WebHare for development

This manual will explain how to setup a local WebHare installation for development and will guide you through building a website. We will be using Docker to manage the WebHare installation. This guide assumes you're using an up-to-date operating system, and if using Windows, at minimum Windows 10 Professional.

> ✔ **Docker limitations**
>
> Please note that Docker has some limitations (especially on Mac and Windows) in performance and ease of development that you wouldn't see on a production WebHare installation, but gives a much easier setup experience. All production WebHare setups are generally done in Docker on a Linux (virtual) machine.

If you have sufficient experience manually maintaining and compiling software, you can alternatively install WebHare from source.

Installing WebHare

First, install Docker from https://www.docker.com/get-started.

On Windows

First, a folder is needed where all data will be stored. Run the following command to create it:

```
1 | mkdir "%USERPROFILE%/whdata"
```

To start WebHare, run the following command:

```
1 | docker run -ti --rm --name webhare -p 80:80 -p 443:443 -v %USERPROFILE%/whdata:/opt/
```

If Docker asks you whether you want to share your C: drive, you should probably do so.

If you run into std::bad_alloc errors, verify the commandline - you may be running into issues with temporary files being created on NTFS (which doesn't support unlinking the files after creation and then mmap()ing them)

On macOS or Linux

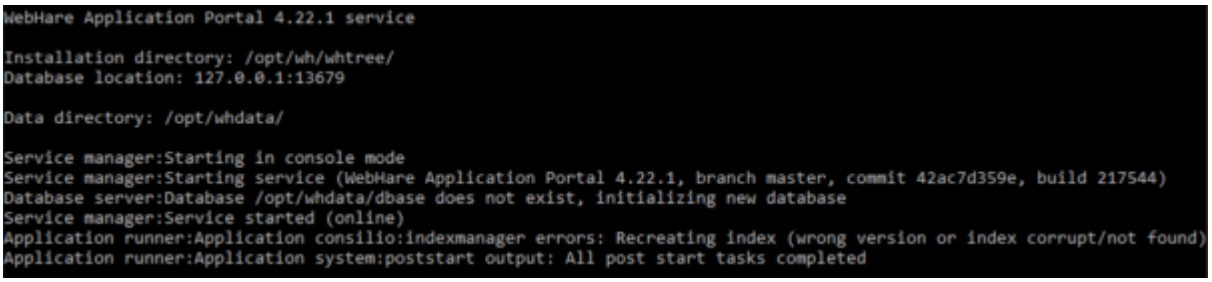
First, a folder is needed where all data will be stored. Run the following command to create it (you only need to do this once):

```
mkdir ~/whdata
```

To start WebHare, run the following command:

```
docker run -ti --rm --name webhare -p 80:80 -p 443:443 -v ~/whdata:/opt/whdata webhar
```

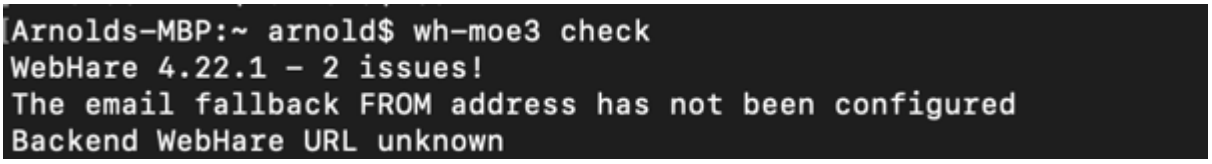
You'll see something similar to the following screen if WebHare started correctly:



WebHare ships with a command line interface named 'wh'. We can use docker to invoke this tool for us. One use is to check WebHare's status. Let's see if everything is working correctly:

```
docker exec webhare wh check
```

You will see something like:



It's running, but we cannot connect to it yet . We need to be able to access what we often simply call the 'backend' - the WebHare backend interface.

Setting up the Webhare backend interface

On a production server we would generally setup a proxy server to host the interface, but here we'll let the built-in webserver handle it by itself. We need an open port for virtual hosting so we can run multiple websites on the same port (in our case: the WebHare backend and a future output website).

Nonstandard port numbers

We strongly recommend using the standard port 80/443 for your WebHare installation and using virtual hosting - some features may be more difficult to setup or have subtle issues with non standard port numbers. You will need to modify the docker command line used during installation to open up other ports than 80 and 443.

To create a virtual hosted port on port 80 and host a site named 'localhost' on it, and create a sysop account for yourself - preferably with a different password:

```
docker exec webhare wh webserver addport --virtual 80
docker exec webhare wh webserver addbackend http://localhost/
docker exec webhare wh users adduser --sysop --password secret sysop@example.net
```

First login

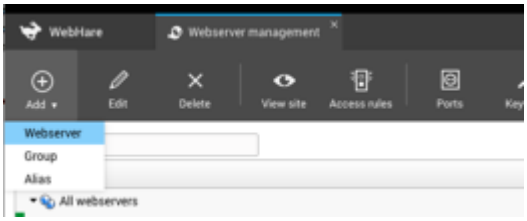
Visit the URL you've just added - eg http://localhost/ and login and password specified above.

At the bottom right of the screen you will most likely have two messages - one warning to inform you of unresolved issues and one question to ask for desktop notifications. If you click this message your browser will ask you for permission to display notifications as browser notifications from now on.

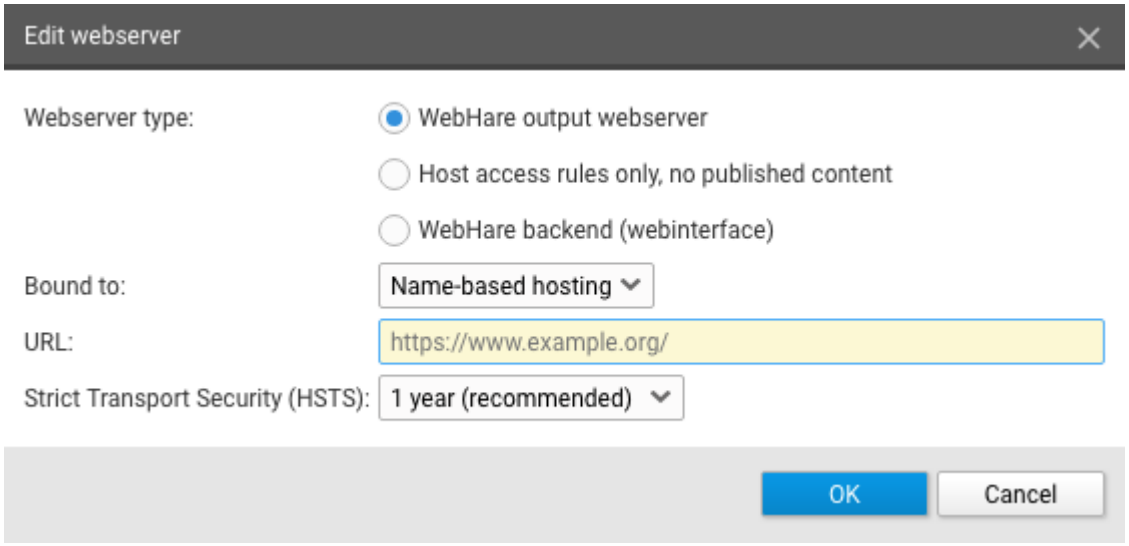
Setting up output

To configure output an Output webserver must be added. This can be done from the Webservers application:

- Start the Webservers application from the WebHare start menu.
- Click the "Add" button and choose "Webserver".



- The "Edit webserver" screen is opened.



- Choose the appropriate settings
  - Server type: Webhare output server
  - Binding type; usually this is "Name-based hosting", where the URL domain name is used to look up the corresponding webserver.
  - For local development, http://127.0.0.1/ can be used.
  - Click “OK” to save the webserver.

Creating a webdesign

explain webdesign basics (what is it, how to use it)

Creating a module

WebHare uses so-called "modules" to group code and data together in logical groups. These modules are stored in the data folder, in the subfolder "installedmodules". This folder can contain module folders, and module group folders (to logically group modules together).

To create a new module, use the following command:

```
1 | docker exec webhare wh module create [modulegroupname/]<modulename>
```

Create and initialize the webdesign

To create a new webdesign in a module, use the following command

```
1 | docker exec webhare wh module createwebdesign <modulename>:<webdesignname> <
```

domainname is used to create the namespace used inside the webdesign.
If domainname is “example.com” the first part of the namespace used in the webdesign will become: http://example.com/

Creating the website

Creating a website that uses the webdesign is done in the Publisher application.

For more about the Publisher, visit the user manal.

- Start the WebHare publisher from the Start Menu
- Select the folder (or create a new folder and select it) where you want your website.
- Select in ‘Menu’ option File > New > Website…
- The “New site” dialog is opened. You can now set:
  - name;
  - output URL;
  - subfolder: for development purposes a subfolder is usually used to allow multiple sites on one webserver URL.
- In the tab ‘Design’ select your previously created webdesign.
- Press “OK” to confirm settings.

Creating content in your website

To create content, an RTD document should be added.

- In the Publisher application, select your website in the tree on the left.
- Click "New file”.
- Select "Rich text document" and press "OK".
- You can now select a name for your file.
- Make sure "Publish this file” is selected.
- Press "OK”

The file is added to the website, and can be edited in the RTD document editor. For more about the editor, see the user manual.

- Double-click on the new file. This will open the document editor.
- Use the editor to add some content to this file.
- Press "Publish”, then answer "Yes".
- Close the editor by choosing "Exit” in the menu.

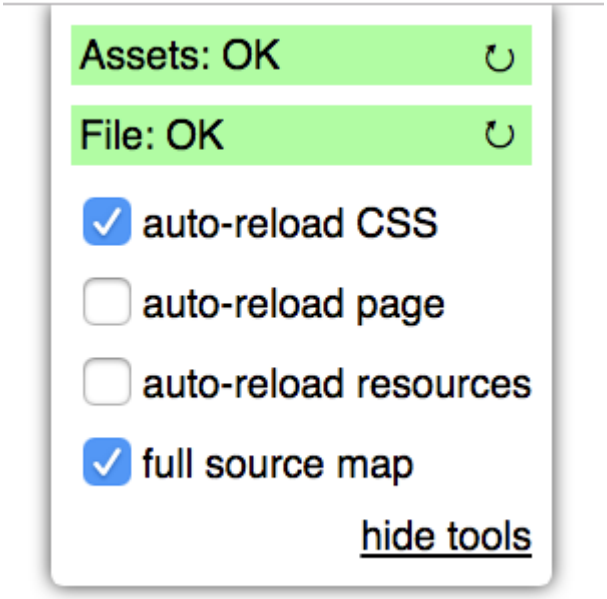
The content you have added is now displayed in the preview, and can be visited by selecting the file and clicking the “View” button. The page will then be opened in a new tab or window.

Setting debug mode

When you have a website with a published page you can enable Website Debug settings to obtain extra information for development and debugging.

- Select a published file within the website.
- Choose “Tools” -> Set Website debug settings” from the Publisher menu.
- Make sure “Enable output debug mode” is checked.
- Click the “Save” button.

The published version of the file is displayed. On the page a debug tool block is displayed. When you click it, debugging information and some more options are shown:



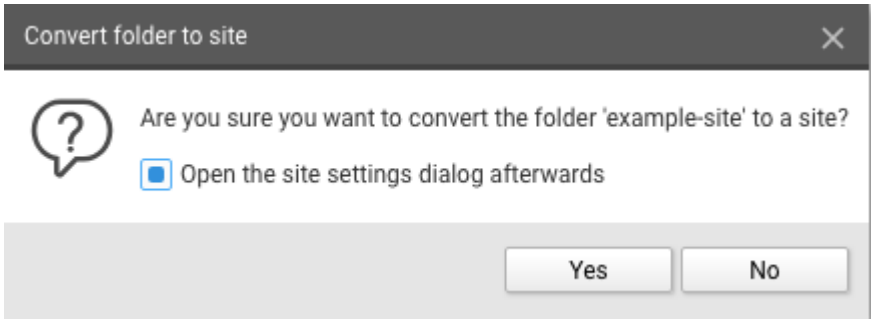
Example site

To start working with a complete site you can download an example site.

- First get the example module, using the following commands:

```
1 | docker exec webhare wh module get https://gitlab.com/webhare/examples/examples.g
```

- Download the archived version of the example website from https://www.webhare.dev/downloads/example-site.wharchive.
- Open the Publisher application in WebHare.
- Select a folder in the left tree to place the example website.
- Upload the archive file and unpack the archive (double click).
- Select the extracted folder and choose “Sites -> Convert to site” from the Publisher menu.



- Select "Open the site settings dialog afterwards" and click "Yes”.
- Select an output URL and a subfolder within that URL. If no output URL is available, please create another output webserver first, or move other sites on an existing output webserver to a subfolder within their output URL. You can access the website settings of an existing site by right-clicking on a site and choosing "Website settings".
- Press "Ok" to convert the folder to a site.
- Run the following command (again):

```
1 | docker exec webhare wh softreset
```

(For a working example site, see: https://examplesite.webhare.dev/)

When using this example design for your own created website, you’ll have to modify the contentsource for the search engine to ensure your own site is indexed. This can be done by modifying the reference ‘site::example-site’ in search.siteprl.xml to something like ‘site::<your-site-name>’.

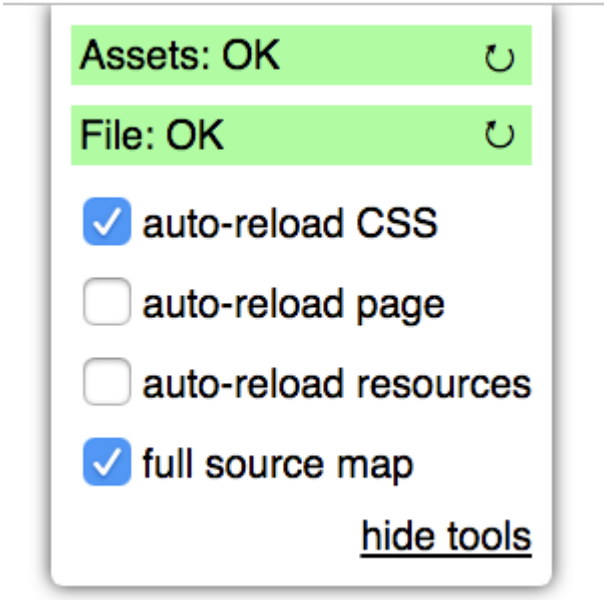
When using the example site as basis for a new moduledesign, you have to rename a few items:

- The first part of the used namespaces in the harescripts and siteprofiles must be changed to a new namespace used for your new moduledesign.
- The tags “examples:searchpage” (tag of the search page) and “examples:examplesite” (tag of the search engine index for the site) must be renamed.

Changing layout

To edit the site template, goto your webhare data folder. You can find the files for the site layout in whdata/installedmodules/<modulename>/webdesigns/<webdesignname>/.

You can change the webdesign files described below to change the page. When making changes to the files you may need to use the 'refresh' action (↻) for the assets to see the changes.



Javascript file

<webdesignname>.es is main javascript file. You need to import all other needed javascript and (s)css files in this file.

CSS/SASS file

<webdesignname>.scss is the CSS / Sass file for styling.

Site profile

<webdesignname>.siteprl.xml - the site profile for the website. More information about this file can be found in the references.

Inline images in the RTD files are set to a maximum width which is defined the attribute 'maxcontentwidth' in the 'webdesign' node.

The site language can be found in the siteprofile in element 'sitelanguage'.

You can activate statistics from Google by using/activating one of the settings in the siteprofile:

```
<googleanalytics account="UA-XXXXXXX-X" />
<gtm account="GTM-XXXXXX" />
```

When using googleanalytics, by default ‘anonymizeip’ is enabled.

HareScript library

<webdesignname>.whlib - more about the HareScript library can be found in the references.

Witty Template

<webdesignname>.witty - more about the Witty template can be found in the references.

RTD Styling

/shared/rtd/rtd.css - You can find basic styling for RTD content in ‘/shared/rtd/rtd.css’

If you want to use a custom font, add at top the rtd.css file the import rule like:

```
@import url(//fonts.googleapis.com/css?family=Open+Sans:400,700,400i,700i);
```

RTD-related JavaScript

/shared/rtd/rtd.es

RTD apply rules

/shared/rtd/rtd.siteprl.xml - XML apply rules for RTD documents.

Webdesign image folder

Folder <webdesignname>/web/img/

There is a <webdesignname>/‘web/img/’ folder where you can put all static images used in the template. These images are accessible in the template by using [imgroot]<imagefilename>.

The “htmlhead” component

The main witty template contains two required components, a htmlhead component and a htmlbody component.

The htmlhead is used for elements inside the head-element of the rendered page.

You can add additional meta tags inside the htmlhead component like meta tags for the site icons.

Some basic elements and links to the compiled javascript and css for the webdesign are automatically generated added to the head-element.

Opengraph meta is automatically added to the head-element if Opengraph plugin settings are present in the siteprofile and applied to the rendered page.

To add the opengraph plugin add next to siteprofile within the part for apply rule all:

```
<opengraph xmlns="http://www.webhare.net/xmlns/socialite"
        site_name="WebHare - Examplesite"
        type="website"
        image="web/img/logo-big.png"
        />
```

A robots meta-tag (like '<meta name="robots" content="noindex">') is automatically placed inside the head-element if robots plugin settings are applied to the current page in the siteprofile.

```
<robots xmlns="http://www.webhare.net/xmlns/consilio"/>
```

Changes are only visible in the output html after republishing the whole site.

The "htmlbody" component

The htmlbody is used for elements inside the body-element. Usually, this is used to render the page header, navigation and footer of pages (elements that are present on every page of the site).

It should at least have the macro [contents] which is used to render the actual contents of a page (as rendered by rich documents, forms, prebuilt pages, etc.).

Adding navigation

To add navigation to the template you first need to edit the Harescript library <webdesignname>.whlib in your editor. Inside this file you find a public objecttype <webdesignname>Design.

In this objecttype you can find (initially commented out) the function GetPageConfig(), which returns a record. All the fields in this return value can be used directly in the witty template.

Uncomment the function and change it to the following code:

```
UPDATE PUBLIC RECORD FUNCTION GetPageConfig()
{
 RETURN [ mainnav := this->GetMainNav()
      ];
```

```
}
```

The main navigation will show all folders with titles and published content from the root folder of the site. We can get a list of those folders by using a database SQL query on the table system.fs_objects. This table contains all files and folders within the publisher tree.

Within a webdesign object, there are three objects available that contain information about the currently rendered file:

To create the navigation, you have to access the database.
All files and folders can be retrieved from the 'system' database from the 'fs_objects' table. This can be accessed by loading:

LOADLIB "mod::system/lib/database.whlib";

For the main navigation we usually get all folders directly under the site main folder/siteroot with a title and a published indexfile.

The query for the main navigation will then look like this:

```
RECORD ARRAY FUNCTION GetMainNav()
{
  RETURN (SELECT *
               , isselected := this->targetobject->whfspath LIKE whfspath || "*"
            FROM system.fs_objects
           WHERE parent = this->targetsite->root // Items in site root
             AND link != ""      // With published indexfile
             AND title != ""     // Must have title
             AND isfolder        // Only folders
        ORDER BY ordering, ToUpperCase(title), name);
}
```

The result is a RECORD ARRAY with the navigation items in each RECORD.

After this you can use the results for the main navigation directly in the witty template by adding the navigation inside the htmlbody component like:

```
<header>
  <nav id="mainnav">
    <a href="[siteroot]" [if ishomepage]class="active"[/if]>Home</a>
    [forevery mainnav]

```

```
    <a href="[link]" [if isselected]class="active"[/if]>[title]</a>
   [/forevery]
  </nav>
</header>
```

'[FOREVERY][/FOREVERY]' iterates through the array with the navigation items.
Within the forevery loop you can use, besides the fields set within the navigation record, condition checks like : '[IF FIRST][/IF]', '[IF LAST][/IF]', '[IF ODD][/IF]'.
Or combinations like: '[IF NOT ODD][/IF]', [IF ODD][ELSE][/IF]

To see the navigation working, make sure you have to add a published "Rich Text Document" file to the site root. Then, add one or more folders (with title!), and also add published "Rich Text Document" files to those folders. Make sure these documents are marked as index of the folder (because the link to a folder is actually the link to its index file, but only if that file is published).

Subnavigation

Next, subnavigation is added, which will contain a list of all documents and folders in the current folder.

First, alter the pageconfig return record to:

```
RETURN [ mainnav := this->GetMainNav()
       , subnav  := this->GetSubNav(this->targetfolder->id)
       ];
```

And after the GetMainNav, add the following function:

```
RECORD ARRAY FUNCTION GetSubNav( INTEGER folderid )
{
 RETURN (SELECT *
           , isselected := this->targetobject->whfspath LIKE whfspath || "*"
         FROM system.fs_objects
        WHERE parent = folderid // Items in current folder
          AND link != ""       // Published pages
          AND title != ""      // Must have title
          AND id != this->targetfolder->indexdoc //Ignore indexfile of current folder
          AND (parent != this->targetsite->root OR NOT isfolder) //ignore folders in siteroot
      ORDER BY ordering, ToUpperCase(title), name);
}
```

Also, add the following to the witty template inside the htmlbody component:

```
<aside>
 [if subnav]
  <nav id="subnav">
   [forevery subnav]
    <a href="[link]" [if isselected]class="active"[/if]>[title]</a>
   [/forevery]
  </nav>
 [/if]
</aside>
```

Adding path/crumbtrail.

To add path navigation for current active page, alter the pageconfig return record to:

```
RETURN [ mainnav := this->GetMainNav()
       , subnav  := this->GetSubNav(this->targetfolder->id)
       , pathnav := this->GetPathNav()
       ];
```

Add at top of the file

```
LOADLIB "mod::publisher/lib/publisher.whlib";
```

The publisher.whlib library is needed for the function GetFolderTreeIds() used for getting the actual path.

And after the pageconfig the getpathnav function:

```
RECORD ARRAY FUNCTION GetPathNav()
{
 //Get all ids from site root until current folder
 // First item is the site root, last the current folder id
 INTEGER ARRAY foldertree_ids := GetFolderTreeIDs(this->targetfolder->id);

 RECORD ARRAY pathnav := SELECT *, title := title ?? name
                         FROM system.fs_objects
                        WHERE id IN foldertree_ids
                         AND link != ""  // only with published index
                         AND isfolder
```

```
                ORDER BY SearchElement(foldertree_ids, id); //Keep order set in foldertre

  IF( Length(pathnav) > 0 )
  {
   pathnav[0].title := "Home"; //Overwrite first title (home)

   //If current file is not the index, add current file to pathnav
   IF( this->targetobject->id != this->targetfolder->indexdoc AND this->targetfolder->id !=
   {
    INSERT [ link  := this->targetobject->link
          , title := this->targetobject->title ?? this->targetobject->name
          ] INTO pathnav AT END;
   }

   IF( Length(pathnav) = 1 )
    RETURN DEFAULT RECORD ARRAY;//If just one item (home), then don't show pathna
  }

  RETURN pathnav;
 }
```

And add the following code to the witty in the htmlbody component:

```
[if pathnav]
 <ol id="pathnav">
  [forevery pathnav]
   <li><a href="[link]">[title]</a></li>
  [/forevery]
 </ol>
[/if]
```

For styling the navigation you need to edit the scss file (<webdesignname>.scss).

Basic forms

If you want to add a contact form to the site, you can create a new file of type ‘Form’. You can style the form by altering the content of /shared/forms/forms.scss. The full form layout, with all basic fields, can be tested by selecting a file in your website in the Publisher and then using the ‘Open forms test’ in the menu under option ‘Tools’.

Simple widgets in the RTD with only HTML and Javascript

You can add simple components to the RTD by adding additional rules to the webdesign siteprofile and components to a Witty file.

For example if you want to offer a 'weather' widget (using https://weatherwidget.io/) option inside the RTD:

- Create folder widgets/weather/ inside the webdesign
- In this folder, add the file weather.siteprl.xml with the following content:

```
<?xml version="1.0" encoding="UTF-8" ?>
<siteprofile xmlns="http://www.webhare.net/xmlns/publisher/siteprofile">
 <widgettype namespace="http://yourdomainname/xmlns/widgets/weather"
          title="Weather"
          wittycomponent="weather.witty:weather">
 </widgettype>
</siteprofile>
```

- Also add the file "weather.witty" with the following content:

```
[rawcomponent weather]
<div class="widget widget-weather">
  <a class="weatherwidget-io" href="https://forecast7.com/en/52d226d89/enschede/" c
  <script>
   !function(d,s,id){var js,fjs=d.getElementsByTagName(s)[0];if(!d.getElementById(id)){js
  </script>
 </div>
[/rawcomponent]
```

By using 'rawcomponent' the content of this component will not be altered or interpreted while rendered.

- Add to the main siteprofile (<webdesignname>.siteprl.xml) directly after the existing applysiteprofile rule:

```
<applysiteprofile path="widgets/weather/weather.siteprl.xml" />
```

- Add to RTD siteprofile definition (/shared/rtd/rtd.siteprl.xml) inside the <widgets /> element:

```
<allowtype type="http://yourdomainname/xmlns/widgets/weather" />
```

- Go to the publisher and create a new RTD file in your website. Edit this file by double clicking. You can add the weather widget using the “insert object” button: 
- Publish the file. After publishing the widget is displayed in the page.

Add extra properties to files or folders

You can add extra properties to a file or folder by adding rules to the siteprofile. The data for these properties will be stored in a contenttype.

For example adding an SEO title option which overrides the title in html head element.

Add the following code to the end of the siteprofile (but before any <applysiteprofile> tag):

```
<contenttype namespace="http://yourdomainname/xmlns/page" cloneoncopy="true">
  <member type="string" name="seotitle" />
</contenttype>

<tabsextension xmlns="http://www.webhare.net/xmlns/tollium/screens"
               name="pagesettings"
               implementation="none"
               >
  <insert position="title" where="after">
    <textedit composition="contentdata" cellname="seotitle" width="1pr" title="SEO title"
  </insert>
</tabsextension>

<apply>
  <to type="file" />
  <extendproperties extension=".pagesettings" contenttype="http://yourdomainname/xr
</apply>
```

The contenttype defines the structure of the storage for the new property. The tabextension describes the extensions to the Publisher properties screen that are used to edit the property

values. And the apply node describes that the property screens are only displayed for files (not for folders).

After adding this part to the siteprofile you have an extra field ‘SEO title’ in the file properties just after the title field. To use this field in the template, you have to add some Harescript to the GetPageConfig function.

You can use this->pagetitle to alter the page title in the title tag in the head-element. The default title is the title of the current file if set, otherwise it’s the folder title or name if folder title is not set.

To change the page title add the following code add the beginning of the GetPageConfig function:

```
// Get the contents of the contenttype with the extra properties
RECORD pagesettings := this->targetobject->GetInstanceData("http://yourdomainname/x

// Use the seotitle as page title if set
IF (pagesettings.seotitle != "")
  this->pagetitle := pagesettings.seotitle;
ELSE
{
  // Otherwise, format the title as (pagetitle - sitetitle)
  this->pagetitle := this->siteconfig.sitetitle;
  IF (this->targetobject->title != "")
  {
    // If page has a title, add this before site title
    this->pagetitle := this->targetobject->title || " - " || this->pagetitle;
  }
  ELSE IF (this->targetfolder->id != this->targetsite->root AND this->targetfolder->title != ""
  {
    //Use folder title if not siteroot and no pagetitle is set
    this->pagetitle := this->targetfolder->title || " - " || this->pagetitle;
  }
}
```

Adding a news folder with news items

To add a news folder, in which every news item has an associated publication date, the following steps can be taken:

First, add a new custom ‘news’ folder type to the siteprofile:

```
<!-- News folder -->
<contenttype namespace="http://yourdomainname/xmlns/folders/news" cloneoncopy="
<foldertype typedef="http://yourdomainname/xmlns/folders/news"
        title="News"
        tolliumicon="tollium:folders/news" />

<!-- allow creation of news folders in every folder in the site -->
<apply>
 <to type="folder" />
 <allowfoldertype typedef="http://yourdomainname/xmlns/folders/news" />
</apply>
```

To add the storage and property screen extensions for the publication date, modify the “page” contenttype in the siteprofile to the following:

```
<contenttype namespace="http://yourdomainname/xmlns/page" cloneoncopy="true">
 <member type="string" name="seotitle" />
 <member type="datetime" name="date" />
</contenttype>
```

And add the following code for the property screen extensions:

```
<tabsextension xmlns="http://www.webhare.net/xmlns/tollium/screens"
        name="newspagesettings"
        implementation="none"
        >
 <insert position="description" where="after">
  <datetime composition="contentdata" cellname="date" required="true" title="Date" typ
 </insert>
</tabsextension>
<apply>
 <and>
  <to type="file" parenttype="http://yourdomainname/xmlns/folders/news" />
  <not><to type="index" /></not>
 </and>
 <extendproperties extension=".newspagesettings" contenttype="http://yourdomainnam
```

```
        </apply>
```

You can now create a news type folder and every file (except the index) in this folder has an extra date field just after the description field in the file properties.

To display the date in the template add

```
LOADLIB "wh::datetime.whlib";
```

At the top of the Harescript library [webdesignname].whlib so you can use the date formatting function.

Then add the date to the pageconfig function return value. The FormatDateTime function is used to present the date in a readable format.

```
RETURN [ mainnav := this->GetMainNav()
      , subnav  := this->GetSubNav(this->targetfolder->id)
      , pathnav := this->GetPathNav()
      , date    := FormatDateTime("%d %B %Y",pagesettings.date, this->languagecode ) //P
      ];
```

After this you can add next line to the witty template

```
[if date]<div class="pagedate">[date]</div>[/if]
```

Adding headerimage to page

If you want a pageimage for every page, you need to add the following.

Change xml for the page contenttype properties to:

```
<contenttype namespace="http://yourdomainname/xmlns/page" cloneoncopy="true">
 <member type="string" name="seotitle" />
 <member type="datetime" name="date" />
 <member type="file" name="headerimage" />
</contenttype>
```

Then add to tabextention named ‘pagesettings’

```
<newtab title="Header image">
 <imgedit composition="contentdata"
        cellname="headerimage"
        width="1pr"
        height="350px"
        title="Header image"
        allowedactions="all refpoint" />
</newtab>
```

You should now see an extra tab ‘Header image’ in the properties of every file in the site.

To display the header image in the website first add

```
LOADLIB "mod::system/lib/cache.whlib";
```

at the top of the harescript library `[webdesignname].whlib` so you can use the image cache and resize function WrapCachedImage.

Now you can add

```
, headerimage := WrapCachedImage( pagesettings.headerimage,
     [ method    := "fill"
     , setwidth  := 2048
     , setheight := 350
     ])
```

inside the pageconfig return record.

In the witty template you change the header element to

```
<header>
 [if headerimage]
   <img class="headerimage" src="[link]" alt=""/>
 [/if]
 <nav id=”mainnav”>
  [forevery mainnav]
   <a href=”[link]” [if isselected]class=”active”[/if]>[title]</a>
  [/forevery]
 </nav>

```

```
</header>
```

and add the additional appropriate css styling to [webdesignname].scss

Add extra properties to site

You can add extra properties to the site folder by adding rules to the siteprofile xml

For example adding custom selectable footer navigation.

Add following to the siteprofile:

```
<contenttype namespace="http://yourdomainname/xmlns/site">
 <member type="array" name="footerlinks">
  <member type="string" name="title" />
  <member type="intextlink" name="link" />
 </member>
</contenttype>

<tabsextension xmlns="http://www.webhare.net/xmlns/tollium/screens"
            name="sitesettings"
            implementation="none"
            >
 <newtab title="Footer">
  <heading title="Footer links" />
  <arrayedit rowselect="true"
            composition="contentdata"
            cellname="footerlinks"
            roweditscreen=".editfooterlinks"
            width="1pr"
            height="1pr"
            orderable="true">
    <column name="title" title="Title"  type="text" width="1pr" />
    <p:intextlinkcolumn name="link" title="Link" width="2pr" />
  </arrayedit>
 </newtab>
</tabsextension>
<apply>
 <to type="folder" pathmask="/" />
 <extendproperties extension=".sitesettings" contenttype="http://yourdomainname/xm
</apply>
```

```
<screen name="editfooterlinks"
      title="Edit link"
      implementation="rowedit"
      minwidth="350px"
      xmlns="http://www.webhare.net/xmlns/tollium/screens">
 <compositions>
  <record name="row" />
 </compositions>
 <body>
  <textedit composition="row" cellname="title" title="Title" required="true" width="1pr" />
  <p:intextlink composition="row" cellname="link" title="Link" required="true" />
 </body>
 <footer>
  <defaultformbuttons buttons="ok cancel" />
 </footer>
</screen>
```

And add at top namespace for components ‘xmlns:p’ to the siteprofile

```
<siteprofile xmlns="http://www.webhare.net/xmlns/publisher/siteprofile"
        xmlns:m="http://www.webhare.net/xmlns/system/moduledefinition"
        xmlns:p="http://www.webhare.net/xmlns/publisher/components">
```

After this you see an extra tab ‘Footer’ in the properties of the site folder where you can add links for the footer.

To display the footer links in the template first add

```
LOADLIB "mod::publisher/lib/publisher.whlib";
```

in top of the harescript library [webdesignname].whlib so you can use the function GetIntextLinkTarget for link resolving.

Then add to the pageconfig function:

```
RECORD sitesettings := this->targetsite->rootobject->GetInstanceData("http://yourdomai
```

And add in the return record of the pageconfig function:

```
, footernav := (SELECT title, link := GetIntextLinkTarget(link) FROM sitesettings.footerlink
```

Now you can use footernav in the witty template like:

```
<footer>
 [if footernav]
  <nav id="footernav">
   [forevery footernav]
    <a href="[link]">[title]</a>
   [/forevery]
  </nav>
 [/if]
</footer>
```

Adding custom widgets with extra properties in RTD

Adding a custom widget in the RTD with extra properties like a two columns widget

Create folder widgets/twocolumns/

To this folder, add file: twocolumns.siteprl.xml with the following content:

```
<?xml version="1.0" encoding="UTF-8" ?>
<siteprofile xmlns="http://www.webhare.net/xmlns/publisher/siteprofile">
<widgettype namespace="http://yourdomainname/xmlns/widgets/twocolumns"
            title="Two columns"
            editfragment=".edittwocolumns"
            renderlibrary="twocolumns.whlib"
            renderobjectname="EmbedTwoColumns"
            wittycomponent="twocolumns.witty:twocolumns"
            >
  <members>
   <member name="left" type="richdocument" />
   <member name="right" type="richdocument" />
  </members>
 </widgettype>

 <fragment name="edittwocolumns"
          xmlns="http://www.webhare.net/xmlns/tollium/screens"
```

```
        implementation="none">
    <contents>
     <grid>
      <col width="1pr" />
      <col width="1pr" />
      <row>
       <cell height="1pr">
        <richdocument cellname="left"
                      composition="contentdata"
                      errorlabeltid=".left"
                      required="true"
                      width="400px"
                      height="1pr"
                      minheight="330px"
                      />
       </cell>
       <cell height="1pr">
        <richdocument cellname="right"
                      composition="contentdata"
                      errorlabeltid=".right"
                      required="true"
                      width="400px"
                      height="1pr"
                      minheight="330px"
                      />
       </cell>
      </row>
     </grid>
    </contents>
   </fragment>

</siteprofile>
```

Create file twocolumns.witty with content:

```
[component twocolumns]
  <div class="widget-twocolumns">
    <div class="col">
      [left]
    </div>
```

```
    <div class="col">
      [right]
    </div>
  </div>
[/component]
```

Create file twocolumns.whlib with content:

```
<?wh
LOADLIB "mod::publisher/lib/widgets.whlib";

PUBLIC OBJECTTYPE EmbedTwoColumns EXTEND WidgetBase
<
  MACRO PTR left;
  MACRO PTR right;

  MACRO NEW()
  { //Pointer for RTD rendering always before Render function
    this->left := PTR this->context->OpenRTD(this->data.left)->RenderAllObjects;
    this->right := PTR this->context->OpenRTD(this->data.right)->RenderAllObjects;
  }

  UPDATE PUBLIC MACRO Render()
  {
     this->EmbedComponent([ left  := this->left
                          , right := this->right
                          ]);
  }
>;
```

Add to the main siteprofile (<webdesignname>.siteprl.xml) directly after the existing applysiteprofile rule:

```
<applysiteprofile path="widgets/twocolumns/twocolumns.siteprl.xml" />
```

For styling add file twocolumns.css to the folder with:

```
.widget-twocolumns
{
```

```
  display: flex;
}
.widget-twocolumns > .col
{
  flex: 0 1 50%;
  max-width: 50%;
  padding-right: 15px;
}
.widget-twocolumns > .col + .col
{
  padding-left: 15px;
  padding-right: 0;
}
@media(max-width: 600px)
{
  .widget-twocolumns
  {
    display: block;
  }
  .widget-twocolumns > .col
  {
    padding-right: 0;
  }
  .widget-twocolumns > .col + .col
  {
    padding-left: 0;
  }
}
```

Note: Use .css file when you want to use the styling in RTD-editor because editor preview does not handle .scss files

Add to main scss file definition <webdesignname>.scss

```
@import "./widgets/twocolumns/twocolumns.css";
```

Add to RTD siteprofile definition (/shared/rtd/rtd.siteprl.xml)

after ‘<css path="rtd.css" />’:

```
<css path="../../widgets/twocolumns/twocolumns.css" />
```

(This is used by the RTD-editor to preview the widget)

and inside the <widgets /> element:

```
<allowtype type="http://yourdomainname/xmlns/widgets/twocolumns" />
```

Adding a search page

This uses the integrated WebHare search engine called ‘Consilio’.

Create the folder pages/search/.

Add to this folder the file search.siteprl.xml with the following content:

```
<siteprofile xmlns="http://www.webhare.net/xmlns/publisher/siteprofile">
 <filetype namespace="http://examplesite.webhare.com/xmlns/types/searchpage" kind
  <dynamicexecution webpageobjectname="search.whlib#SearchPage" />
  <robots xmlns="http://www.webhare.net/xmlns/consilio" noindex="true" nofollow="tru
 </filetype>

 <!-- Consilio catalog, name MUST start with <modulename>:
      Change for your own site the folder attribute in the contentsource (site::<your-site-na
 -->
 <index xmlns="http://www.webhare.net/xmlns/consilio" name="examples:examplesite"
  <contentsource type="publisher:webhare" folder="site::example-site" />
 </index>
</siteprofile>
```

Add file search.whlib to the folder with the following content:

```
<?wh
LOADLIB "wh::witty.whlib";
LOADLIB "mod::consilio/lib/api.whlib";
LOADLIB "mod::publisher/lib/webdesign.whlib";
LOADLIB "mod::system/lib/webserver.whlib";
```

```
PUBLIC OBJECTTYPE SearchPage EXTEND DynamicPageBase
<
 UPDATE PUBLIC MACRO PrepareForRendering(OBJECT webcontext)
 {
  INSERT "searchpage" INTO webcontext->htmlclasses AT END;
 }

 UPDATE PUBLIC MACRO RunBody(OBJECT webcontext)
 {
  STRING words := GetWebVariable("words");
  RECORD results := RunConsilioSearch("modulename:websitename", CQParseUserQue

  EmbedWittyComponent( this->pagefolder || "search.witty:search", CELL[...results, word
 }

>;
```

Next add the file search.witty to the folder with the following content:

```
[component search]
 <form action="./" method="get">
  <input type="search" value="[words]" name="words" placeholder="Search for..." />
  <button type="submit">Search</button>
 </form>

 <div class="results">
  [if totalcount]
   [totalcount] item(s) found for '[words]'.
  [elseif words]
   No items found for '[words]'.
  [else]
   No search term given
  [/if]

  [if results]
   <ul class="searchresults">
    [forevery results]
     <li>
```

```
          <a href="[objectid]">
           <b class="title">[if title][title][else]<i>No title</i>[/if]</b>
           [if summary]
            <span class="summary">[summary]</span>
           [/if]
          </a>
         </li>
        [/forevery]
       </ul>
      [/if]
     </div>

[/component]
```

To make the consilio-search engine to create summaries of just the content of a page, add html comments, in the main witty template around the [contents] macro else the summary will also contain the navigation and footer content.

```
<!--wh_consilio_content-->
[contents]
<!--/wh_consilio_content-->
```

Add to the main siteprofile (<webdesignname>.siteprl.xml) directly after the existing applysiteprofile rule(s):

```
<applysiteprofile path="pages/search/search.siteprl.xml" />
```

Finally, create in the website a new file of type ‘Search page’. The filetype will not be visible immediately, you’ll need to enable “Show all types’. In this case that’s probably okay as you don’t need site users to be able to create multiple search pages. But if you want to enable users to select the Search page type, add the following code to the site profilel:

```
<apply>
 <to type="all" />
 <allowfiletype typedef="http://examplesite.webhare.com/xmlns/types/searchpage" />
</apply>
```

For styling add ‘search.css’ (or .scss) to the folder and add to main scss file definition (<webdesignname>.scss)

```
@import "./pages/search/search.css";
```

and put your styling for the search page in the search.css file.