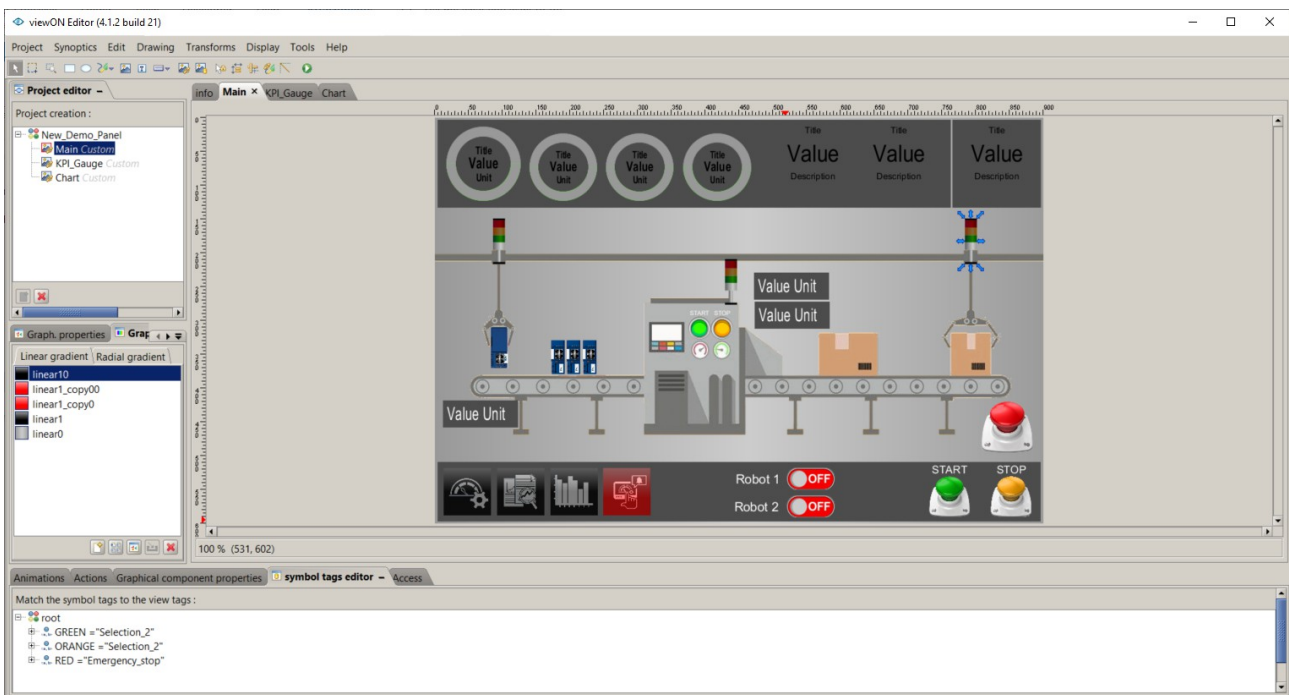


Viewon - Getting Started

Application User Guide



AUG-005-02 4.1 en-US

Important User Information

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1. Hardware and software requirements

1.1. Hardware requirements

In order to follow this guide you need:

- 1 Ewon device with viewON capabilities (for example: Ewon Flexy)
- 1 PC with an Internet access and an up-to-date web browser

1.2. Software requirements

Ewon configuration software:

The Ewon device is configured through its embedded web server. So all you need is a standard web browser software like Firefox or Chrome.

Additionally we suggest to download the eBuddy utility on our support website:

<https://resources.ewon.biz/download/ebuddy>

The eBuddy utility lists all the Ewon devices available on your network and changes the default IP address of an Ewon device to match your LAN IP address range. With eBuddy you can also easily backup/restore your configuration or upgrade the firmware of your Ewon device.

viewON software:

To create a viewON project, the viewON Editor is needed on your PC.

To visualize the exported viewON application on the Ewon device you simply need an up- to-date web browser (Mozilla FireFox, Google Chrome,...).

This makes the viewON project visualization compatible with any kind of platform (computer, tablet, smartphone) and any kind of OS (Windows, Linux, MacOS, iOS, Android).

The viewON editor software can be downloaded on the Ewon web site:

<https://resources.ewon.biz/download/viewon>

1.3. Ewon firmware version

To be able to follow this guide, your Ewon device needs a firmware version 14.4s0 or higher.

A simple way to upgrade the Ewon firmware is to use eBuddy, the Ewon software companion. We recommend upgrading your Ewon device to the latest available firmware version before starting a new viewON project.

2. viewON Editor Installation

2.1. Software installation

Launch the viewon-setup-#.#.#.exe file and follow the different steps to install the viewON application on your PC.

Software download link: <https://www.ewon.biz/technical-support/pages/all-downloads>

2.2. viewON Registration

From a feature point of view there is no difference between an unregistered copy or an registered copy of viewON.

Having a registered copy of viewON will give you access to support. In case of problems or questions, you can contact your local distributor. The local distributor will relay your question to HMS support if required.

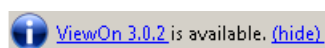
To register your viewON software, you must first contact your local distributor to purchase a viewON license.

The detailed procedure for registering your viewON software is available here:

<https://resources.ewon.biz/en/doc/support/kb-0153-00-register-your-viewon>

2.3. viewON Updates

If the PC running viewON has an Internet connection, there is an automatic check for available updates when the viewON editor starts. If updates are available, it displays a message at the top right of the main toolbar in the working area:

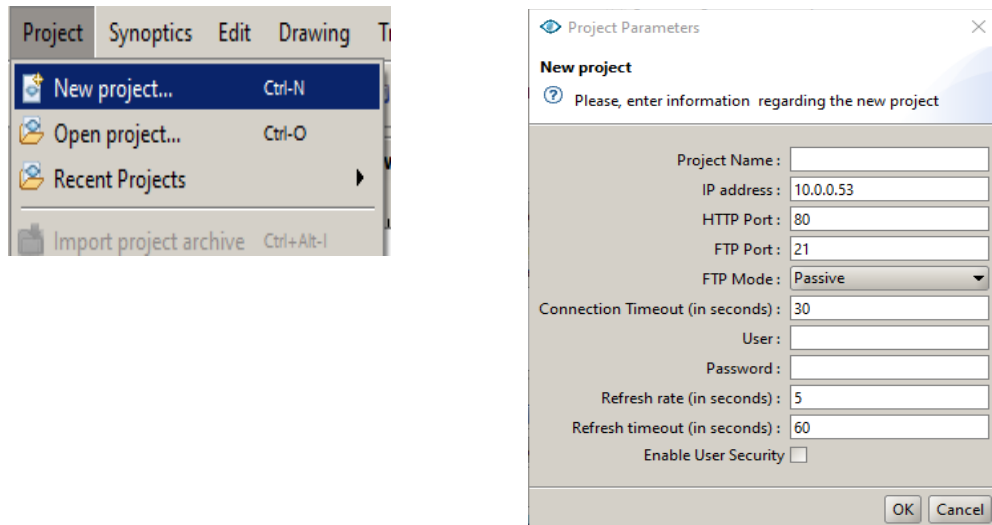


By clicking on the link, you will be redirect to the Ewon website in order to download the new version of viewON.

3. Create your first viewON project

Creating your own web pages on the Ewon device using the viewON editor is very simple. This chapter summarizes the different steps to follow to create your first viewON project and to export it to the Ewon device.

3.1. Create a new project



Define the «Project Name» and the «IP address» of your Ewon device. The IP address encoded here should be the IP address on which you can reach the Ewon for the project setup (Tag import and project download). In most of the use cases it should be the Ewon LAN IP address which will be used here.

You can leave the «HTTP Port», «FTP Port», «FTP Mode» and «Connection Timeout» parameters unchanged. The connection to the Ewon for the viewON project creation is performed using the FTP protocol. Only change these parameters if you encounter connection problems to the Ewon device during project setup.

In the «User» and «Password» fields, you can enter the Ewon account that has administrator rights or any other Ewon account which has enough FTP access rights. If these fields are left blank, the user will be prompted for credentials when FTP access with the Ewon device is required such as when importing tags or exporting the project.

In the «Refresh rate» field, enter the refresh rate in seconds at which the viewON web page should read the Tags value from the Ewon device.

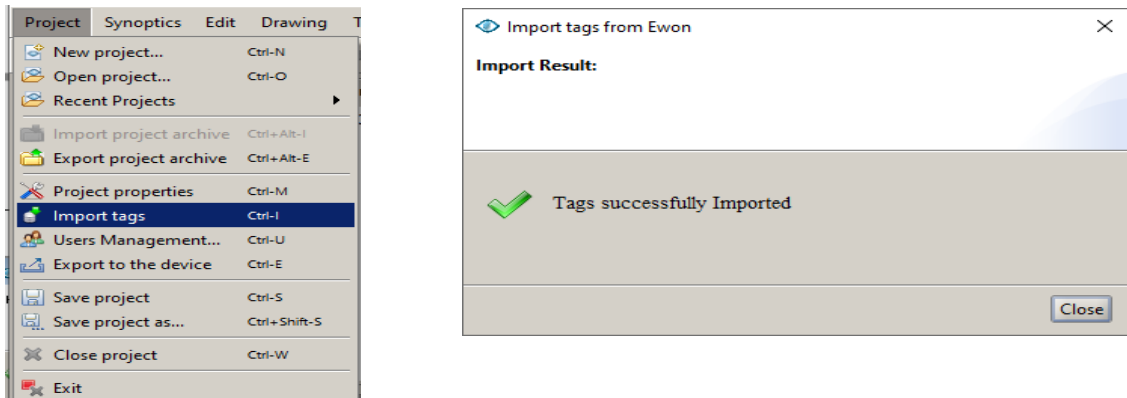
If you attempt to visualize the viewON application over a slow Internet connection then it is recommended to specify a refresh rate of 5 or 10 seconds.

In the «Refresh timeout» field, enter the time interval in seconds viewON should wait for an answer when asking to refresh the tags value.

If you will be using viewON's User Security feature as described in 6.10.-Access User Rights, then select the Enable User Security option.

3.2. Import Tags from your Ewon Device

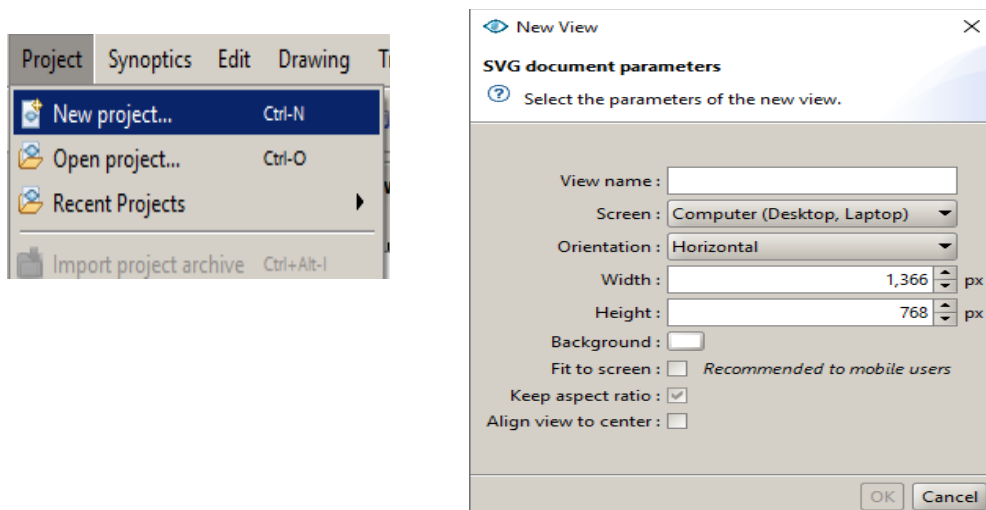
To import the Ewon Tags, use the Import tags feature in the Project Menu. You will then be able to associate the Ewon Tags to animations, actions, etc.



If the HTTP transfer has been done successfully, the above message should appear. The Tags should then be imported from the Ewon device to the viewON project.

3.3. Add views to the project

In the project editor, right click on the project name to show up the context menu and click "Insert new view".



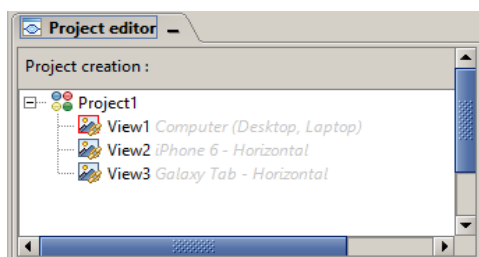
You will need to define some of the view specifications:

- **View name:** Put the name you wish to set for the view

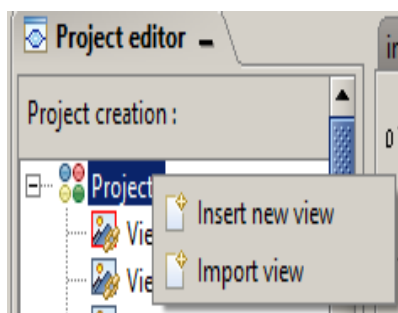
- **Screen:** select the device on which this view will be displayed on (computer, tablet, smartphone, etc.) Following the selected item, the width and height will automatically adapt.
- **Orientation:** If the view should be in a horizontal or vertical mode.
- **Width / Height:** The size of the view can be customized (the Screen field will adapt automatically).
- **Background:** The background color for the view.
- **Fit to screen:** By checking this box, you avoid the need for users to scroll when displaying the project on small resolution devices.
- **Keep aspect ratio:** Should the project always respect the width/height ratio or can it be distorted?
- **Align view to center:** By checking this box, the center of the view will appear in the center of the screen on initial load even if the screen size and the view are different.

3.4. Define the Main view

After adding 3 views (named View1, View2, View3) the project explorer should look like this:



To define the view that will be displayed first at the start-up of the viewON application, right click on the view in order to open the context menu and select «Main view».



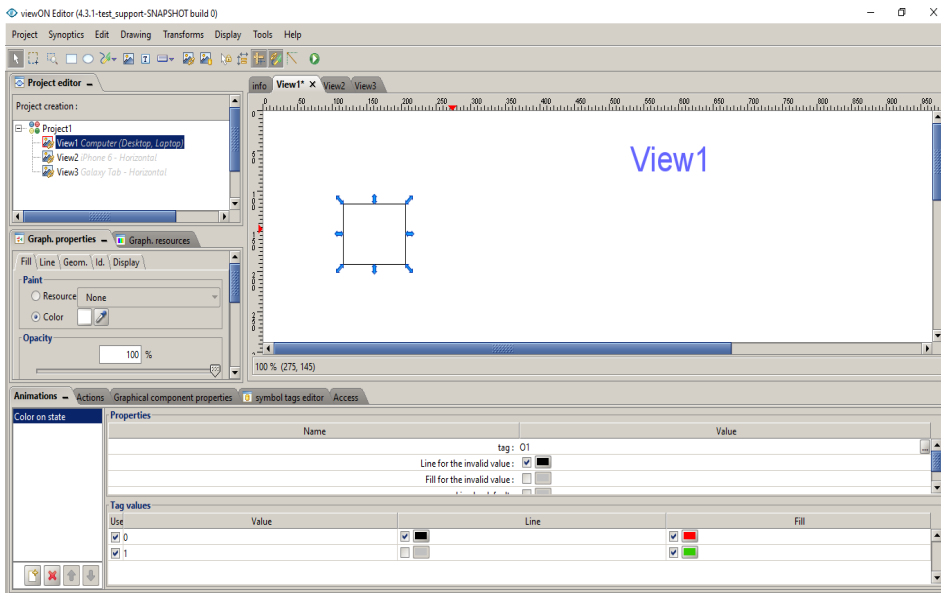
In the Project editor, the Main view is displayed with a red square around its icon.

3.5. Add animations and actions to your objects

Inside the views, add objects and link animations and/or actions to the objects.

Click "Drawing → Rectangle, Ellipse, Path, Image, Text, Symbols, Graphical components,... and then position it in the view

The chapters "Animations" and "Actions" inside this manual explain in detail how to link an Animation or an Action to objects.

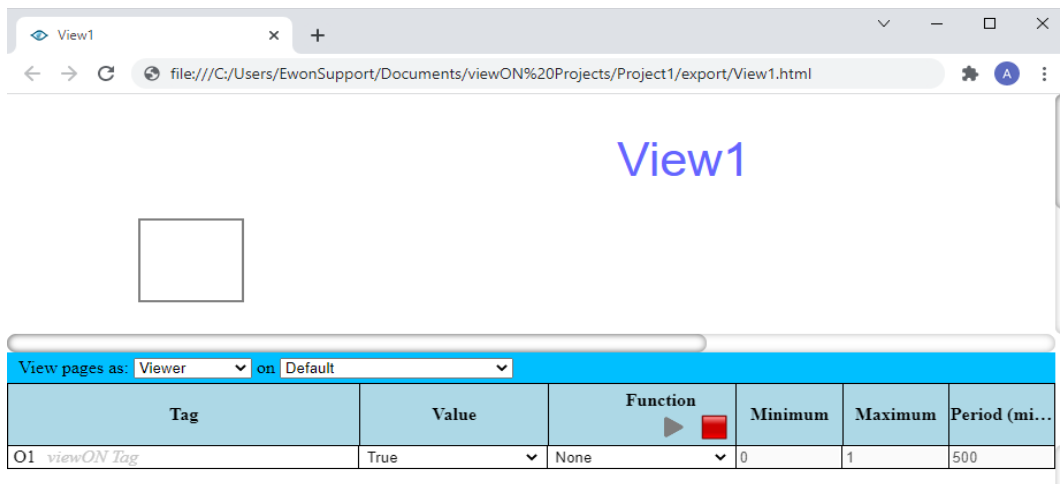


3.6. Test your animations

You can test your project without exporting it to the Ewon device.

To do so, just launch the application simulator using the  icon in the tool bar.

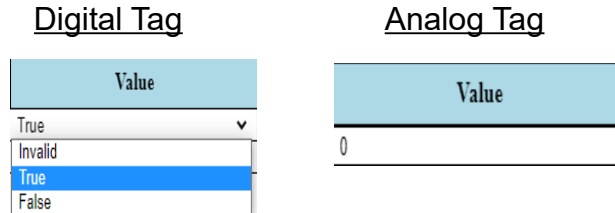
The application simulator opens in your default browser.



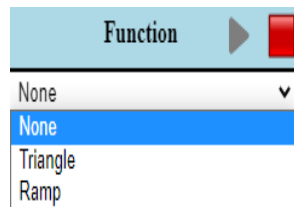
The upper section of this window shows the result of your project.

The lower section of this window allows you to simulate the tag values in order to test the configured animations and actions.

You can simply change the value by entering a new one in the targeted field.



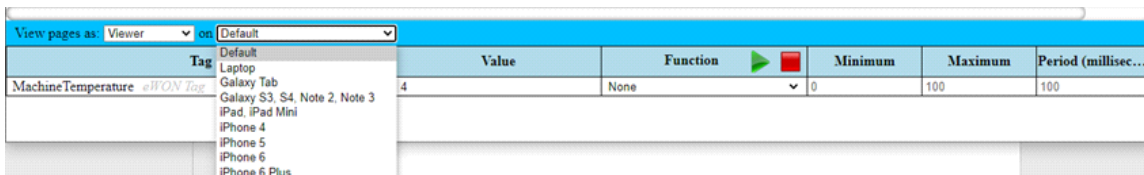
You can also use a function to change the values of your tags automatically. Choose one of the proposed functions and define a minimum/maximum value and the update period. Click "Play" icon to run the function(s) and "Stop" icon to stop them.



- Note -

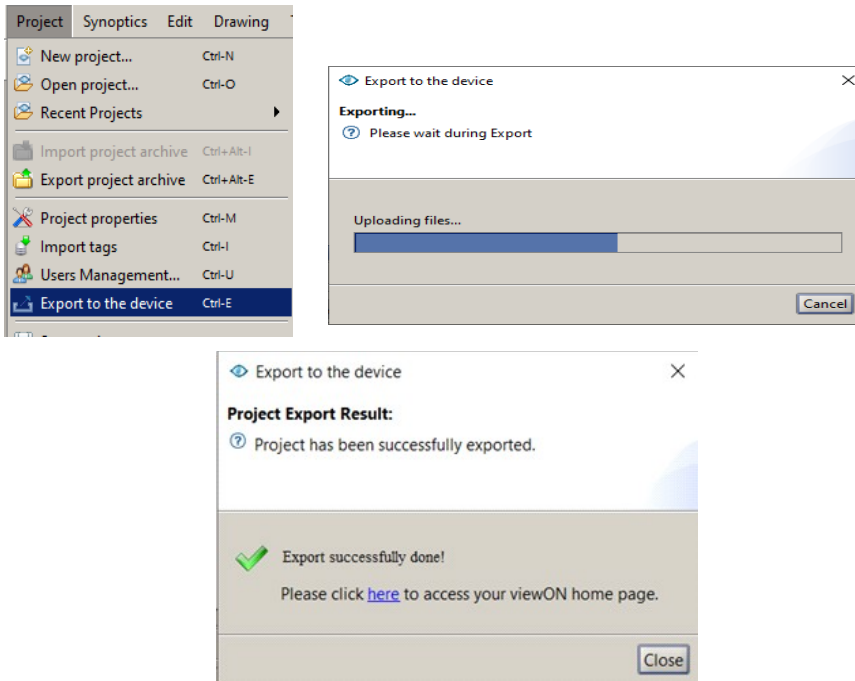
To play the simulator on your PC, viewON uses the browser set as default. Verify that this browser version is compatible with viewON (See chapter "hardware and software requirements") and if the browser is associated with the file extension ".html".

The application simulator allows as well to simulate different screen resolutions depending on the device (smartphone, device, computer...) used to check the simulation and the reaction of the viewON page to those screens.



3.7. Export the project to the Ewon Device

To export the project to your Ewon device, use the «Export to the device» option under the Project menu.



- Note -

The IP address and user account of the Ewon device for the export have been configured during project creation. You can re-open the project properties window using menu: Project – Project properties.

- Caution -

When the viewON editor exports the project to your Ewon device, it will first clear the entire "/usr/viewON" directory on your Ewon device. If the Ewon device already contains another viewON project, it will be deleted.

4. Visualize the project on your Ewon Device

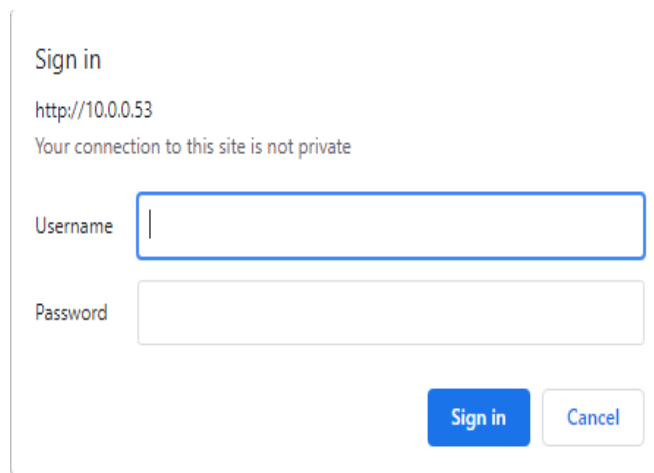
To visualize the viewON project, inside your web browser, simply use the following url:

`http://Ewon_IP_Address/usr/viewON/index.html`
(for example <http://10.0.0.53/usr/viewON/index.html>)

A link is also provided for you in the results dialog box after you export your project to your Ewon device.

If your Ewon device is not configured to allow anonymous read-only access or if your viewON project requires more than read-only access as described below, you will be asked to log into your Ewon device.

Enter a valid Ewon user name and password.

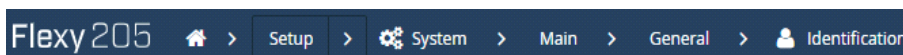


After encoding the login you should see the viewON web pages in your Browser.

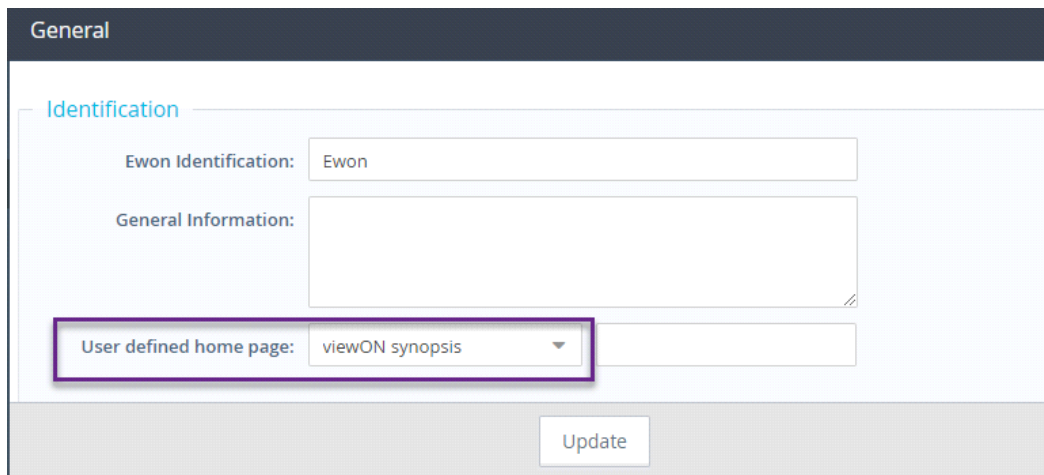
4.1. Declare the viewON project as default home page

You can set your viewON project as the default homepage of your Ewon device. This will allow to display the viewON project simply by entering the IP address of the Ewon device inside your web browser.

To set the viewON application as default homepage on your Ewon device, open following content on Ewon device's web interface:



In the «User define home page» list box, select the «viewON_synopsis» option and leave the second field empty.



The screenshot shows the 'General' settings page for an Ewon device. The 'Identification' section is highlighted in blue. It contains three input fields: 'Ewon Identification' with the value 'Ewon', 'General Information' (a large empty text area), and 'User defined home page' with a dropdown menu set to 'viewON synopsis'. A purple box highlights the 'User defined home page' dropdown. At the bottom right, there is an 'Update' button.

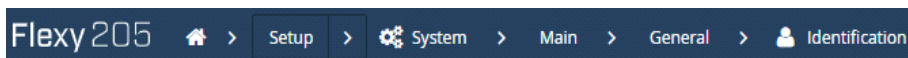
- Note -

Once the viewON project is set as the default home page, to display the Ewon configuration pages, use the following url: http://Ewon_IP_Address/index.htm

4.2. Enable Anonymous Read-Only Access

It is possible to create a read-only anonymous web access to your viewON project. This improves the user experience when displaying the viewON project through a secured connection such as through M2Web or eCatcher mobile. No special settings within the viewON project are required. However, access must be enabled on the Ewon device.

To enable read-only anonymous access on your Ewon device, open following content on Ewon device's web interface:



Enable the "Anonymous read-only access" feature.

Identification

Ewon Identification:

General Information:

User defined home page:

Enable anonymous read-only access for the following features

- /usr folder and subfolders
- Tags embedded in viewON
- Instantaneous Tag values (\$dtV)
- Instantaneous String Tag values (\$dtS)
- Alarm Summary (\$dtAR)
- Alarm History (\$dtAH)
- Historical Logging (\$dtHL)
- Historical Table (\$dtHT)
- Historical String (\$dtHS)

⚠ Disabling the web authentication makes your Ewon less secure. Unless you know what you're doing:

- Make sure nobody outside your organisation can access your Ewon WAN IP through the Internet.
- Make sure that you don't expose sensitive Ewon data to non-accredited users through LAN or VPN

To set the anonymous access for the viewON project, you need to enable the following options:

- /usr folder and subfolders
- Tags embedded in viewON

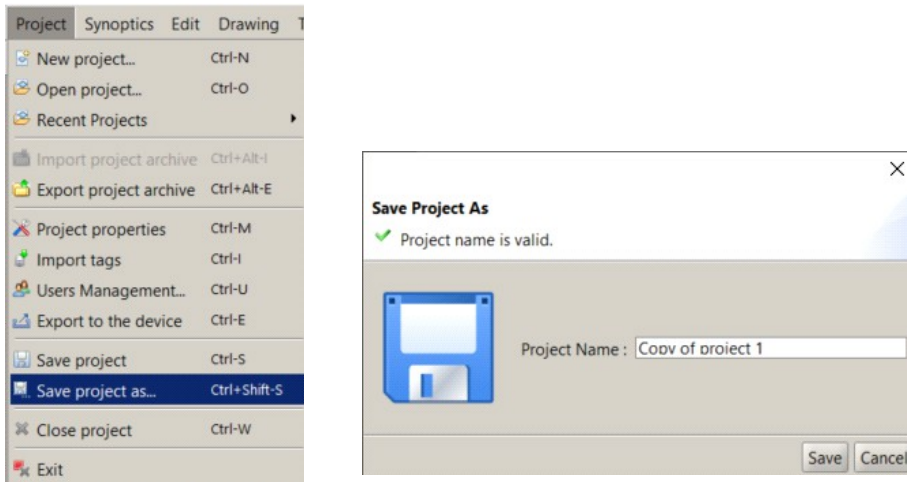
If your viewON project also includes some alarm and historical logging display, then you also need to enable the following options:

- Alarm Summary (\$dtAR)
- Alarm History (\$dtAH)
- Historical Logging (\$dtHL)

5. Copying, importing, exporting projects.

5.1. Making a copy of your project.

The "Save project as.." feature allows you to create a copy of your existing project in order for example to make some modifications for another viewON project.

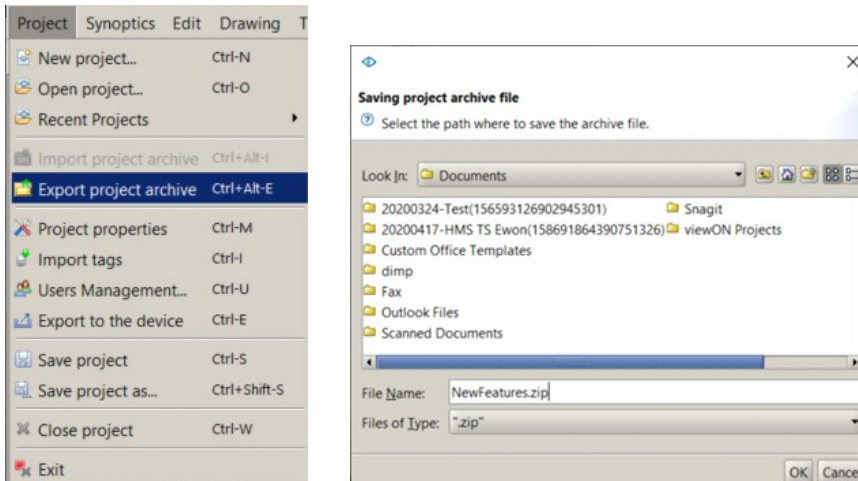


A copy of the viewON application will be created inside the viewON project folder on your PC (Documents\viewON Projects) using the new project name you specified.

5.2.Import and Export feature

a) Backup or export a viewON project

If you want to backup your viewON project or copy the project on an other PC, then you can use the “Export project archive” feature:

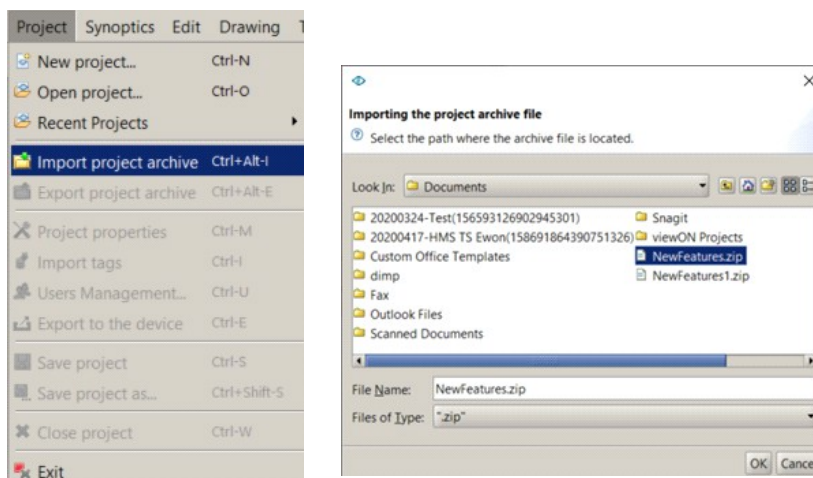


A zip file is created in the "Documents" folder (or in the folder you specified) on your PC containing the entire viewON project.

If your viewON project contains symbols, then the project archive will also contain a Symbol folder containing all the symbols you used. This will, when you import the project on another PC, also import the symbols.

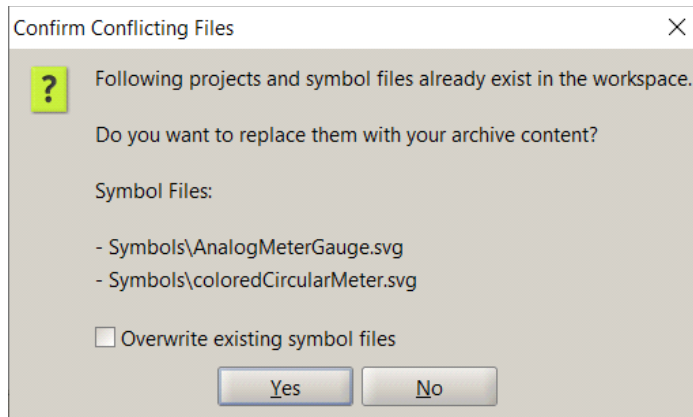
b) Import a viewON project

If you want to import an existing viewON project on your PC, then you can use the “Import project archive” feature:



Select the Zip file containing the viewON project archive.

If the archive file contains a project name or symbols which already exists on the PC then a popup window will ask what you want to do:

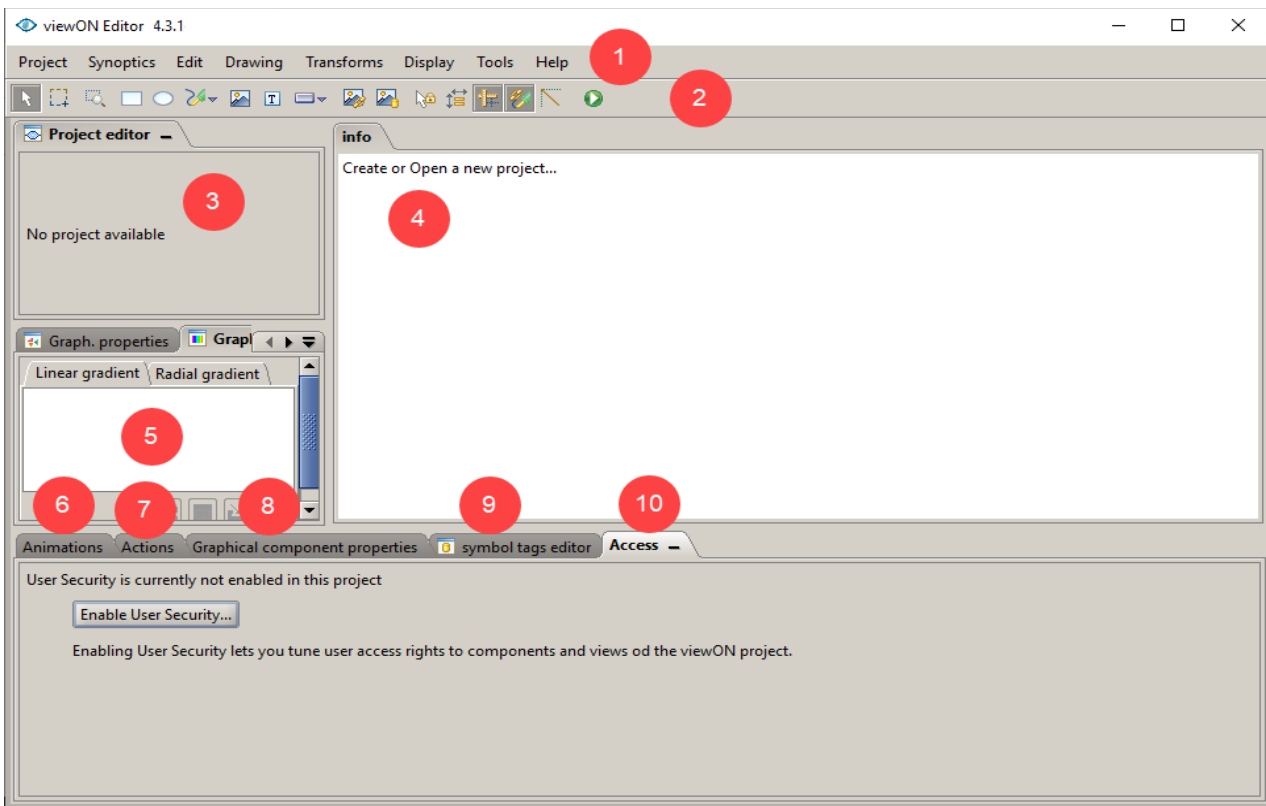


Select the "Overwrite existing symbol files" option if you want to overwrite the existing symbols with the symbols from the archive.

This will import and extract the project archive into the viewON project folder of your PC (Documents\viewON Projects).

After the import, you can select the project inside the viewON editor to open it.

6. The viewON Editor Interface



The viewON editor is divided in several sections:

1. Menu bar
2. Tool bar
3. Project editor
4. Working area (Synoptics interface)
5. Graph. Properties and resources
6. Animations properties
7. Actions properties
8. Graphical component properties
9. Symbol tags editor
10. Access User Rights

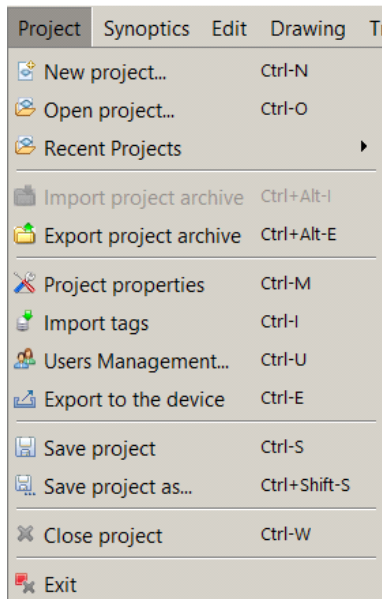
The following chapters contain a brief explanation of every section listed above.

6.1. Menu bar

Below, every menu will be listed with a short description of what can be done using the menu.

a) Project

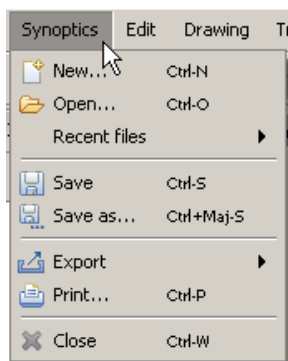
Use this menu to create, open, rename or save your projects.



This menu can also be used to:

- Import the Tags from your Ewon device (to allow animations and actions based on Ewon tags)
- Export the project to your Ewon device
- Export a project backup (archive)
- Exchange user access rights with Ewon device (User Management)

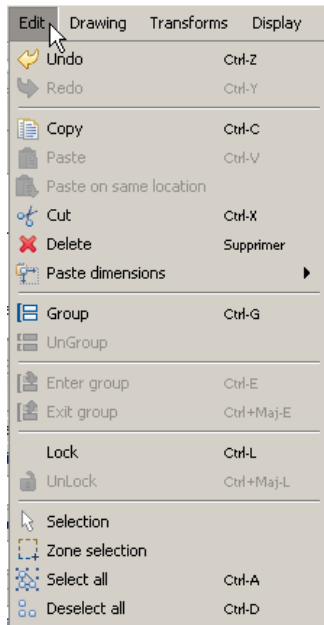
b) Synoptics



Use this menu to create, open or save your synoptics.

This menu allows also to print a synoptic or to export the synoptic as bitmap or pdf file.

c) Edit



selection, etc)

Use this menu to edit the selected components on your synoptic.

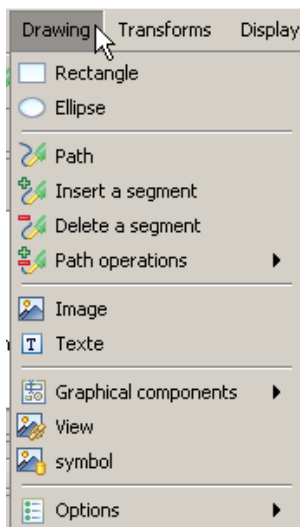
The menu allows you to:

- copy/past objects
- copy/past dimensions (will only copy the dimensions of the selected object)
- group/ungroup objects
- enter/exit a selected group (allows to work on a separate object of the group without need to ungroup)
- lock/unlock objects (lock an object to avoid unintentional move of the object)
- Choose the selection mode (object selection, zone selection, etc)

- Note -

Most of these options are also accessible by a right mouse click on the object in the working area.

d) Drawing



Use this menu to add an object on the synoptic, as for example a rectangle, an ellipse, a path, an image or a text.

The «Insert/Delete a segment» and the «Path operation» options allow you to arrange (transform) the object as you please.

Using this menu you can also insert:

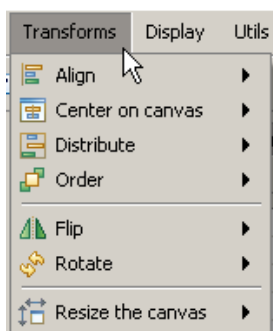
- special graphical components like a Combo Box or an Alarm History table
- insert a view (to insert an existing view into the current view; useful for a custom menu bar for example)
- insert a symbol (a reusable object)

With the «Options» sub-menu you can define the behavior of the working area, as for example Align on rulers, Forced Line mode, etc.

- Note -

Most of these options are also accessible from the tool bar of the viewON Editor

e) Transforms



Use this menu to determine the position of the selected object on the synoptic.

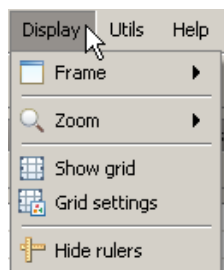
This menu allows, for example, to align the selected objects, to rotate the selected object, or to define which object has to be in front or in the back of the synoptic.

Use also this menu to resize the canvas of your synoptic (custom size or fit to contents size)

- Note -

Most of these options are also accessible by a right mouse click on the selected objects in the working area.

f) Display



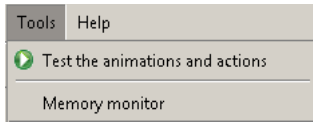
Use this menu to select the frame (opened synoptic) you want to work on. Zoom options for the working area are also available.

This menu can also be used to display or hide the grid and the rulers of the working area.

- Note -

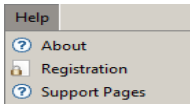
The – and + buttons of the keyboard can be used to zoom in or out the working area.

g) Tools



This menu allows you to test your application without the need to transfer it first to your Ewon device. The application simulator will open in your default web browser in order to simulate your application.

h) Help








This menu allows you to register the viewON software and to display the information about software revision, etc.

6.2. Tool bar



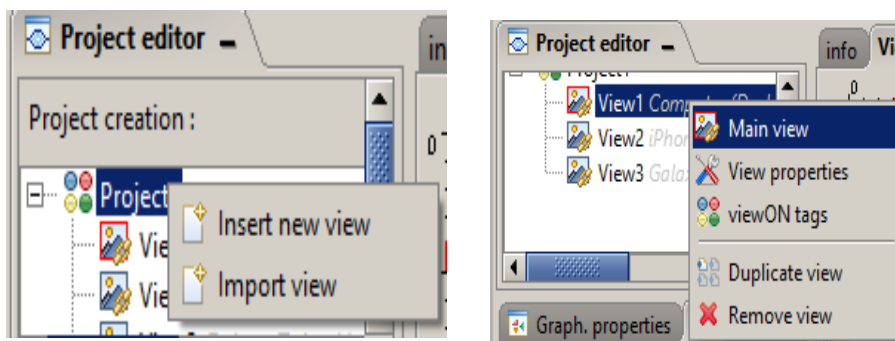
Tool	Action
	The mouse pointer will allow you to select a separate object on the synoptic. (Selection)
	With the mouse you will be able to draw a rectangle in order to select the objects situated in between the rectangle. (Zone selection)
	With the mouse you will be able to draw a rectangle to which the working area will be zoomed towards. (Zoom on a zone)
	Create rectangles and squares.
	Create ellipses and circles.
	Create a path. To close the path realize a double click.
	Insert an image.
	Create a text element.
	Insert a graphical component: Button, Check box, Toggle button, Combo box, List, Number Editor, Slider, Alarm history, Alarm summary, Menu bar, Trends
	Insert a view
	Insert a symbol
	Activate/deactivate the «Repeated actions» mode. Allows, for example, to select by zone or to draw a shape several times, without being reset to the regular mode (simple selection mode).

	Activate/deactivate the «Keep ratio» mode.
	Activate/deactivate the «Align on rulers» mode.
	Activate/deactivate the «Close path» mode. If this option is checked, then the last point of the drawn path will be automatically linked to the first point of the path.
	Activate the «Forced lines» mode. Activate this option if you want to draw a line or a square for example (not a curved line).
	Test the animations and actions. Will open the default browser in order to simulate the application.

6.3. Project Editor

The Project Editor allows you to add, rename, import or delete a view in your project.

Use the mouse right click in the Project editor to display the different context menus of the Project Editor.



The Project Editor allows you also:

- to define which view will show up first when the project is opened on the Ewon device (Main view)
- to edit view properties such as size or background color

a) View vs Synoptic

It is important to understand the difference between a View and a Synoptic.

A view is a synoptic which is linked to the project. But not every synoptic is linked to the project.

So you can, for example, open in the working area some synoptics which are not linked to the current project (not a view) in order to work on a symbol or just to copy some objects of an already existing synoptic. Even if these synoptics are displayed in the working area, they don't make part of the project. If you save the

project, these synoptics will not be saved.

To link an existing synoptic to your project, use the «Import view» option. The synoptic will then be linked to your project. A copy of the synoptic will be saved into the workspace of your project.

6.4. Working area



The working area will contain the different views of your project or the synoptics you opened.

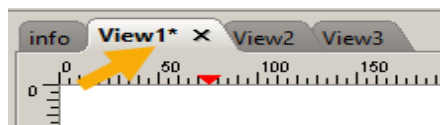
Click on the different tabs to switch from one synoptic to the other.

To open a view, just click on the view in the Project editor.

To open a synoptic which is not linked to your project (not a view) use the «Synoptics/Open» menu.

- Note -

The keyboard arrow keys can be used to move a selected object. But for this, the Synoptic needs to have the focus. To set the focus on the synoptic just click with the



mouse on the tab of the synoptic, once the synoptic displayed.

The «*» displayed next to the view or synoptic name indicates that modifications have been operated on the synoptic but these modifications have not been saved yet.

To save the modified Views, just use the «Project/Save project» menu.

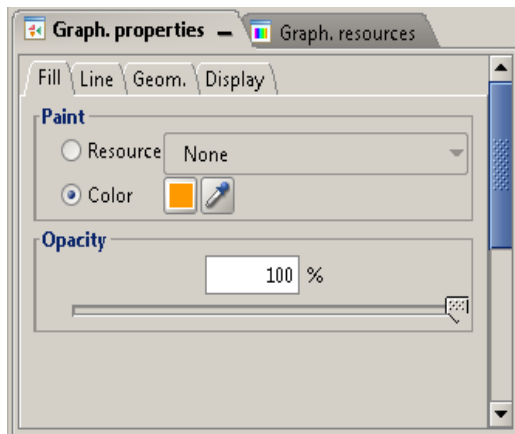
To save a synoptic that is not linked to the project (not a view) use the «Synoptics/Save» menu or use the close button on the synoptic tab:



6.5. Graph. Properties and Resources

The Graph. properties section allows setting the properties of the selected graphical object.

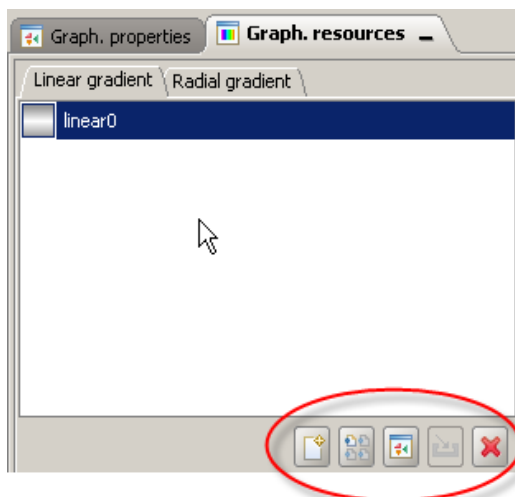
For example, if you select a rectangle on the synoptic, the Graph. properties section will allow you to define following:



- Fill tab: to define the fill color and opacity
- Line tab: to define the line color, opacity, width and dash options
- Geom. tab: to define the position and dimensions of the selected object and to define the corner radius
- Id. tab: to retrieve the ID number of the object
- Display tab: to define the opacity of the entire object and if the object should be visible or not

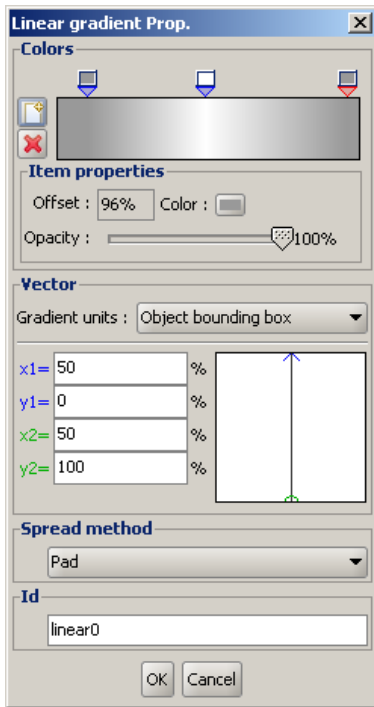
The Graph. resources section allows you to define a linear or radial color gradient. This

color gradient (graph. resource) can then be used to define the fill color of a rectangle for example.




- Linear gradient tab: to define a linear gradient color
- Radial gradient tab: to define a radial gradient color



The icons on the right bottom of the Graph resources window allow you to add, duplicate or delete a gradient.



The Gradient properties window can be opened just by a double-click on the gradient itself or using the Properties icon on the bottom of the window.

Colors section:

Use the  «Add a new color item» button to add a supplementary color for the gradient definition.

Click on  this slider to move the gradient and to define  the color of the gradient

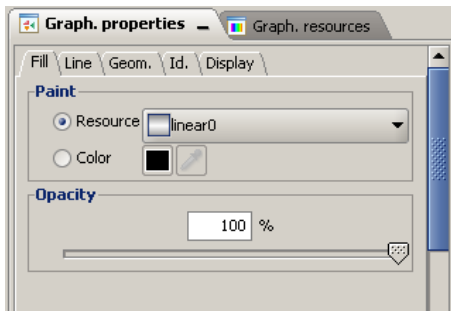
Vector section:

Use these fields to define the gradient orientation, ex from bottom to top, etc.

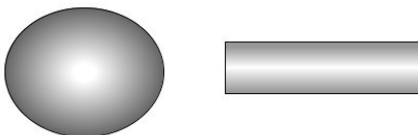
Id section:

Set the name of the gradient

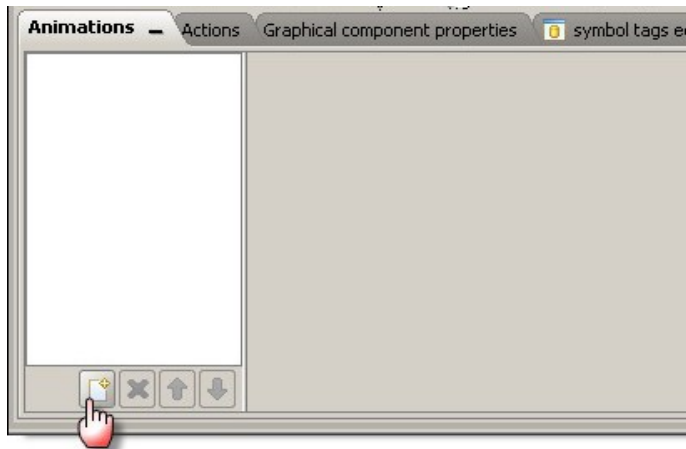
To apply a linear gradient to the selected object (a rectangle for example) use the «Resource» field instead of the color field in the Paint section of the Graph. Properties windows:



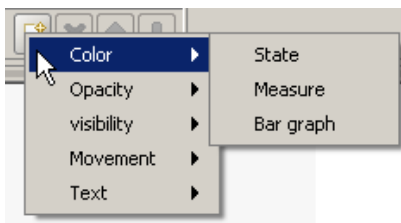
The gradient color option allows you to give an 3D aspect to your objects as shown on the following two objects:



6.6. Animations properties

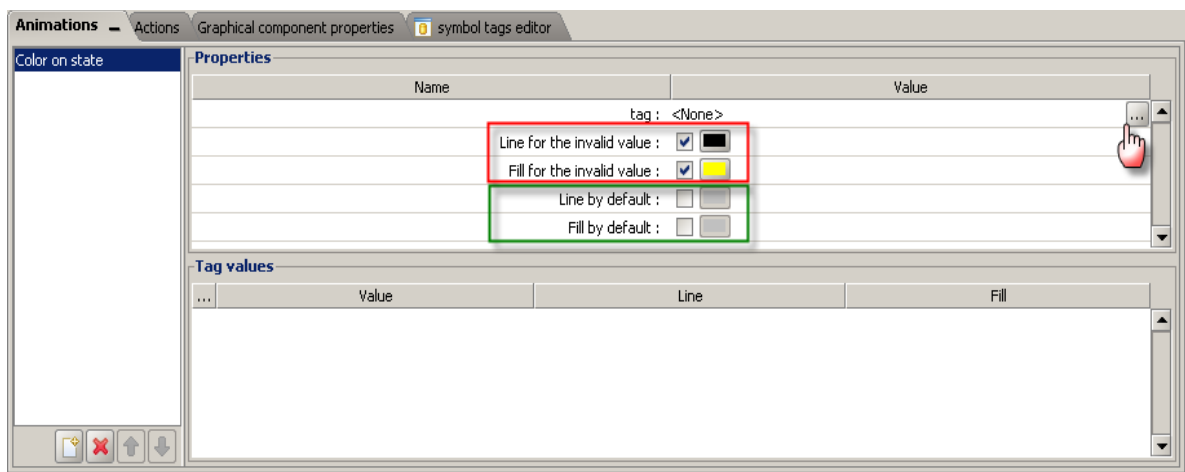


Use the «new» button on the bottom of the animations window to add an animation to the selected object.



The context menu will allow you to select the animation you want to apply to your object.

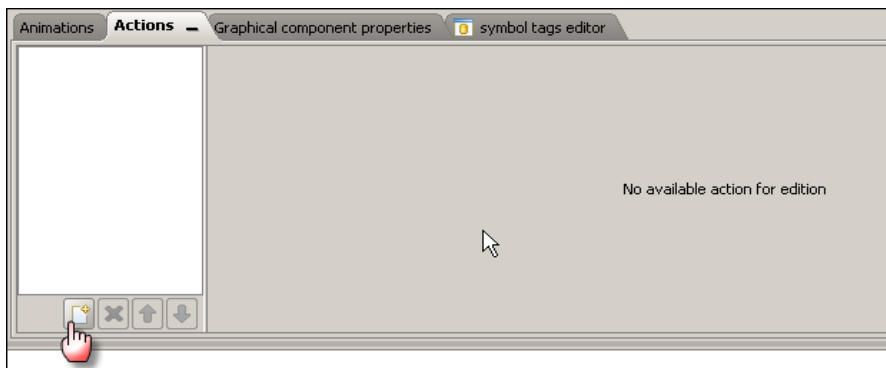
For example, the following picture shows the Animation properties window for a «color on state» animation:



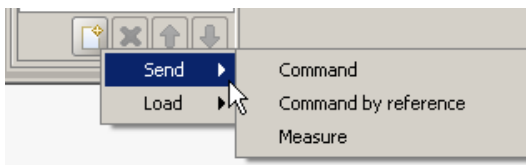
The different possible animations are listed in the following table:

Animation	Type	Description
Color	State	Color animation using a state variable (Boolean tag, alarm status, alarm type)
Color	Measure	Color animation using analog tag intervals
Color	Bar graph	Bar graph animation using analog tag value
Color	Blink	Allows to add a blinking animation to objects
Opacity	State	Opacity animation using a state variable (Boolean tag, alarm status, alarm type)
Opacity	Interval	Opacity animation using analog tag intervals
Opacity	Measure	Opacity animation using analog tag value
Visibility	State	Visibility animation using a state variable (Boolean tag, alarm status, alarm type)
Visibility	Interval	Visibility animation using <i>analog</i> tag intervals
Movement	Translation	Object translation (xy to xy) using analog tag value
Movement	Rotation	Object rotation using analog tag value
Movement	Basic Scale	Simple object resizing using analog tag value
Movement	Scale	More complex object resizing using analog tag value
Text	Simple	Text animation using Ewon Script
Text	State	Text animation using a state variable (Boolean tag, alarm status, alarm type)
Text	Measure	Text animation using analog tag value. Will display the analog tag value.
Text	String	Text animation using Ewon or viewON tags of type string
Text	Interval	Text display animation using <i>analog</i> tag intervals

6.7. Actions properties

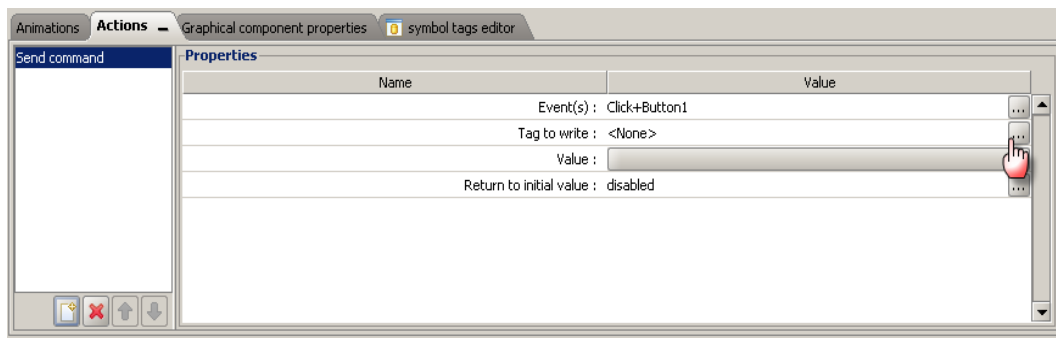


Use the «new» button to add an action to the selected object.



The context menu will allow you to select the actions you want to apply to your object.

For example the following picture shows the Actions properties window for a «Send Command» action:



The different possible actions are listed in the following table:

Action	Type	Description
Send	Command	Send 0 or 1 to a boolean Tag, or execute an Ewon Script
Send	Command by reference	Send the boolean value of one Ewon Tag into another Ewon Tag.
Send	Measure	Send a value into an analog Ewon Tag
Send	String	Sends a text to an Ewon or viewON tag of type string
Load	View	Manage views: open a new view, back to previous view, quit view
Load	URL	Display another web page by indicating the URL
Execute	ViewON Script	Executes the javascript

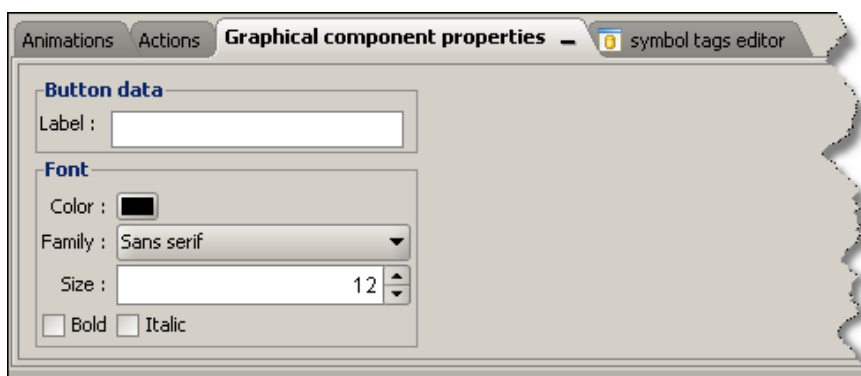
6.8. Graphical component properties

There are some special graphical components at your disposal in the viewON Editor (Button, List, Alarm history, etc.).

For these graphical components the «Graph. Properties» window only allows the configuration of the geometrical location and the display options (opacity, visibility, etc).

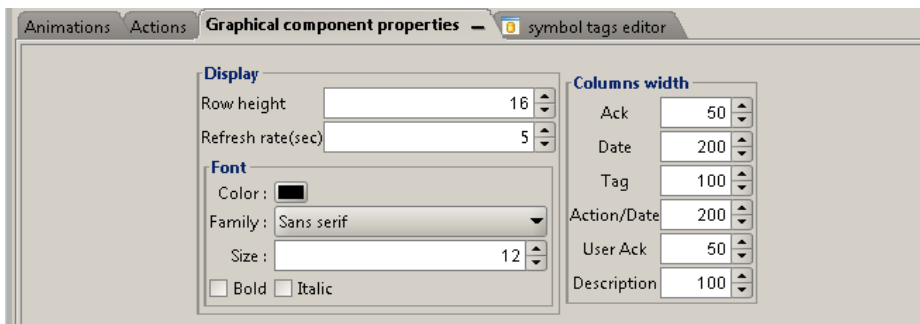
To define the other properties that are linked to the selected graphical component, the «Graphical component properties» window displayed in the bottom of the Editor has to be used.

For example, for the graphical component «Button» following window will be displayed:



Here you can define the text contents and format of the button .

Or for example, the graphical component «Alarm summary» can be configured using the following Graphical component properties window.



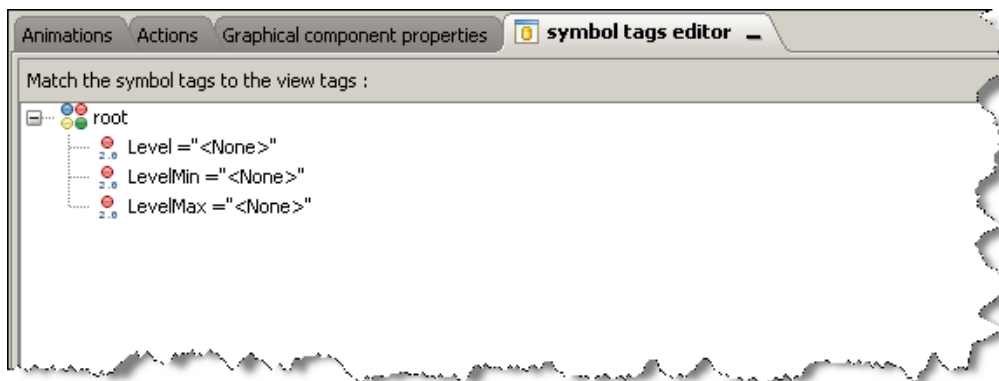
6.9. Symbol tags editor

You can insert symbols into your view.

A symbol is an object with predefined graphical components and animations. A symbol can be, for example, a tank or a motor.

Even if the symbol is composed of several different graphical components and animations it will be represented in your view as one unique object.

To configure the animations and actions which make part of the symbol, the «symbol tags editor» window displayed in the bottom of the viewON Editor has to be used.



If the selected symbol contains animations, then you will find here a list of all the different «Symbol Tags» used for the different animations.

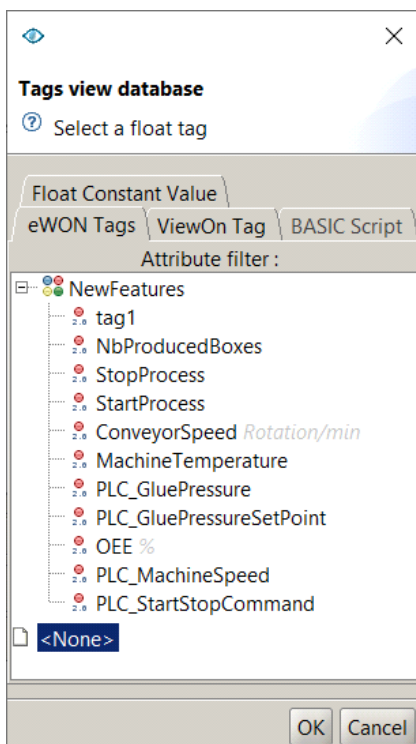
Every Tag **must** be linked to an Ewon Tag to make the animation work. Alternatively, a constant value, a viewON Tag or a Basic Script can also be used. The «<None>» indicates that the symbol tag has not been linked to an Ewon Tag yet.



To link an Ewon Tag select the symbol Tag in the list and click on the browse button on the right bottom.

The «Tag view database» window will show up:

Select the Ewon Tag or define a constant value to link to the symbol Tag and click on the OK button.



6.10. Access User Rights

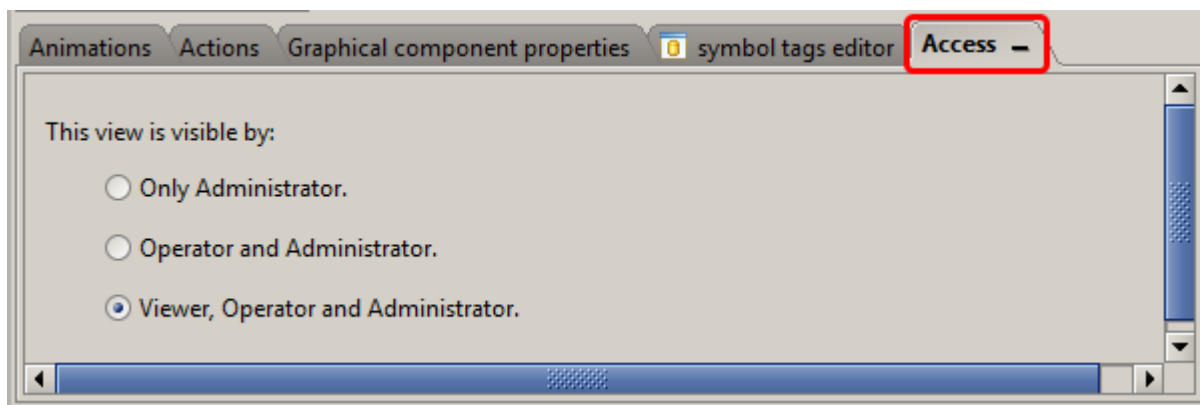
This feature is highly connected to the firmware of the Ewon device.

All users defined in the Ewon device can be linked to one of the 4 user groups: None, Viewers, Operators or Administrators.

These user groups will then be configured to be able to see some views or components of the project.

As viewON retrieves those users directly from the Ewon device, the Ewon device needs to be connected. Once the links between Ewon users & viewON user groups are established, the viewON will push back the new configuration to the Ewon device.

In the "Access" tab under the canvas, users may decide which user roles can access to specific components or to the whole view from this tab.



If you want to grant access on:

- a component, this one needs to be first selected in your project
- a view, this one needs to be highlighted, without any component selected

- Tips -

*The line above the 3 options indicates what will be visible to whom. Depending on what's selected you will have
This **view** is visible by
This **component** is visible by*

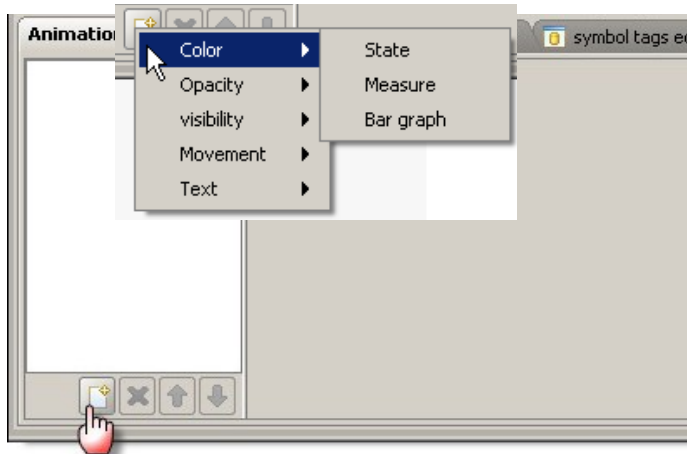
Enabling the User security can be done either through the Project > Project Properties menu or via the Access panel whereas disabling it can only be done via the first method.

- Note -

If you disable the user security option, all components and pages will be accessible to every user like before.

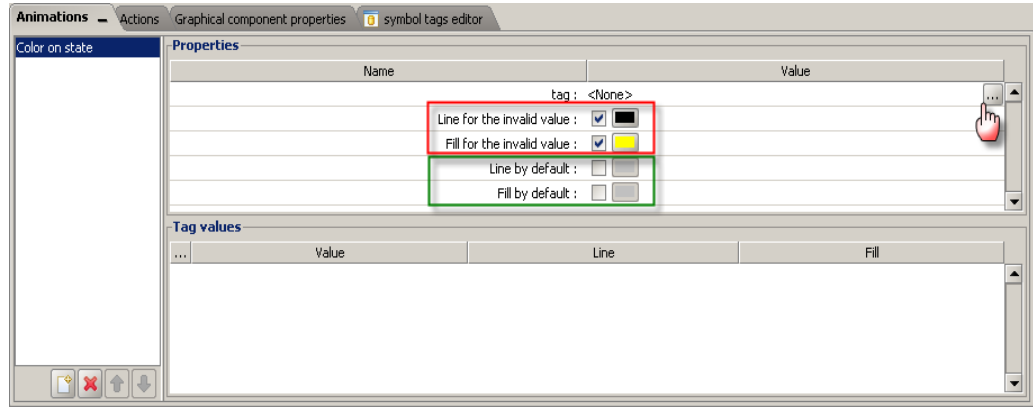
7. Animations

To add an animation on an object, select the object in the working area and click the button «new» located at the bottom of the animations window.



The context menu will allow you to select the animation you want to apply to your object.

The following picture shows the Animation properties window for a «color on state» animation:

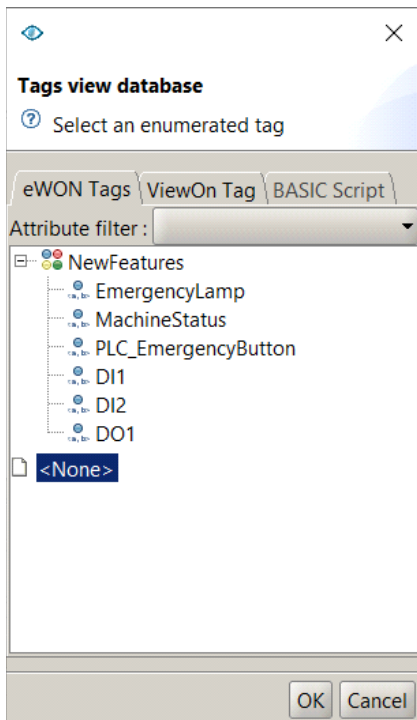


If needed, configure the Line and Fill check boxes and the associated colors for an invalid state.

viewON applies the invalid settings (if checked) to the object when the value cannot be read from the Ewon device (or when the value is out of range in case a min/max range must be defined for the object)

The Line and Fill options by default are not of any use in the actual viewON version.

Click on the Tag selection button in the tag field to show up the Tags database.



This window lists the different tags available on your Ewon device which can be used for the selected animation.

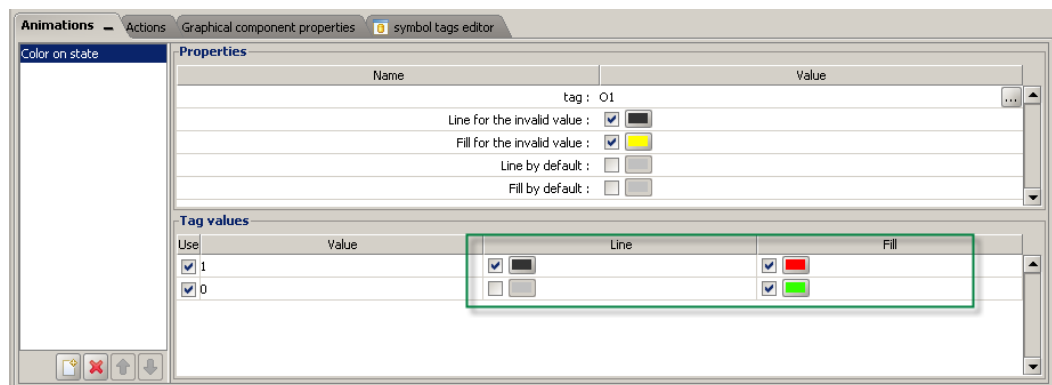
For example, because we choose a «State» animation, only Boolean tags are listed here. You can now select the tag to use for the animation.

You can also use a viewON Tag or enter an Ewon script. The result of this script will then be used for the animation.

7.1. Animation using an Ewon Tag

You can animate your object just by using a Tag value (Boolean or analog)

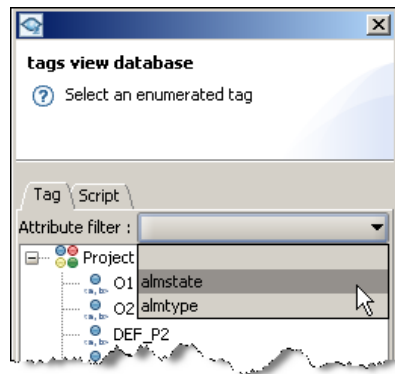
If you select for example the Tag «O2» in the tags view database window, then the animation properties window will look like this:



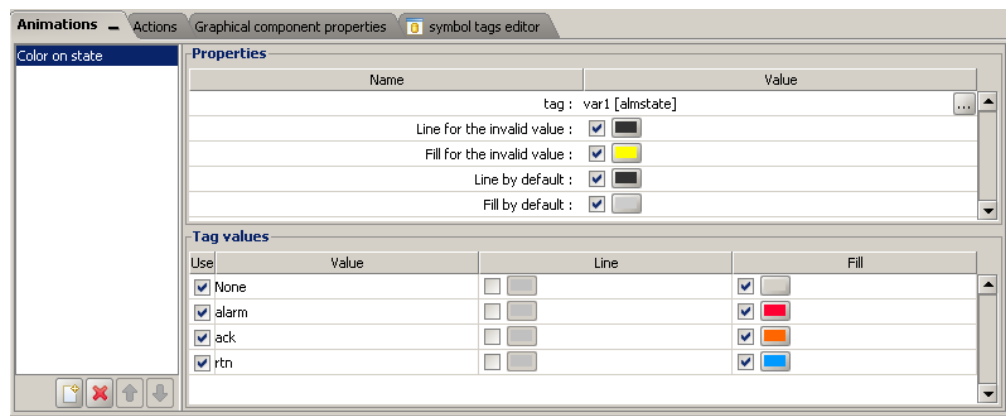
In the «Tag values» section you must define the colors for the different states of the boolean Tag.

7.2. Animation using Ewon Tag Attributes

Using the «Attribute filter» option in the «Tag view database» window, it is also possible to configure an animation using the alarm states or alarm types of a Tag.



You can for example animate your objects with a different color for every alarm state (None, Alarm, Ack, RTN).



7.3. Animation using viewON Tags

Instead of using an Ewon Tag for the animation you can also use a viewONtag which has been declared for the view you are using. This allows for example to perform animations or actions without the need to exchange a value with the Ewon device itself.

More details see chapter: 11.1-viewON tags

7.4. Animation using Ewon Script

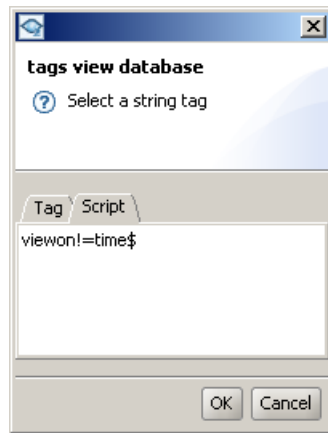
Instead of using a tag value or a tag status for the animation, you can also animate your object using an Ewon Script.

- Note -

Exchanges between the viewON application and the Ewon device are made by the BASIC variable «viewon!».

The viewon! variable is of type string!

If, for example, you want to display the date and time on your viewON synoptic, then choose a text object and apply a simple text animation on this object. In the «Tag view database» open the Script tab and declare following script:



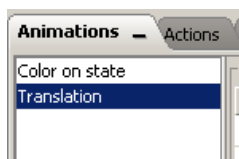
At every refresh interval, the text object will then be updated with the date and time of the Ewon device. Other possible scripts could for example be «viewon! = A\$» or «viewon! = STR\$ MyTag@», etc.

- Note -

The viewON BASIC scripts will be placed into the «Basic action» stack of the Ewon device. Because the script is used on an animation, the script will be placed into the Ewon stack at every update interval. So develop the viewON Scripts according to this.

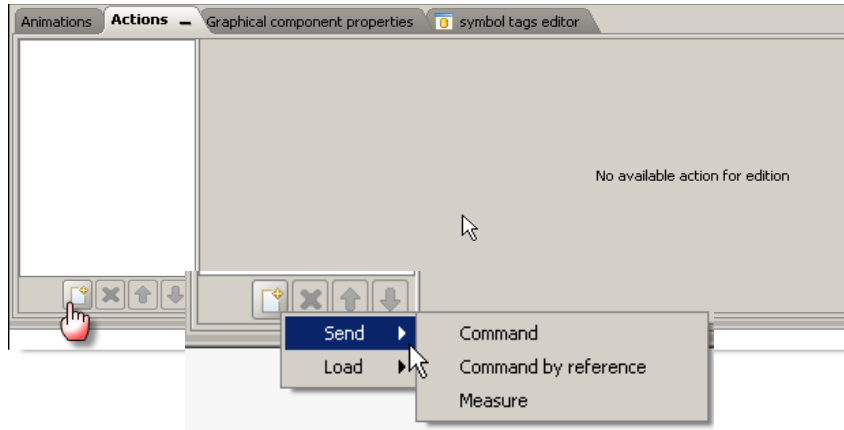
7.5. Multiple animation

It is also possible to combine multiple animations on the same object using the «New» button in the Animations properties window.



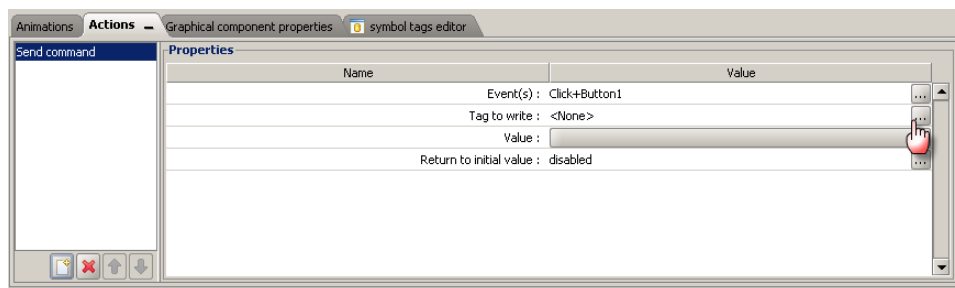
8. Actions on objects

To add an action to an object, select the object in the working area and click the button «new» at the bottom of the Actions window.

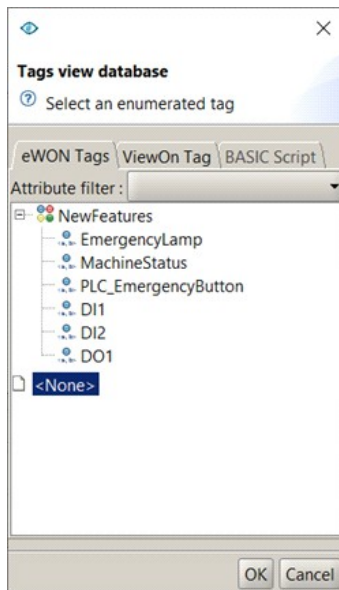


The context menu will allow you to select the actions you want to apply on your object.

The following picture shows the Actions properties window for a «Send Command» action:



Click on the Tag selection button in the «Tag to write» field to show up the Tags database.



This window will list the different tags available on your Ewon device and which can be used for the selected action.

For example, because we choose a «Send Command» action, only boolean tags are listed here. You can now select the tag to use for the animation.

You can also link the action to a viewON Tag or to an Ewon script. The script will then be executed on the Ewon device every time the action is performed.

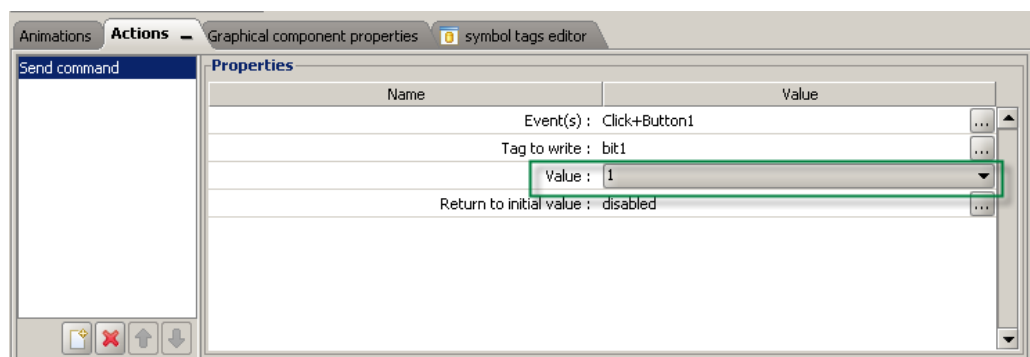
- Note -

You can also combine multiple actions on the same object using the «New» button in the Actions properties window.

8.1. Actions using an Ewon Tag

By selecting a Tag, you can force the value of this Tag to 0 or 1.

If you select for example the Tag «bit1», the action properties window will look like this:



In the «Value» field enter the value that will be applied on the selected Tag, every time the action is executed.

8.2. Actions using viewON Tags

Instead of performing the action on an Ewon tag you can also use a viewON Tag which has been declared for the view you are using. This allows for example to perform animations or actions without the need to exchange a value with the Ewon device itself.

More details see chapter: 11.1-viewON tags

8.3. Actions using Ewon Script

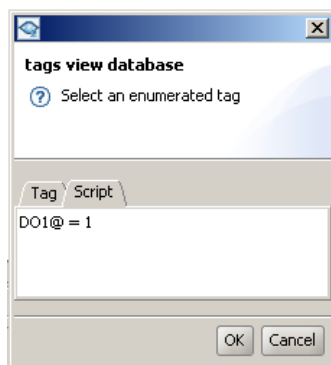
Instead of setting directly the value of a tag, you can also run an Ewon script every time the action is performed.

- Note -

Exchanges between the viewON application and the Ewon device are made by the BASIC variable «viewon!».

The viewon! variable is of type string!

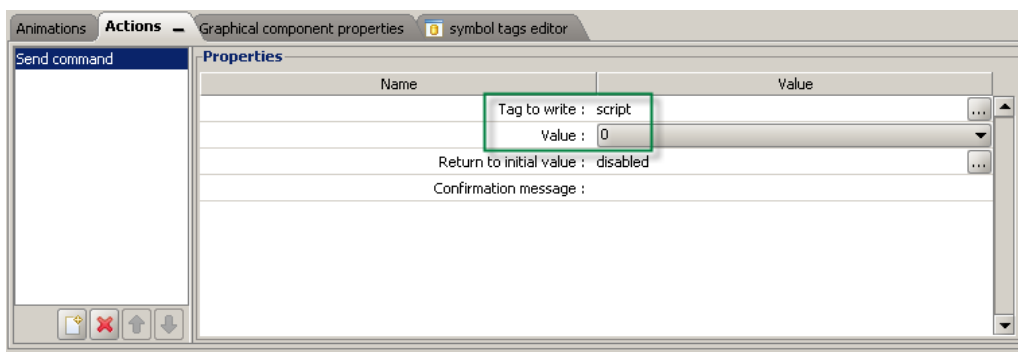
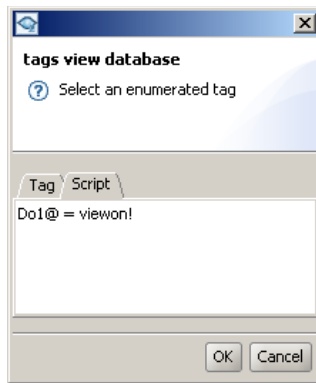
For example place the following «Send command» action on a button:



This script will set the Ewon tag DO1 to 1 every time the action is performed, so every time the button is used.

In the action script you can also use the viewon! variable. Before the execution of the script on the Ewon device, the viewon! variable will be replaced by the value set by the associated action.

For example



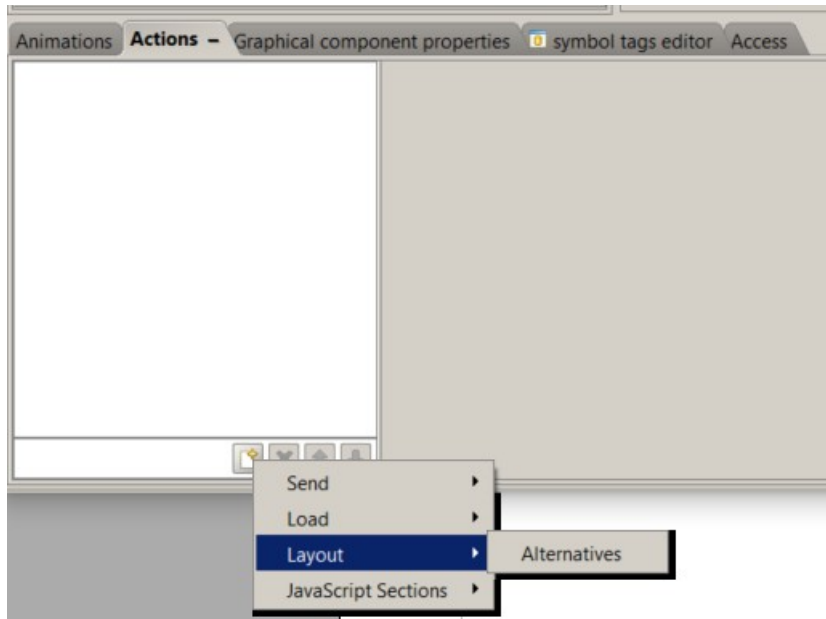
In the example shown here above, the DO1 Tag on the Ewon device will be set to 0 every time the action is performed.

9. Actions on views

Since viewON version 4.0 you can also add specific actions to views.

To select the view, open the view tab and make sure that no object is selected (for example click on an empty place in the view)

Once the view selected click the button «new» at the bottom of the Actions window.



9.1. Alternative Layout

This action can be seen as a redirection of a view depending on the screen resolution. Users may want to have a main view and an alternative one (of the same view) dedicated for mobile devices.

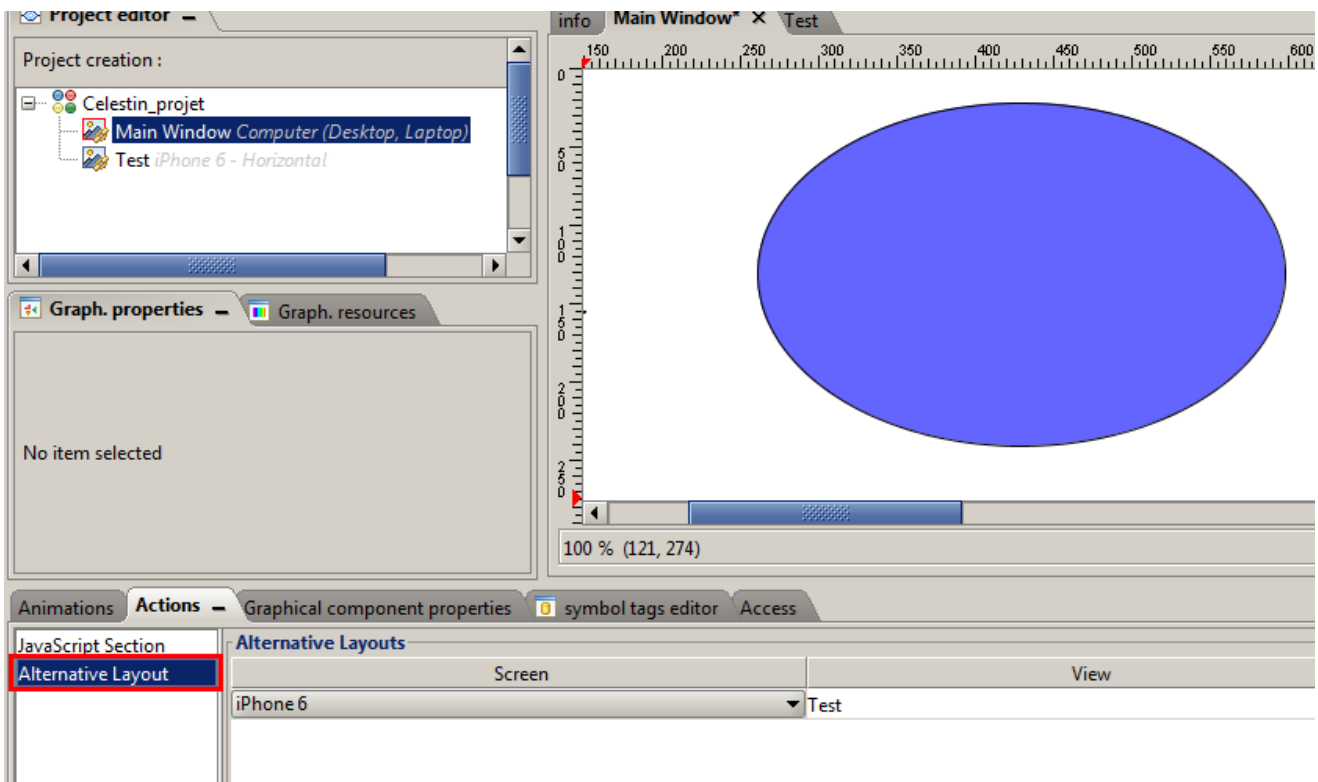
Let's say the project has following two views:

- main
- main_mobile

We may want to redirect main.shtml to main_mobile.shtml when the first one is displayed on a mobile device: we can only do it on the client side with javascript.

- Note -

Once you add an alternative layout action to a page, viewON compilation process will create two web pages



Extended to the above example, it would render:

- Main Window.shtm: This page is an empty page only with the redirect config. It redirects the users to main.shtm or main_mobile.shtm depending on the devices screen resolution you are accessing the web page from.
- Main Window_.shtm: This page has the real content of the main view.
- Test.shtm: This page is being loaded instead of Main Window_.shtm if you are on an iPhone 6 (or similar screen resolution).

For more information on Alternative Layout, refer to [AUG-006: viewON - Objects, Animations and Actions](#)

9.2. JavaScript section

This action allows to attach Javascript code directly to the view (not to an element) like all other global actions. And this section is executed periodically in the desired interval.


See chapter: 11.Client Side Scripting

10. Visualization access rights

The Ewon device can be configured for anonymous read-only access as described in 4.2.-Enable Anonymous Read-Only Access. However, in cases where this access is not enabled or where additional rights are required, the access rights of the Ewon device can be used to restrict the value display or actions.

The following Ewon access rights are taken into account by the the viewON webpages:

Access rights	Needed to
View I/O	read a value out of the Ewon device (all tags)
Force Outputs	write a value to the Ewon device
Acknowledge Alarms	acknowledge alarms on the Ewon device
Ewon File access [EBD]	access Alarm History and Alarm Summary
Tag page Allowed	read a value out of the Ewon device (limit access to tags from Default and Selected page)

If one of the rights is not granted to the user, the webpage will display the following symbol on the object : 

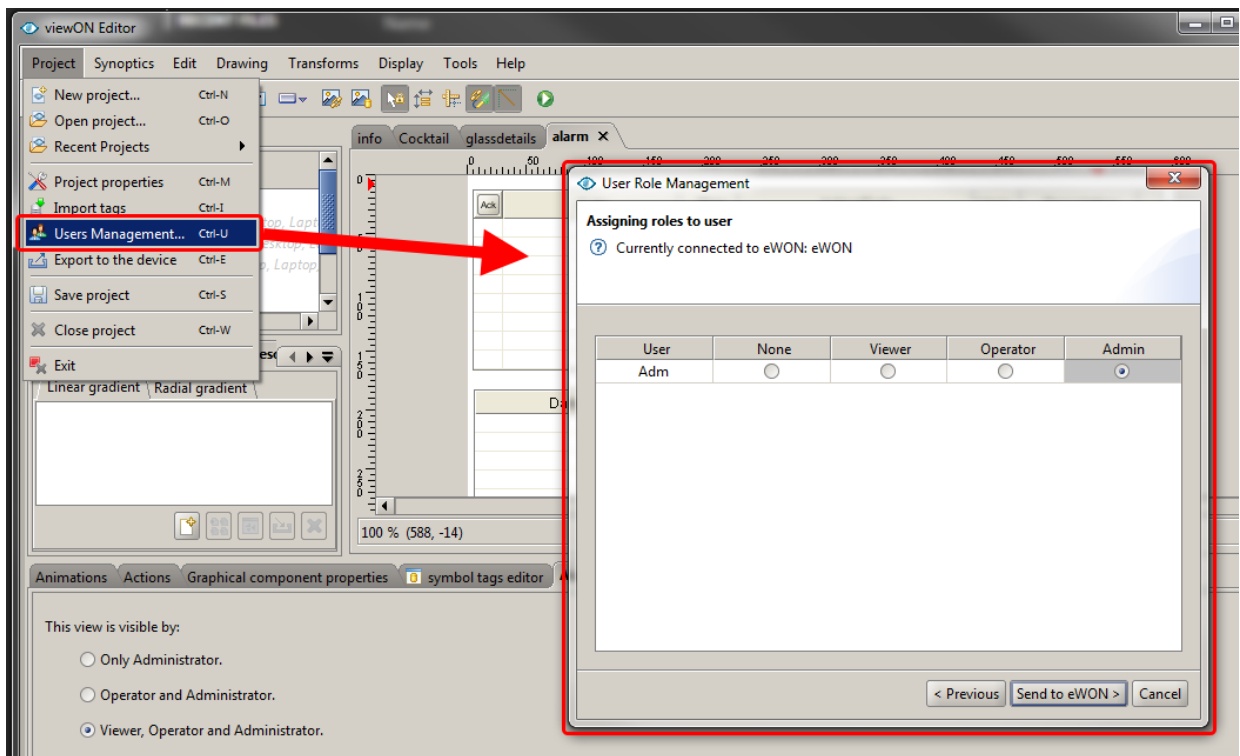
These settings can be combined with the Users Rights Access feature of the viewON itself which is regrouped in 3 user groups:

- Viewers**
 They are the low-grade users and can not do any operations. They are read-only users.
- Operators**
 They re more trusted users: they can write in the Ewon device, such as modifying tag values and acknowledging alarms.
- Administrators**
 They can do everything, including modifying the application configuration, although this outside the scope of viewON application.

The hierarchy implies that:

- Everything that is visible to *Viewers* is automatically visible to *Operators* and *Admins*.
- Everything that is visible to *Operators* is automatically visible to *Admins*.

The Users Right Management screen which allows users to modify existing Ewon users access right through an FTP connection is accessible from: Project → Users Management.



- Important-

Viewer, Operator and Admin are the new roles created for viewON. None of the existing Ewon users will have these roles by default. If users want to benefit from this feature they are first obliged to configure their users right from this screen.

To learn how grant access on components or views, refer to the chapter 6.10- Access User Rights

11. Client Side Scripting

Client side scripting is a feature which enables users to add their own JS code to a viewON view.

11.1. viewON tags

This is a term which is very important: viewON tags means **client side tags**.

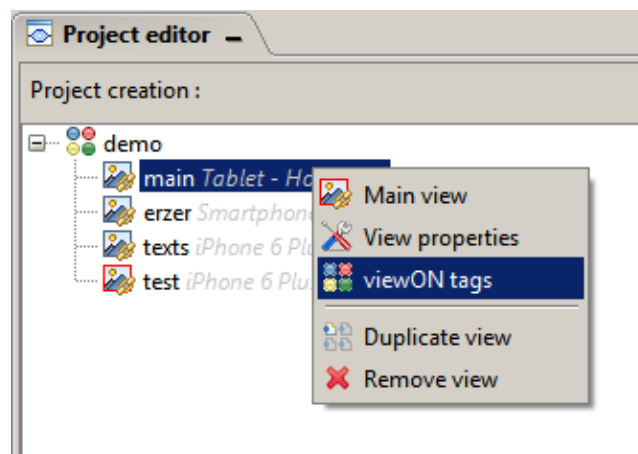
If we speak technically they are JavaScript objects.

viewON tags exist only on the client side and their value is lost every time the page is refreshed.

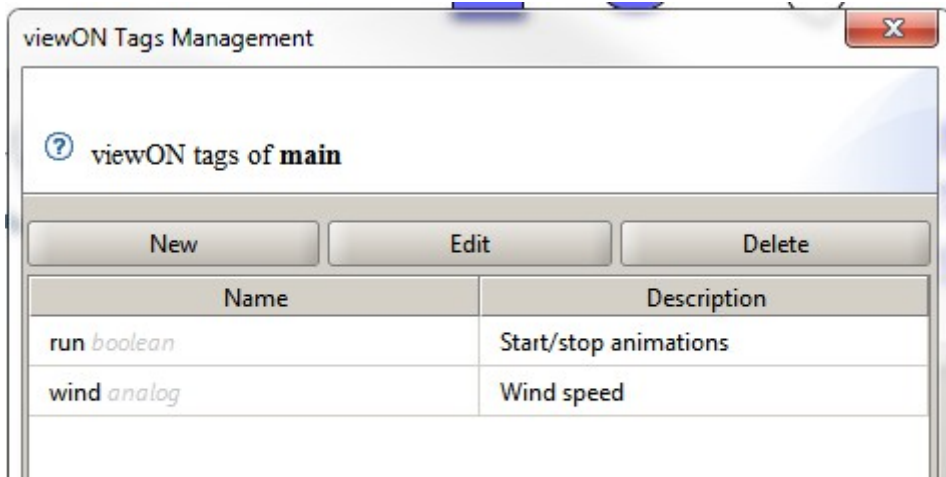
- Important -

Ewon tags and viewON tags **ARE NOT THE SAME**.
viewON tags are defined for each view of the project separately by the users,
Ewon tags are imported from Ewon device.

Users may access to viewON tags management by right clicking to their view on the project tree.



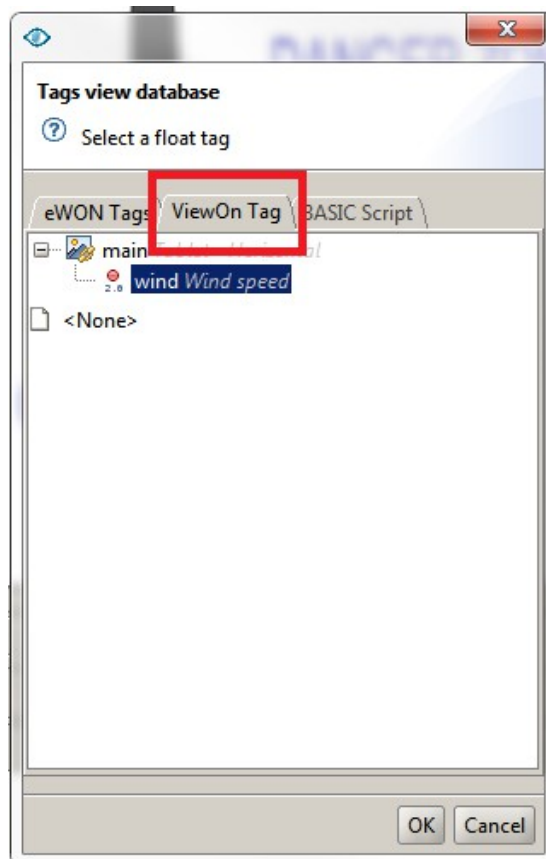
When a user clicks on a viewON tag item, he will be landing on the following screen:



The viewON Tags Management frame lists the viewON tags of the selected view. User will add/remove/update the viewON tags of this view.

There are two types of viewON tags: **boolean** and **analog**.

These viewON tags can be used afterwards in animations/actions and JavaScript sections like Ewon tags.



11.2. viewON Script sections and Execute viewON Script actions

viewON script section are actually JavaScript sections written by the users. They are also called viewON Scripts in order to distinguish them from the BASIC Scripting.

User can change the value of viewON tags by sendCommand, sendMeasure and sendCommandByRef actions like Ewon tags.

Users may also change the values of these tags by using the viewON scripts.

User may type viewON scripts in two places:

1. Global JavaScript Section

JavaScript code written in this section is directly attached to the view (not to an element) like all other global actions. And this section is executed periodically in the desired interval.

- Note -

Minimum limit of execution interval is **100 milliseconds**. If user types a value less than 100, section is executed **only once**.

2. Execute viewON Script Action

This action can be added to buttons and SVG elements. JavaScript code written in this section is executed only when the user triggers the action.

Some special method calls need to be used to read/write Ewon/viewON tags:

- `getEwonTagVal('tagName')`
reads Ewon tag value from the page cache
- `getViewONTagVal('tagName')`
reads viewON tag value
- `setEwonTagVal('tagName', value)`
writes Ewon tag value, send an AJAX call
- `setviewONTagVal('tagName', value)`
writes viewON tag value

You may find more detail about these method in the application (by hitting *CTRL + Space* while typing the function name).

These write changes are not directly applied. All change requests are sent to the server (committed) at the end of the script execution.

If users want to send these changes directly to the server they should call a function after each set tag method calls

```
commitEwonTagChanges()
```

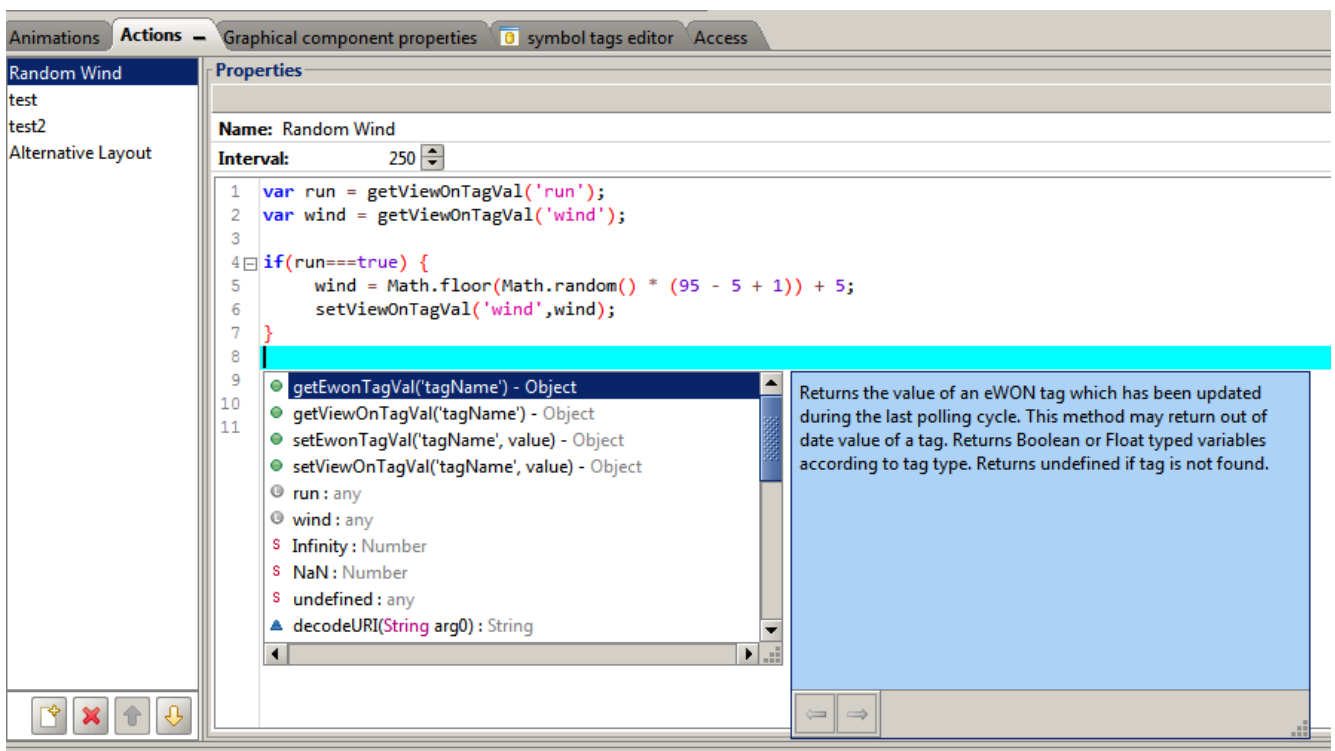
- Note -

Users may also access to jQuery v2.1.0 and jQuery UI – v1.10.4 API from this code sections.

11.3. Debug & Help

To debug their JS code, users can use the debugging tools of the browsers like Chrome and Firefox to add breakpoints etc..

Starting v4, viewON has a special JavaScript code area which highlights and validates the JavaScript syntax. If users type “Ctrl + Space” this code area will display available functions list.



12. Document History and Trademark Information

12.1. Document History

Version	Date	Description
1.1	2016-06-10	Client Side Scripting, Access Rights, Alternative Layout added
1.2	2017-11-08	ADDED: IE10 restrictions
4.0	2020-06-30	Global update for viewON version 4
4.1	2021-12-21	Global update for viewON version 4.5

12.2. Trademark Information

Ewon® is a registered trademark of HMS Industrial Networks SA. All other trademarks mentioned in this document are the property of their respective holders.