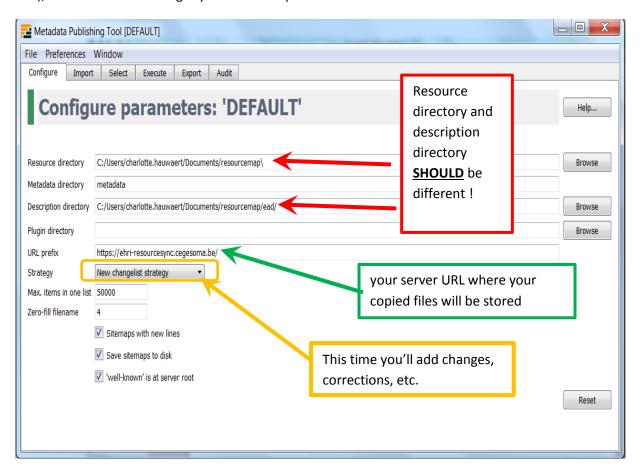
A second method, is to send in a Zip file to EHRI. The inconvenience of this lays in the fact that the Zip file has to be resent every time you use the MPT.

More information about the technicalities of these can be found on <a href="https://github.com/EHRI/rspub-gui">https://github.com/EHRI/rspub-gui</a>.

# Chapter 4: Advanced Selection - all the steps

Please note that a large part of the advanced selection is exactly the same as the simple selection, except for some details. Some parts are exactly the same as in chapter 3.

If your institution has to do an advanced selection (i.e.: changes have to be incorporated, deletions, etc.), the method differs slightly from the simple selection.



# **Configuration**

When you will proceed to the simple selection, you have to configure the MPT first. As you can see, some parameters need to be chosen.

The first thing you should choose, is the Resource directory.

### **Resource directory**

The *resource directory* should be an existing directory on the (local or networked) filesystem. Your institutions has thus preselected files from your database with data you are willing to share with EHRI in

a folder (for more information, go to "Select Resources"). This means that your institution will have preselected the EAD-files it wishes to share with EHRI. For institutions with more sources regarding different historical periods, they will have pre-selected only the files regarding the Holocaust and can be shared with EHRI. The selected files should be stored in a map on the institution's computer or server, where it then can be harvested when the MPT will select those files from your institution into a webserver. This webserver will have a specific website address where you'll find the EAD-files that will be synchronized.

If you have used the ECT-tool prior to the MPT to convert your files into EAD-files, the ECT-tool will have given the conversion date as the name for your resource directory folder. When using the MPT and filling in the resource directory, you need to browse for this dated directory.

If you want to know more about the technicalities regarding the URL and others, you are welcome to check it out on github (https://github.com/EHRI/rspub-gui/releases).

Tip: If your files are not yet converted into an EAD-format, you can use the ECT-tool to convert your files into EAD files before you use the MPT.

### **Metadata directory**

The metadata directory is a storage space for the capability list that will be created when you execute the MPT. You can give any name you want to the metadata directory. In the example, we choose to call it "metadata". Each *Capability List* defines a set of preselected EAD-files. When using multiple *configurations* to define multiple sets from the same *resource directory* make sure that each Metadata directory gets a different name. Like md 01, md 02 etc.

If the metadata directory does not exist, it will be created during the first execution of a *synchronization*.

Be careful: with advanced selection, the resource directory and the metadata directory need to be different.

### **Description directory**

The *description directory* should be an existing directory on the (local or networked) filesystem. In this directory the document that describes the entire site, also known as .well-known/resourcesync or *Source Description* is expected to appear or will be created. If the value of description directory is left blank, the document is expected or will be created in the *metadata directory*. The button *Browse* will open a file explorer that enables you to choose the description directory.

### **Plugin directory**

The *plugin directory* is an existing directory on the (local or networked) filesystem. In this directory or its subdirectories a search for plugins will be conducted. At the moment there are slots for plugins of type

ResourceGateBuilder. If the plugin directory is left blank, no search will be conducted upon execution of a *synchronization*. The button *Browse* will open a file explorer that enables choosing the plugin directory. This option is tricky as it requires an IT-savvy person to create and run the plug ins. Please note that is an option, not a necessary feature.

### **URL** prefix

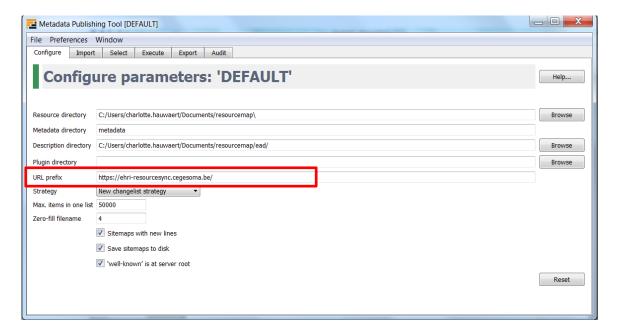
The *URL prefix* is the basename of the site, optionally followed by a path segment. This URL represents the site (or a part of your website) where de EAD-files will be stored so that EHRI can look up the site and harvest your EAD-files and put them in the EHRI-portal

local path to the resource: C:\path\to\resources\ehri\path\to\resource.ead resource directory: C:\path\to\resources\
URL prefix: <a href="http://www.example.com/">http://www.example.com/</a>
composed URL to resource: <a href="http://www.example.com/ehri/path/to/resource.ead">http://www.example.com/ehri/path/to/resource.ead</a>

### The URL prefix may have a path segment:

local path to the resource: C:\path\to\resources\ehri\path\to\resource.ead resource directory: C:\path\to\resources\
URL prefix: http://www.example.com/rs/abc/
composed URL to resource: http://www.example.com/rs/abc/ehri/path/to/resource.ead

### See also: *Resource directory*



You should replace the URL prefix with your own URL where the description directory will be stored. In concreto, the URL of the web site where your files will be copied, needs to be filled in as to give the opportunity to EHRI to find them when the automatic search has been launched. This can be done periodically.

### **Strategy**

The *strategy* defines what kind of *sitemap* documents (i.e. the list of all the website links linked to your own institution's website) will be generated when a *synchronization* is executed. At the moment, you can choose between:

- **New resourcelist strategy** At each *synchronization* run a completely new *Resource List* will be generated. If previous Resource Lists or *Capability Lists* exist in the *metadata directory* you will be asked if they can be deleted. This is the best option when you are using the MPT tool for the first time. This is thus the strategy to adopt when you are doing a simple selection.
- New changelist strategy Will create a new *Change List* at each *synchronization* run. At the start of *synchronization*, if no Resource List exists in the *metadata directory*, will conduct the *New resourcelist strategy automatically (?)* on first execution.

If you want to add files or delete files or add changed files, this strategy should be chosen. This option is possible with both selections, but to save some time, it would be wise to use the advanced selection when profiting from this strategy as you will "add change" to the original list.

• Incremental changelist strategy - Will increment or add any changes to an existing *Change List* with the newly found changes. At the start of *synchronization*, if no Resource List exists in the *metadata directory*. This means the new changelist will only locate the changes you made (i.e. dates, years, etc.) and compare them to the last changelist.

**Hint:** The strategy can be changed before each successive execution of a synchronization run.

### Max. items in one list

The maximum amount of items in one list. The *sitemap protocol* has an unofficial standard on how many items (links to *resources*) can be in one list. This amount can vary between 1 and 50000.

### **Zero-fill filename**

The amount of digits that generated *sitemaps* should have in their filenames. This value should be between 1 and 10.

Example of filenames with zero-fill filename set at 4:

```
changelist_0000.xml
changelist_0001.xml
changelist_0002.xml
...
changelist_9999.xml
```

With zero-fill filename set to 4, the amount of *Change Lists* can grow to 10000. This means you can execute 10000 *synchronizations* in *strategy* mode *new changelist strategy*.

#### Save sitemaps to disk

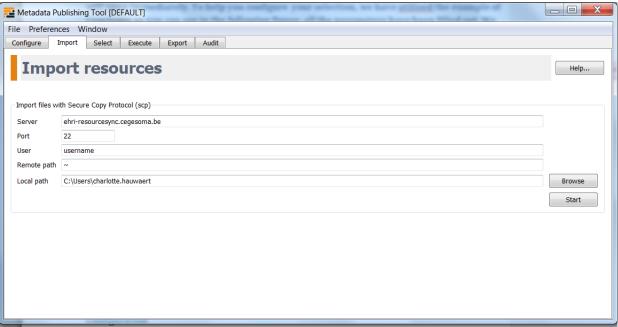
You can do a *trial run* of a *synchronization*. A trial run will report an overview of how many *resources* are affected, how many changes have been detected etc. but will not produce new *sitemaps*. Leave the checkbox unchecked for a trial run.

#### **Reset**

The Reset button will reset the current *configuration* to the default settings, after you confirm the warning dialog.

**Caution:** Resetting the current configuration also affects the currently set values on wizard pages *Import, Select* and *Export*. In all, you will thus reset the MPT in its entirety.

# **Importing Resources**

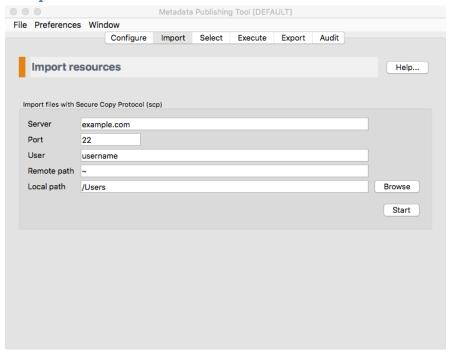


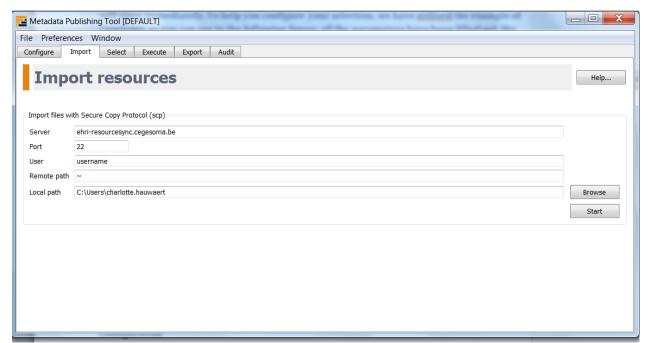
The import functionality is only necessary if your EAD files are on a server. If your files are on a local or networked drive you may skip this page of the wizard.

With the import page you can copy files from the remote server to a local or networked drive with the aid of the Secure Copy Protocol (*scp*).

Parameters on the import page are best set with the help of a technically skilled person. The variables on this page are part of the same named *configuration* as the one from the *Configuration* page and are saved automatically. Once parameters on this page are set, all you have to do each time you want to import your remote files to your local environment is press the *Start* button (and remember your password). In the following paragraphs, we describe the import process in detail.

# **SCP** parameters





**<u>Hint:</u>** Different scp parameters can be set on each *configuration*. They are saved automatically.

<u>Server:</u> The name or IP address of the server.

Port: The port on the remote server. Default scp port is 22.

<u>User:</u> The username on the remote server.

<u>Remote path:</u> The path to the directory on the remote host. All files and folders in the remote directory will be copied recursively to the *Local path*.

<u>Local path:</u> The path to the directory on the local or networked drive that you wish to copy to. All files and folders in the directory on the **Remote path** (see above) will be copied recursively to this directory. Directories on the local path that do not exist will be created.

The button *Browse* will open a file explorer that enables choosing the local directory.

# Running an import

After pressing the *Start* button, the import execution window will open.

	Import
Import [	DEFAULT
Main events	
Resources	
•	•
Errors	
	Run Stop Close

The import execution window has three areas for reporting events:

Main events In this area main events of the import process will be reported.

**Resources** In this area files that are imported are listed.

**Errors** In this area errors that took place during the import process are reported.

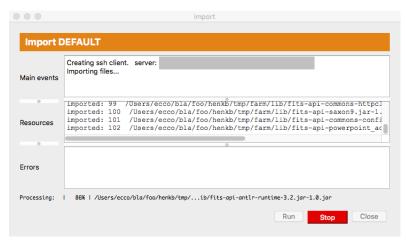
All areas can be enlarged or made smaller by grabbing the horizontal handle bars. Of course, the import execution window itself can also be reshaped.

Press the Run button to start the import process. A dialog appears in which you have to type your password for the remote server.

**Tip:** A password may not be needed with key-based authentication.

See for instance: Configure SSH Key-Based Authentication

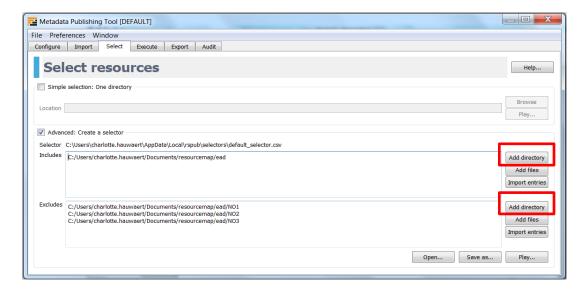
While the import process is running you may at any time press the Stop button to interrupt the process.



After the process has ended without errors the complete file and folder tree of the remote path is now on the local path.

#### **Select Resources**

Select the checkbox for *Advanced: create a selector*.



**Important:** With advanced selection, you can choose multiple files and folders for inclusion and exclusion of *synchronization*. For instance, if you include the directory C:\my\_files\ehri but want to exclude its subdirectory C:\my\_files\ehri\other files.

Press *Add directory* or *Add files* respectively if you want to browse to directories or individual files to be included or excluded. When adding files, you can choose multiple files by pressing *Shift* and *Ctrl* or *Cmd* keys while choosing files with your mouse. You can also type or paste path names in the respective boxes. Remove path names by simply selecting and deleting them.

To import lists of path names press the *Import entries* button. Choose the file that contains the path names in the explorer that opens. Each entry in the file with path name entries should start on a new line. In the case of the example, we selected by directories.

**Hint:** Selected directories or files should be in the *resource directory* that you chose on the *Configure* page. Only *resource* that are in the *resource directory* or in one of its subdirectories are subject to *synchronization*.

Press the *Play*... button if you want to get an impression of how many and which files are included and how many and which files are excluded. The lists and counts displayed are estimates; automatically excluded files like hidden files are not excluded in this display, but will be excluded in the *synchronization*.

The entries in *Includes* and *Excludes* are automatically saved with each *configuration*. Besides that, they can also be saved and loaded from the filesystem by pressing the *Save* and *Open* buttons respectively.

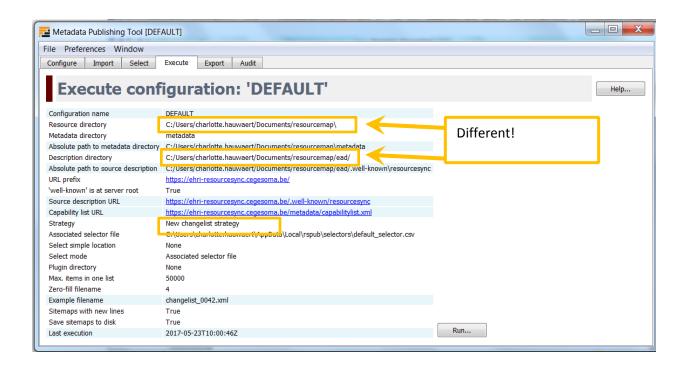
## **Execute and Synchronization**

On the execute page you can inspect the parameters of the current *configuration* and start a *synchronization*.

### **Inspect parameters**

The execute page gives an overview of the value of all parameters that are involved with a *synchronization*. The parameters in boxes with a white background can directly be set on pages *Configure* and *Select*; the values in boxes with a blueish-grey background are derived or computed values.

With advanced selection you are importing changes, deleted items and new items. It is thus an advanced selection as your initial list will be altered by the advanced selection.



#### **Synchronize resources**

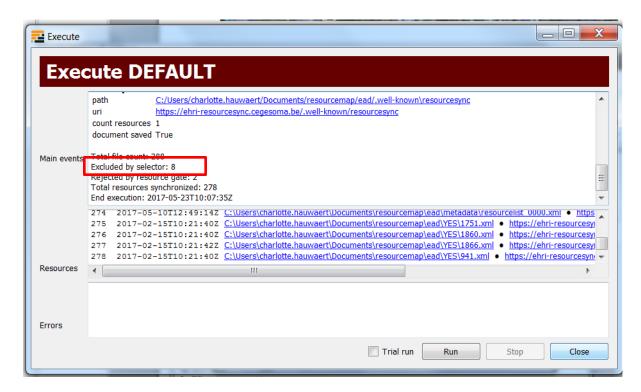
Press the Run... button on the execute page to start a synchronization run.

The synchronization window has three areas for reporting events:

Main events: In this area main events of the synchronization process will be reported.

**Resources:** In this area *resources* that are *synchronized* are listed.

**Errors:** In this area errors that took place during the *synchronization* process are reported.



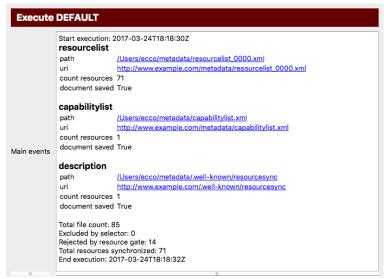
In the advanced selection, the tab "excluded by selector" will show the number of directories and/or files you chose to leave out.

While the *synchronization* process is running you may at any time press the Stop button to interrupt the process.

The synchronization window while the synchronization process is running:

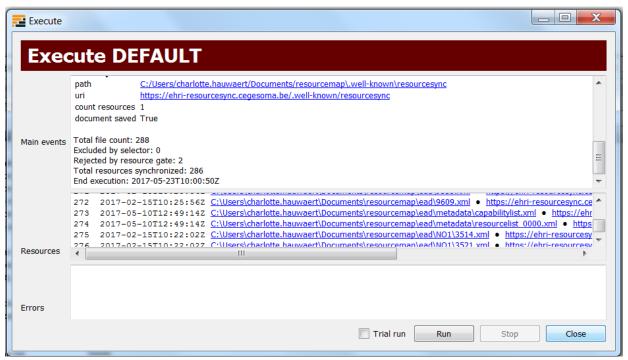
	Start execution: 2017-03-24T17:31:31Z
ain events	
	OT TOTA TO ACTUALIZE TORRIGIOSON MINISTERING HITCOSOFF TO ACCOUNT OF HITCH
	62 2016-11-10T15:22:12Z /Users/ecco/tmp/dfsid/dsfsid.csv • http://www.example.com/t
	63 2016-12-27T15:01:23Z /Users/ecco/tmp/fedora_download/219890/Dublin Core Record
sources	64 2016-12-27T15:01:23Z /Users/ecco/tmp/fedora_download/219890/Metadata for this F
0	0
rors	
1013	

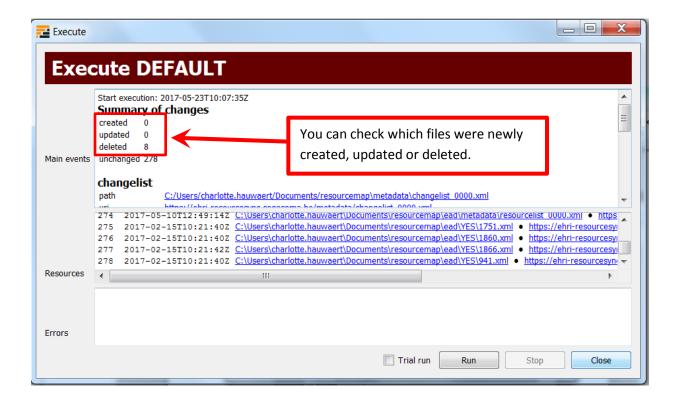
When the *synchronization* process has finished the main events of the *synchronization* process are reported.



Part of the synchronization window after the synchronization process has finished

Clicking on the paths to the *sitemaps* will open your local editor for xml-files with the contents of the *sitemap*. As long as the *sitemaps* are not exported to your web site the links to the URI's are of course stale or will not function. The default resource gate will reject hidden files and files in the *metadata directory* in case this directory is on the select path.





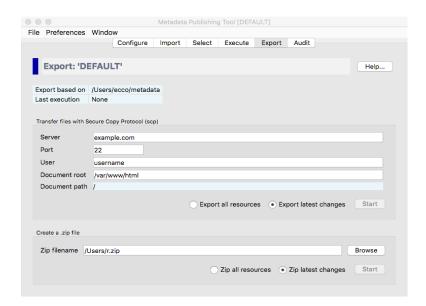
# Export resources and sitemaps to a web server

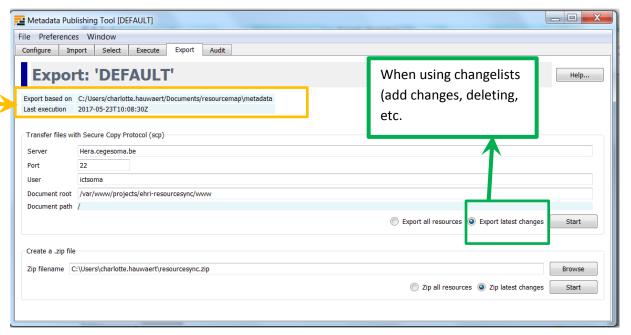
<u>Important:</u> The local *synchronization* will not publish your *resources* and *sitemaps*. For that, *resources* and *sitemaps* must be made available on a web server. The export page offers two methods to export *resources* and *sitemaps* from your local or networked drive to your web server:

- **Transfer files with SCP** Uses the Secure Copy Protocol (*scp*) to transfer files directly to your web server.
- Create a zip file This method creates a zip file of your *resource*s and *sitemaps*. You can hand over this zip file to your system administrator who should take care of publishing the contents on the web server.

**Hint:** There are several ways to overcome problems with the exchange of files between servers and your local or network drive. One way is to use an scp client, which is described on this page. Another way is to use DropBox-like solutions. (See for instance B2DROP and WebDAV.)

<u>Attention</u>: Do not change parameters on the *Configuration page* in between a *synchronization* run and the export. The outcome of the export may be undecided if you do so. Always export *resource*s and *sitemaps* right after a fresh *synchronization* run.





The export page shows the current *configuration*, the location of the metadata the export will be based upon and at what date and time the last execution of the *synchronization* took place.

#### **Transfer files with SCP**



The parameters for export with *scp* can best be set with the help of a technically skilled person. These parameters are automatically saved with the current *configuration*.

**Server:** The name or IP address of the web server.

**Port:** The *scp* port on the web server. Default *scp* port is 22.

**User:** The username on the web server of your institution.

**Document root:** The document root is the folder where the website files for a domain name are stored.

With the Apache HTTP Server for instance this defaults to /var/www/html.

The *Document path*, relative to the *Document root*, is derived from the *URL prefix* you set on the *Configuration page*. (The *Document path* will be equal to the path segment of the *URL prefix*.) You have a choice between exporting all *resources* and export the latest changes.

- Export all resources will include all resources mentioned in the *sitemap* documents currently in the *metadata directory*. Useful if you want to completely update the part of your site that hosts *resources* and *sitemaps* of the current *configuration*.
- Export latest changes will only include resources that where affected according to the last *synchronization*. This will suffice in most occasions. This means that your changelists will be exported onto the server of your institution and incorporate changes, deletions, etc.

Press *Start* to open the *scp* Transport execution window.



The scp Transport execution window has three areas for reporting events:

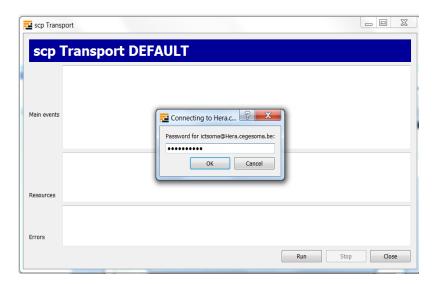
Main events: In this area main events of the export process will be reported.

**Resources:** In this area files that are exported are listed.

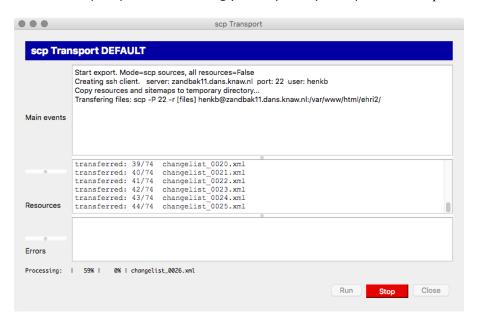
**Errors:** In this area errors that took place during the export process are reported.

Press the *Run* button to start the export process. A popup dialog will ask for the password of the user at the web server.

A password may not be needed with key-based authentication: keep it at hand.

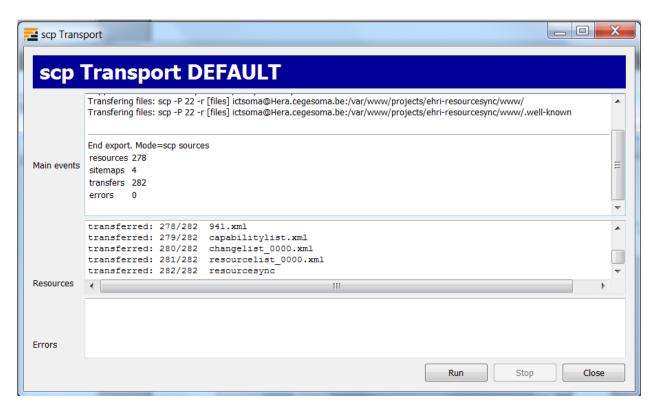


While the import process is running you may at any time press the Stop button to interrupt the process.



After the export has finished without errors your *resource*s and *sitemap*s at the web server are now up to date with the local changes after your latest *synchronization*.

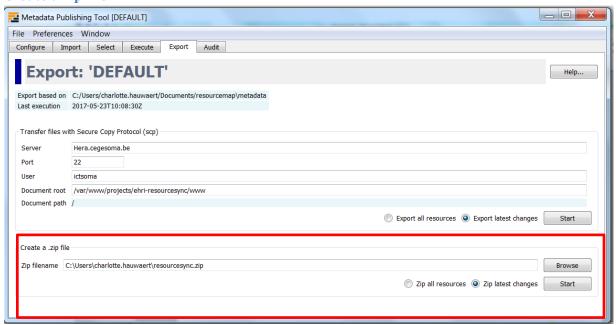
scp Tran	nsport DEFAULT
	Start export. Mode=scp sources, all resources=False Creating ssh client. server: zandbak11.dans.knaw.nl port: 22 user: henkb Copy resources and sitemaps to temporary directory Transfering files: scp -P 22 -r [files] henkb@zandbak11.dans.knaw.nl:/var/www/html/ehri2/ Transfering files: scp -P 22 -r [files] henkb@zandbak11.dans.knaw.nl:/var/www/html/.well-known
Main events	End export. Mode=scp sources
	resources 71
	sitemaps 3
	transfers 74
	errors 0



**Attention:** You need to have write access to the *Document root/Document path* at the remote server. If not, you will have received an error message in the scp Transport execution window.

Also, if your *source description* is *at server root*, you need to have write access to the *.well-know* directory at the *Document root* of the web server.

#### Create a zip file

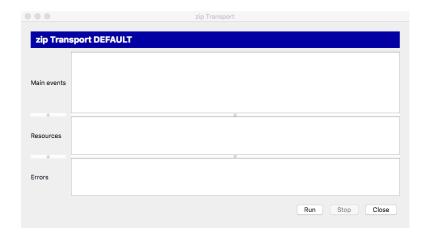


**Zip filename** Fill in the name of the zip file that will be created. Use the *Browse* button to open a file explorer that enables choosing the zip filename.

You have a choice between zipping all resources and zipping only the latest changes.

- **Zip all resources** will include all resources mentioned in the *sitemap* documents currently in the *metadata directory*. Useful if you want to completely update the part of your site that hosts *resources* and *sitemaps* of the current *configuration*.
- **Zip latest changes** will only include resources that where affected according to the last *synchronization*. This will suffice in most occasions.

Press *Start* to open the zip Transport execution window.



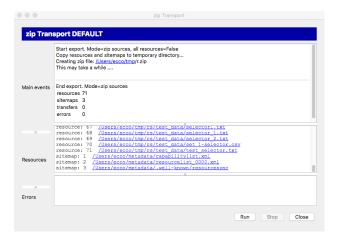
The zip Transport execution window has three areas for reporting events:

Main events: In this area main events of the zip process will be reported.

**Resources:** In this area files that are zipped are listed.

**Errors:** In this area errors that took place during the zip process are reported.

Press the *Run* button to start the zip process. While the zip process is running you may at any time press the Stop button to interrupt the process. You now need to hand over the zip file to the system administrator of your web server. She should take care of copying *resources* and *sitemaps* to the correct location on the web server.



**Attention:** No matter what you chose at 'well-known' at server root during Configuration, the source description will always be in the metadata directory in the zip file. Your system administrator should take care to place it in the correct location on the web server. Either keep it in the metadata directory ('well-known' at server root was set to **False**) or copy it to the {Document root}/.well-known/resourcesync ('well-known' at server root was set to **True**).

#### **Audit**

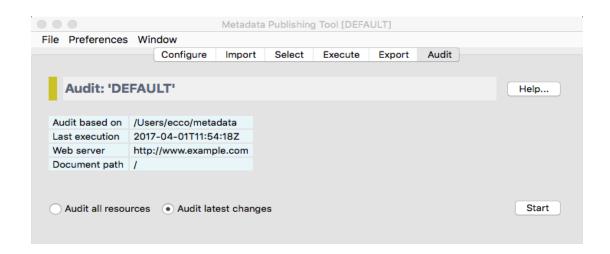
The audit page enables verification of the *sitemap* and *resource* URL's on your web server. After a successful audit, you can rest assure that your *ResourceSync* site is healthy.

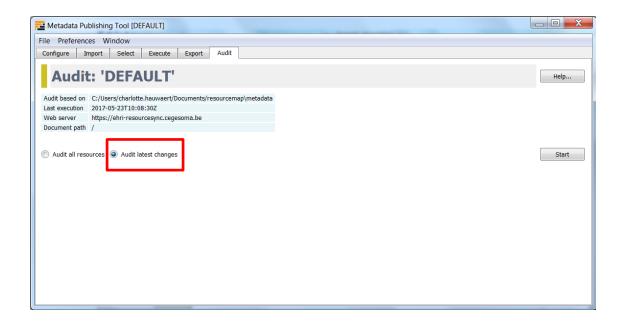
The audit page shows the current *configuration*, the location of the metadata the audit will be based upon, at what date and time the last execution of the *synchronization* took place, the web server that is being tested and the *Document path* for documents of the current *configuration*.

#### The audit process

You have a choice between auditing all resources and auditing the latest changes.

- **Audit all resources** will include all resources mentioned in the *sitemap* documents currently in the *metadata directory*. Useful if you want to completely audit the part of your site that hosts *resources* and *sitemaps* of the current *configuration*.
- **Audit latest changes** will only include resources that where affected according to the last *synchronization*





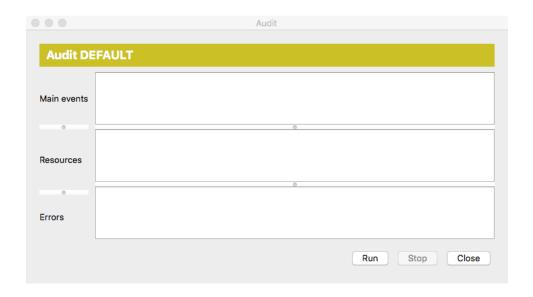
All *sitemaps* will be included in the audit, no matter what choice you made for included *resources*. Press *Start* to open the Audit execution window.

The Audit execution window has three areas for reporting events:

Main events: In this area main events of the audit process will be reported.

Resources: In this area URL's that are being checked are listed

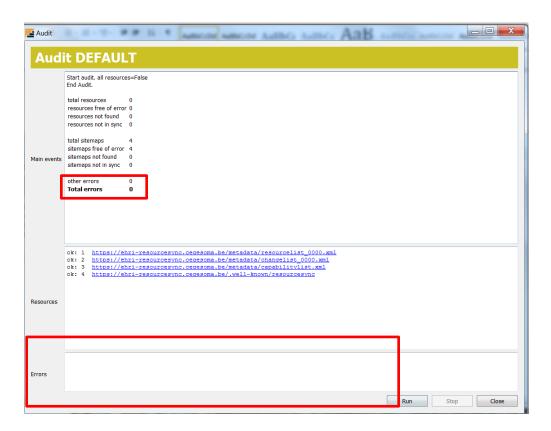
**Errors** In this area errors that took place during the audit process are reported.



Press the *Run* button to start the audit process.

While the audit process is running you may at any time press the Stop - button to interrupt the process. The audit was successful if the **Total errors** in the display reports 0 errors.

If the audit was not successful, try to analyze the reported errors and adjust *Configuration* and/or repeat the *Export* process.



As we can see here, the export was executed and when we checked the export with the Audit function, we now see that everything has been done correctly.

To import sources, you have two options: by creating a site or by creating a zip-file. Keep in mind that both have to be sent to EHRI (Francesco.Gelati@arch.be) so that EHRI can incorporate your files into the EHRI portal.

The first option of importing sources is by creating a website. This website is created by the MPT itself once you have completed all the procedures until the audit. If it is your first time using the MPT, you need to give the website address to EHRI by sending it to <a href="mailto:Francesco.Gelati@arch.be">Francesco.Gelati@arch.be</a>. Once this is done, EHRI will automatically remember the website and can than search the Web to find the address again and to compare it to see if you uploaded changes.

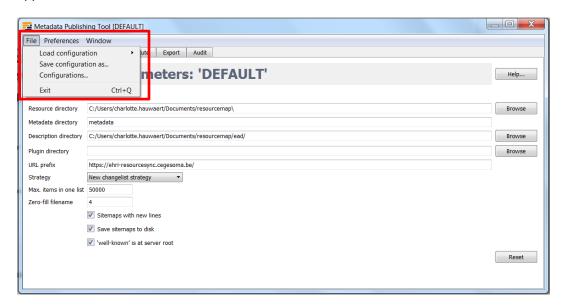
A second method, is to send in a Zip file to EHRI. The inconvenience of this lays in the fact that the Zip file has to be resent every time you use the MPT.

More information about the technicalities of these can be found on <a href="https://github.com/EHRI/rspub-gui">https://github.com/EHRI/rspub-gui</a>.

# **Appendix**

## File menu

The File menu gives options to manage multiple *configurations* and gives an option to exit the application.



#### **Load configuration**

Gives a list of previously saved configurations. Click on a named configuration in the list to close the current configuration and open the chosen one. The current configuration will automatically be saved.

#### Save configuration as...

Pops up a dialog to enter the name of the configuration. The current configuration will be saved under the given name. Any named configuration that was previously saved under the given name will be overwritten without warning.

#### Configurations...

Pops up a list with the names of saved configurations. You have the ability to delete configurations by selecting their names. Multiple configurations can be deleted by selecting multiple names from the list.

#### **Exit**

Exit the application.

# The Preferences menu

The Preferences menu gives options to change the overall appearance of the application.

# Language

Set the language of the application to the language of your choice.

# The Windows menu

The Windows menu gives options to select windows.

#### About...

Pops up a window that summarizes the origin and version of the application and presents links to interesting sites.