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# 1 Introduction

The hyper Content & Digital Asset Management Server has its own workflow management. This allows you to define processes for content release that are mapped within the editors, as well as consistent work processes.

Through the free definition of a staged workflow and the allocation of rights to each instance of the workflow, content can only be modified and released when an instance (user) has completed the defined workflow. The integrated editors and approvers decide on forwarding /approval or rejection of contents by mouse click. The involved persons will be notified automatically via the task management and e-mail.

With the help of so-called robots (virtual members of the workflow) operations can be automated as well. Business processes can be defined using robot-instances which automatically connect to other systems (Mail servers, ERP systems, databases) in order to start further actions.

A workflow can be set individually in templates for pages or components or it can be linked to folders. All pages and components in this folder are subject to the same workflow process.

So that users can see at a glance which objects have already been released as part of a workflow and which are still being processed, there are icons that appear in both the detail and thumbnail views:



... Finished or released



... in Progress

## 2 Important rules

The following rules need to be considered when defining a workflow:

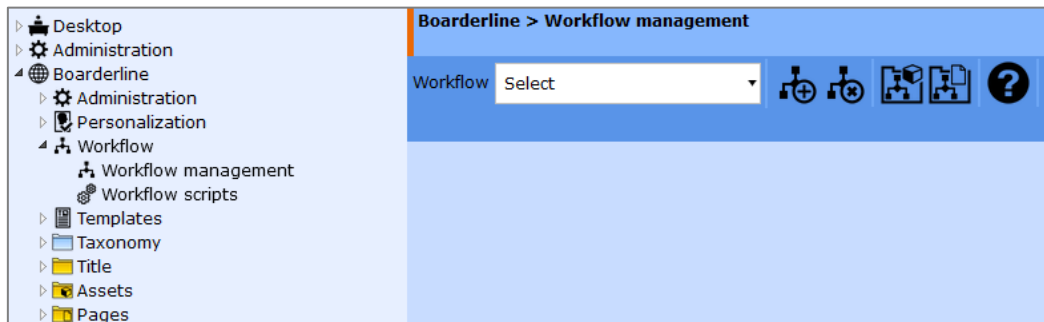
- Only the first user within the workflow (start) is able to reset the workflow. If the first user edits an object whose workflow is complete, the entire workflow will start again. This means that the flow of the document begins from start again.
- If a user accesses a document that his approver has already released, she has no influence on the document and can no longer edit it.
- If an entire folder will be published that holds objects with an assigned workflow, only those objects that have been released will be published.
- A workflow linked to an object has higher priority than a workflow assigned by a folder. If an object has a workflow assigned by a template, the assigned workflow by a folder or its subfolders will be replaced by the workflow of the template. The same applies to subfolders which have a workflow assigned.

## 3 Workflow management

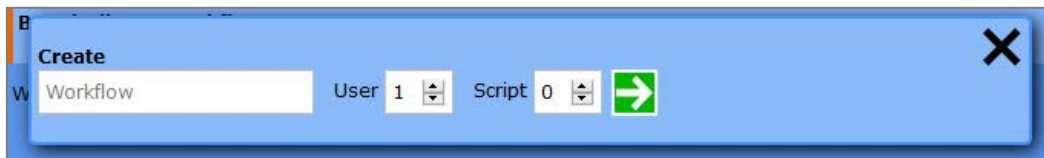
The workflow management is the administrative environment for all processes. New processes and existing processes and their areas of application can be defined.

### 3.1 Creating a workflow

Select the item "Workflow Management" in the navigation tree. A new toolbar will appear in the work area. Move the mouse cursor over an icon to display the name of the action:



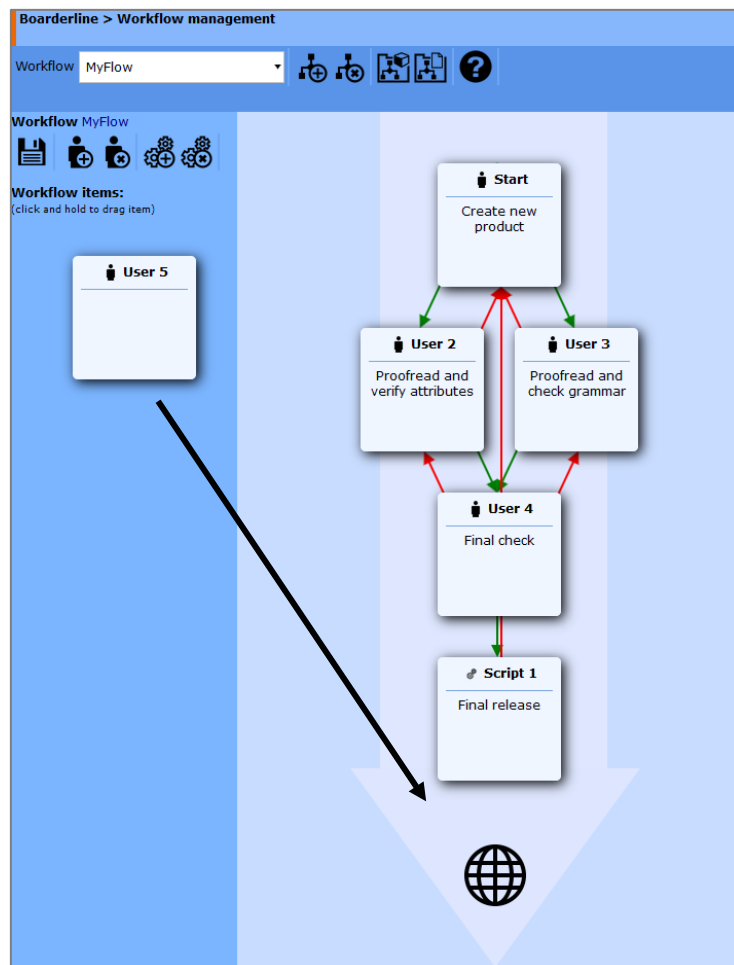
Select the first icon "Create" to create a new workflow. You will be prompted to enter a name and the number of users and robots. You can also add or remove participants of the workflow later at any time. Confirm by clicking the "OK" button.



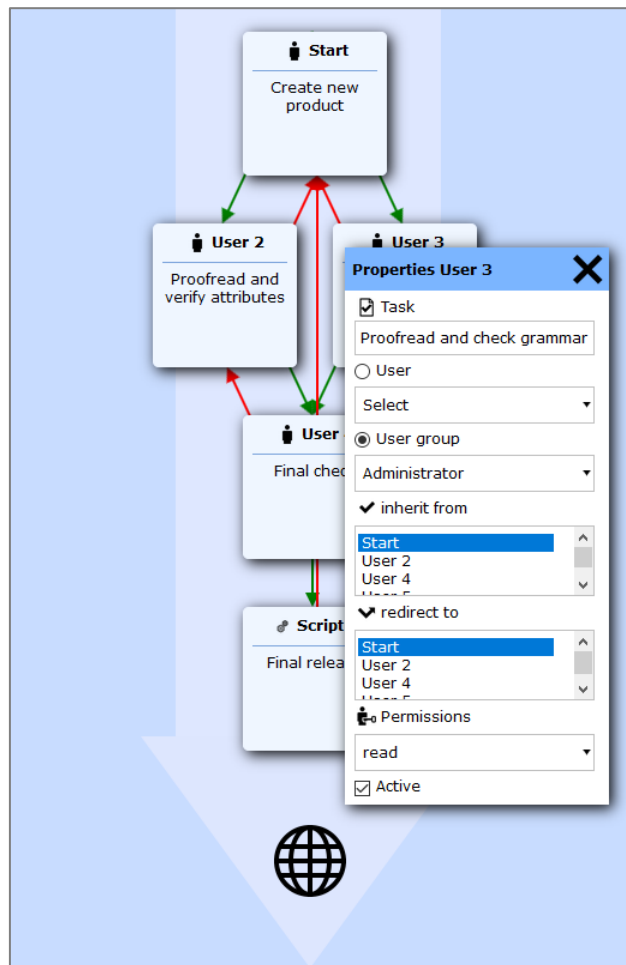
Now the new workflow is created and you can define the content flow between the instances/participants.

The work area for editing the workflow is divided into two segments. The left pane contains a sub-toolbar, as well as all the participants. Using the tool bar, you can save the workflow at any time and add or remove users as well as scripts/robots.

Below the small toolbar the icons of the participants of the workflow will be displayed, these icons can be moved and positioned by a simple click and drag using the mouse.



Now the properties of the individual participants can be set. Click on the icon of a workflow member/item to open its properties in a new context menu. The set of properties vary whether it is a user or a script (robot). For users you can optionally define if the member is a user or a user group. Select an option using the radio buttons and assign a user or a user group to the workflow item. The same applies for scripts (robots). You need to select an existing script that defines the task of the robot.



In addition to the assignment of a user, group of users or a script, the predecessor needs to be defined. The predecessor passes the document to the next member in the workflow process. Optionally, a member to return a rejected content can be defined as well. Again, a multiple selection is possible. If no successor for rejected content is defined, then the predecessor will be used. A successor will only be used in case of rejection of content by a participant.

Furthermore, the permissions of the participant in the workflow need to be defined:

- read
- read + edit
- read + publish
- read + edit + publish

The participants can thus read, edit/modify or publish documents in accordance with their permissions within the process.

A robot has no such property because his actions are defined using a script.

The last step requires to activate the participant. Only then the instance is integrated into the workflow. If the participant is disabled, it means that this instance is removed from the workflow.

After finishing the workflow definition, the workflow need to be saved.

## 3.2 Editing a workflow

Select an existing workflow in order to make modifications. After that the same graphical user interface as shown previously in "Creating a Workflow" will be available in order to modify the process.



## 3.3 Removing a Workflow

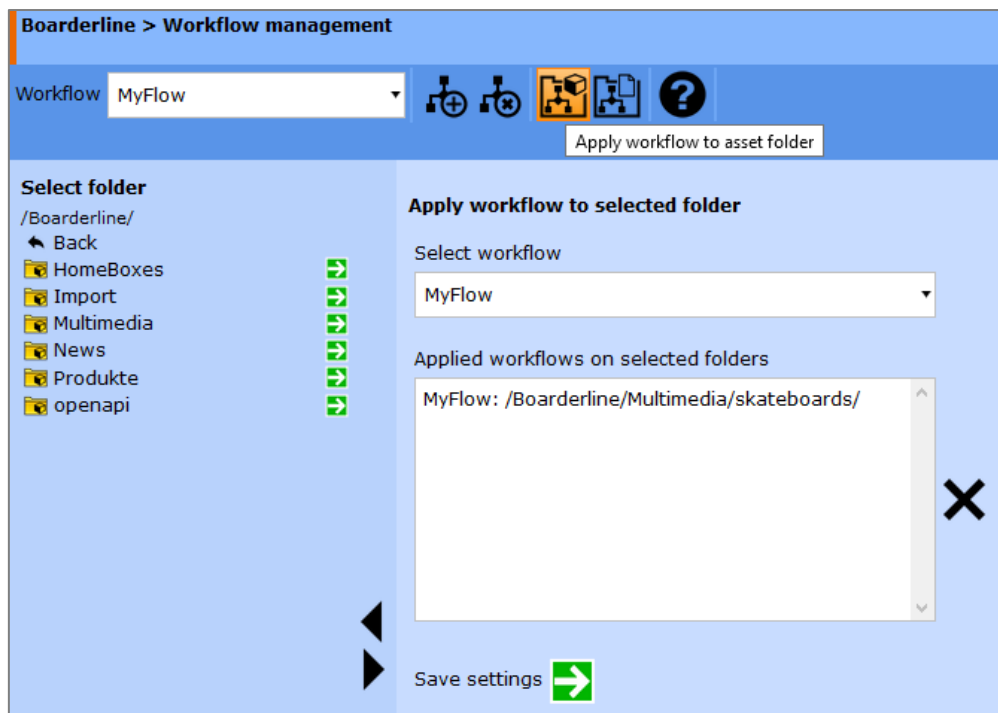
Select "Remove", after that a drop-down menu for the selection of a workflow will appear. Select the desired workflow process and confirm removing it by clicking the "OK" button.



## 3.4 Assigning a workflow to a folder

Workflows can be associated with component folders or pages folders. The selected workflow process will be applied to all pages and components in this folder, or its sub-folder. By defining a workflow in a template, or by allocating a workflow on sub-folders, the defined workflow will be overridden. To assign a workflow to a folder, you need to select one by using the drop menu. Subsequently, a folder can be selected by using the Navigator. By clicking the "OK" button, the selected workflow will be associated with the selected folder. The new entry will appear in the list box on the right panel. If the folder is already used, an assignment will not be possible and an error message will appear. Do you want to remove the workflow from a folder again, you can do this by selecting an entry in the list box and clicking the "Remove" button.

Please save the settings by clicking the „OK“ button.

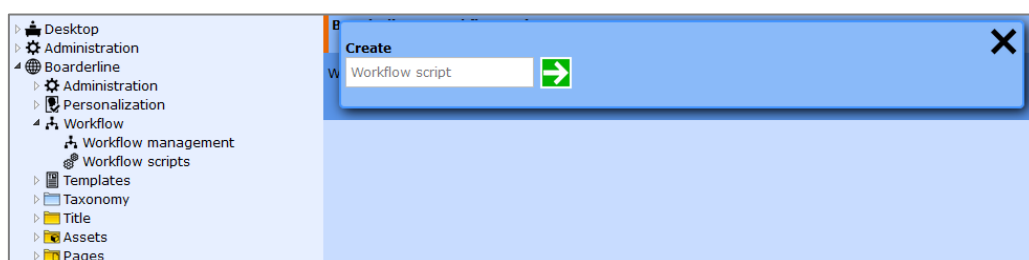


## 4 Workflow scripts

With the help of the so-called "Workflow Scripts" robots can be defined. These are programs that will be executed automatically according to the defined interface. Robots behave in their actions not significantly from normal users, since they can approve or reject content. However, they act immediately after their call within the workflow process and can perform all kind of different tasks in the system. The developer of a Workflow Script has many opportunities using PHP to define a virtual workflow member and its tasks.

### 4.1 Creating a workflow script

A new Workflow Script is initiated by a click on the first button of the toolbar. After entering a unique name and confirmation with "OK", the script or robot will be created. The script holds no logic so far and therefore can perform any action. It is therefore necessary to tell the robot which activities it should take. This is done using a PHP script with the help of the hyperCMS APIs.





## Parameters used for Workflow Script programming

### The following set of input-variables can be used:

Publication: \$site

Position of the object (path): \$location

Object name: \$object

### The following system-settings can be accessed and used:

\$mgmt\_config (Array)

### The result of the Workflow-Scripts (Output) must be:

If successful => Release of the object and forwarding it to the next instance:  
return true;

If not successful => Rejecting the object and sending it back to the predecessor:  
return false;

**The following example shows a Workflow Script. This script will check a certain attribute/content of an object (page, component or file) and will release it for publishing or will reject it:**

```
// load current object
$info = getobjectinfo ($site, $location, $object, "sys");

if ($info != false)
{
    // load content container of object
    $data = loadcontainer ($info['content'], "work", "sys");

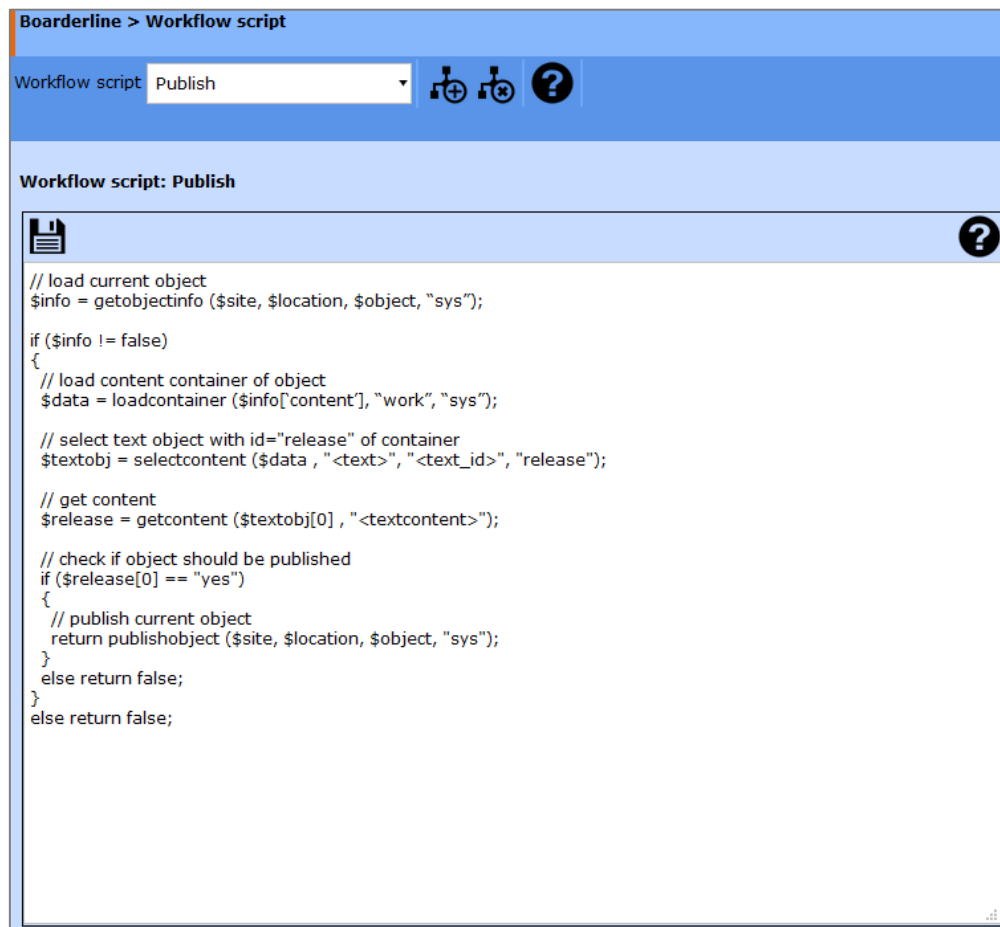
    // select text object with id="release" of container
    $textobj = selectcontent ($data , "<text>", "<text_id>", "release");

    // get content
    If (!empty ($textobj[0])) $release = getcontent ($textobj[0] , "<textcontent>");

    // check if object should be published
    if (!empty ($release[0]) && $release[0] == "yes")
    {
        // publish current object
        return publishobject ($site, $location, $object, "sys");
    }
    else return false;
}
else return false;
```

The previous example uses the hyperCMS API, more information can be found in the hyperCMS Programmers Guide.

The script can be saved using the save button. A help function regarding the input/output-parameters can be accessed by clicking the ?-icon.



## 4.2 Removing a workflow script

Remove an existing Workflow Script by clicking on the "Remove" icon. Select the workflow that should be removed and confirm with the "OK" button. The script will be removed. Attention: All workflows using this robot will be affected.

## 4.3 Editing a workflow script

Select an existing workflow from the drop-down menu. Now the script will appear in the editor and can be modified.

## 5 Legal reference / flag

### 5.1 Questions and suggestions

For advanced questions and suggestions, please contact the support.

**hyperCMS Support:**

[www.hypercms.com](http://www.hypercms.com)

[support@hypercms.com](mailto:support@hypercms.com)

### 5.2 Imprint

Responsible for the content:

hyperCMS

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A-1020 Vienna – Austria

[office@hypercms.com](mailto:office@hypercms.com)

<http://www.hypercms.com>

### 5.3 Legal information

The present product information is based on the version of the program, which was available at the time the document was composed.

The maker reserves the rights of modifications and corrections of the program. Errors and misapprehension accepted.

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