

HWg-Juno and Genetec Omnicast

User & Administration manual

Manual version 1.0R - HWg-Juno firmware 1.0.7 and Genetec Omnicast4.6 GA

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General

HWg-Juno is dedicated IP I/O device compatible with Genetec Omnicast from version 4.5 GA and newer.





HWg-Juno provide to system integrator possibility to design system with unlimited number of dry (balanced) inputs and relay outputs. When using HWg-Juno Omnicast system could scale amount of inputs and output according to needs of the project. There are no more limits on limited amount of I/O ports available on video encoder or IP camera. With HWg-Juno you could place units where you need them and do not install expensive cabling to your location of video encoder or IP camera.

Device is listed by Genetec in official supported device list available on-line on Genetec’s [web site](#).

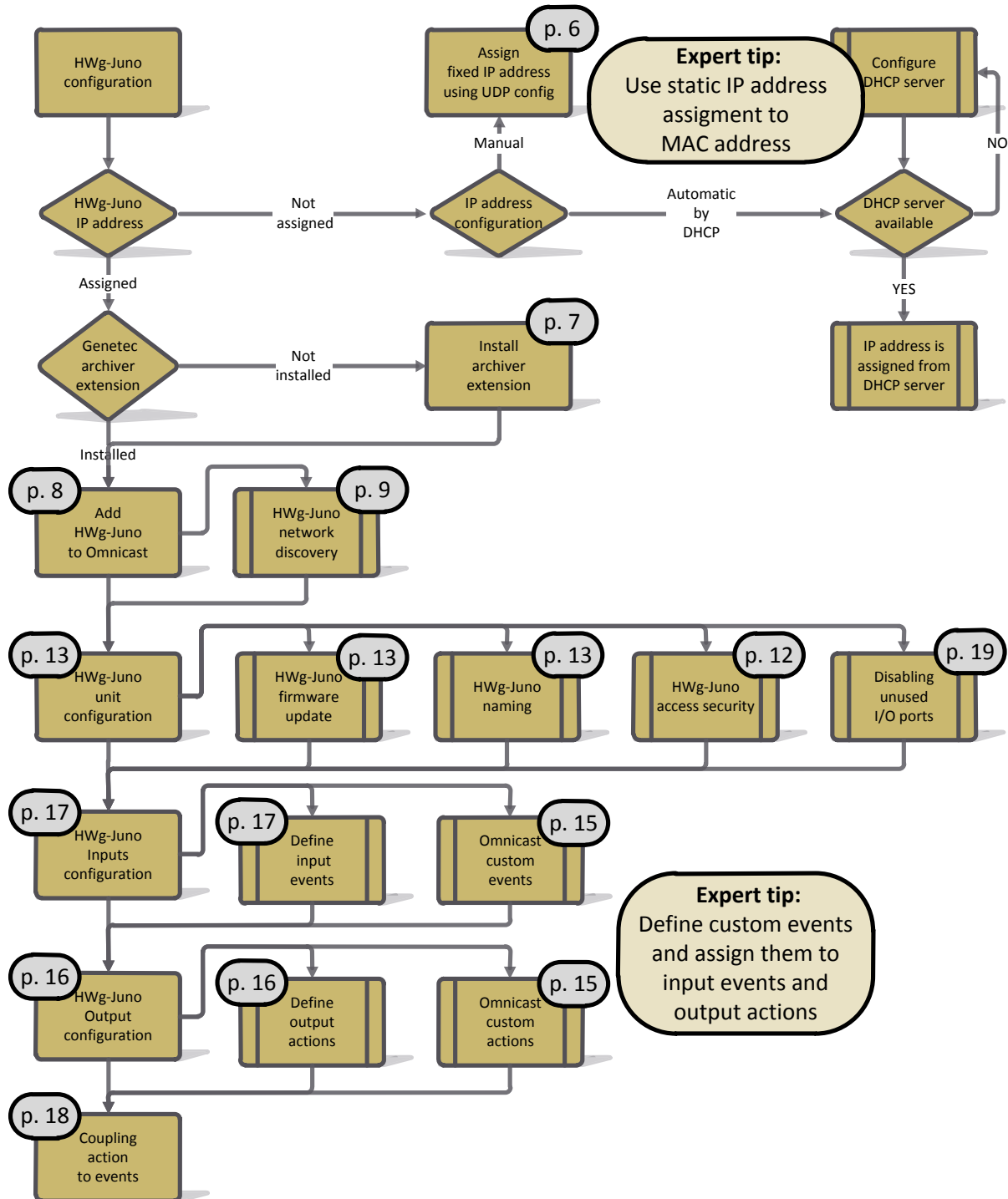
HWg-Juno is implementing Genetec protocol version 1.4 and supports all features available in Genetec Omnicast software for dry inputs and relay outputs. You could consider HWg-Juno as encoder without video input.

Latest HWg-Juno firmware is available for download at juno.hw-group.com

Technical support portal for HWg-Juno units is available at: hwg-juno.proboards.com

	HWg-Juno 101	HWg-Juno-404	HWg-Juno-1200	HWg-Juno-008
				
Inputs	1	4	12	-
Outputs	1	4	-	8
Power	5V=	5V=	12V=	12V=
PoE	802.3af	802.3af	802.3af	802.3af
Temperature	-10°C - 70°C	-10°C - 60°C	-10°C - 60°C	-10°C – 60°C

Quick navigation

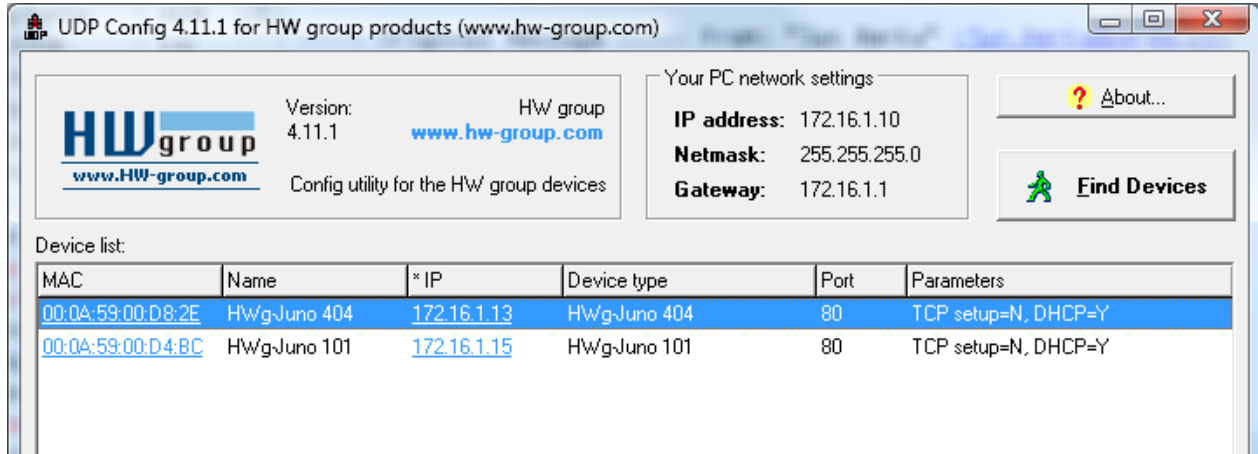


Licensing of HWg-Juno in Genetec Omnicast

Chapter will be updated soon.

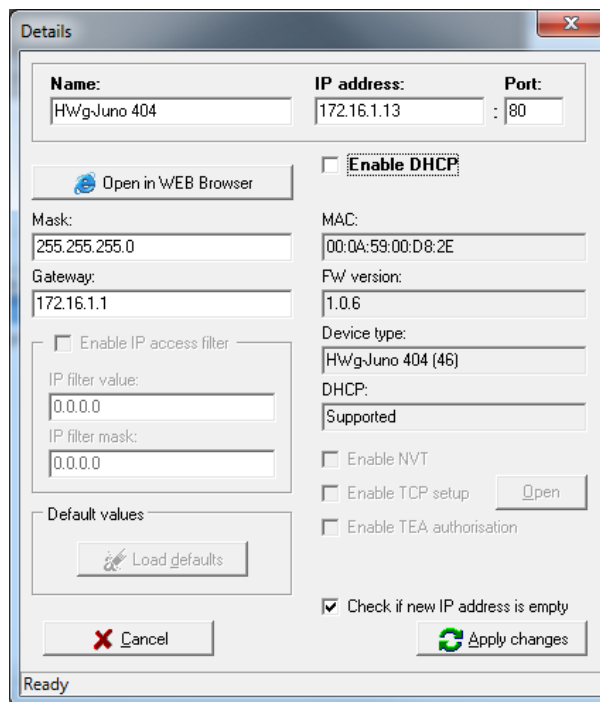
IP configuration of the HWg-Juno

IP configuration of HWg-Juno unit is done using UDP config utility which could discover and assign IP address to any HW Group produced units.



Once the unit has IP address assigned either static or dynamically assigned from DHCP all unit configurations is done in Genetec Config Tool.

All HWg-Juno devices has IP configuration default setting **automatic by DHCP**. Upon boot of HWg-Juno unit the unit will acquire IP address and could be discovered in Genetec Config Tool.

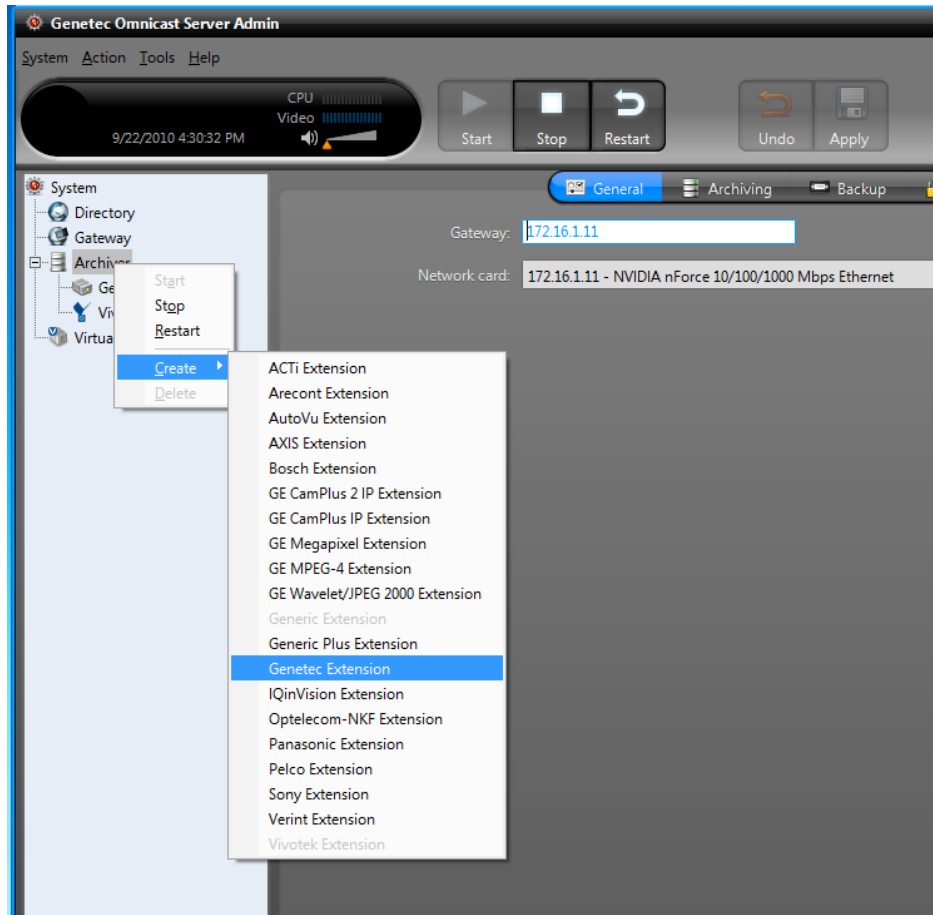


Right-click on discovered device will open Detailsettings windows.

Server Admin Tool

HWg-Juno is implemented in Genetec Omnicast using Genetec protocol. Genetec Extension has to be installed on every archiver server where you plan connect HWg-Juno units.

Please verify that you have Genetec extension installed on all archiver where you want to connect HWg-Juno units. If extension is missing on archiver then discovery of unit and adding of unit to archiver y is not possible.



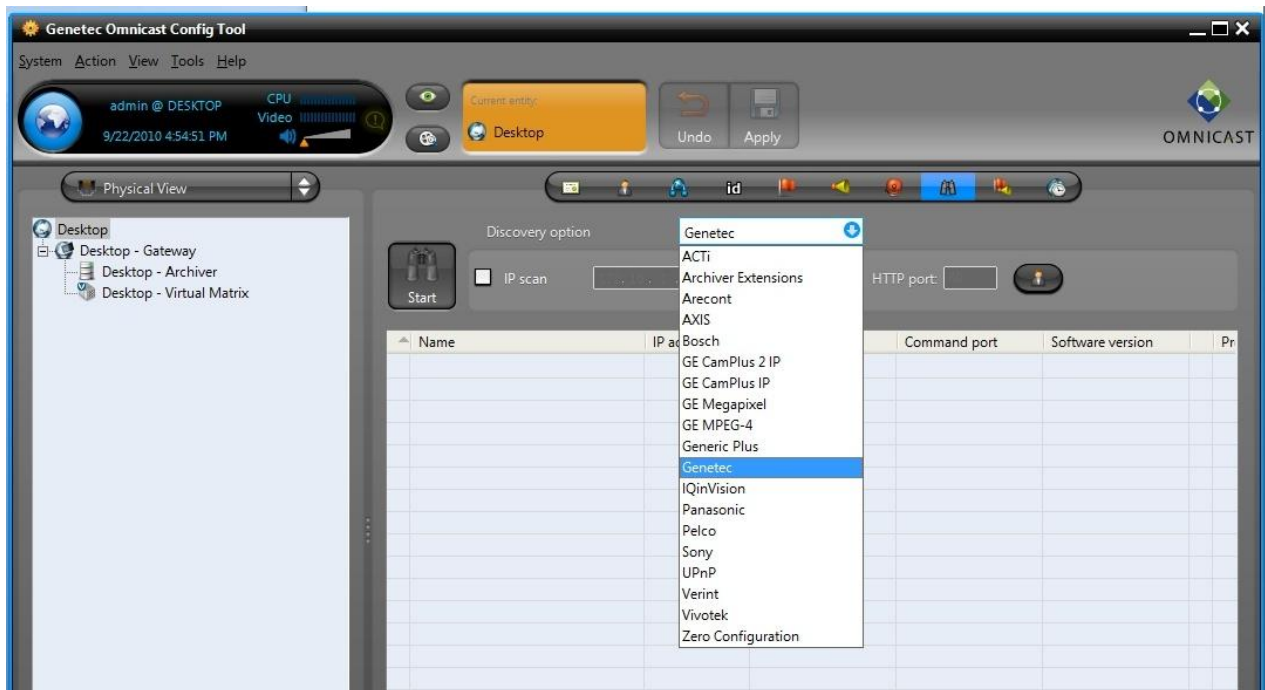
To add Genetec Extension to Archiver:

- Open **Genetec Server Admin**
- Select **Archiver** and right-click to open context menu.
- Select option Archiver >Create >Genetec Extension
- Restart **Archiver** to apply changes.

Adding HWg-Juno unit into Omnicast system

If HWg-Juno has IP address and your Archiver has Genetec extension in place you could proceed to discovery of unit on network and adding the HWg-Juno to Genetec Omnicast system.

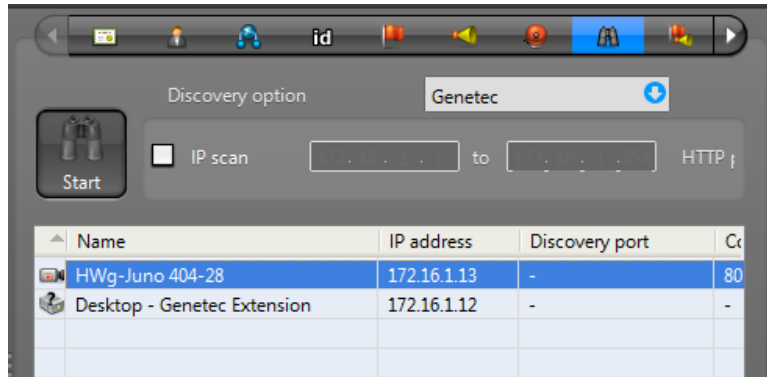
To discover unit on network you could use standalone Genetec Discovery tool or you could use Discovery tool embedded in Genetec Config Tool.



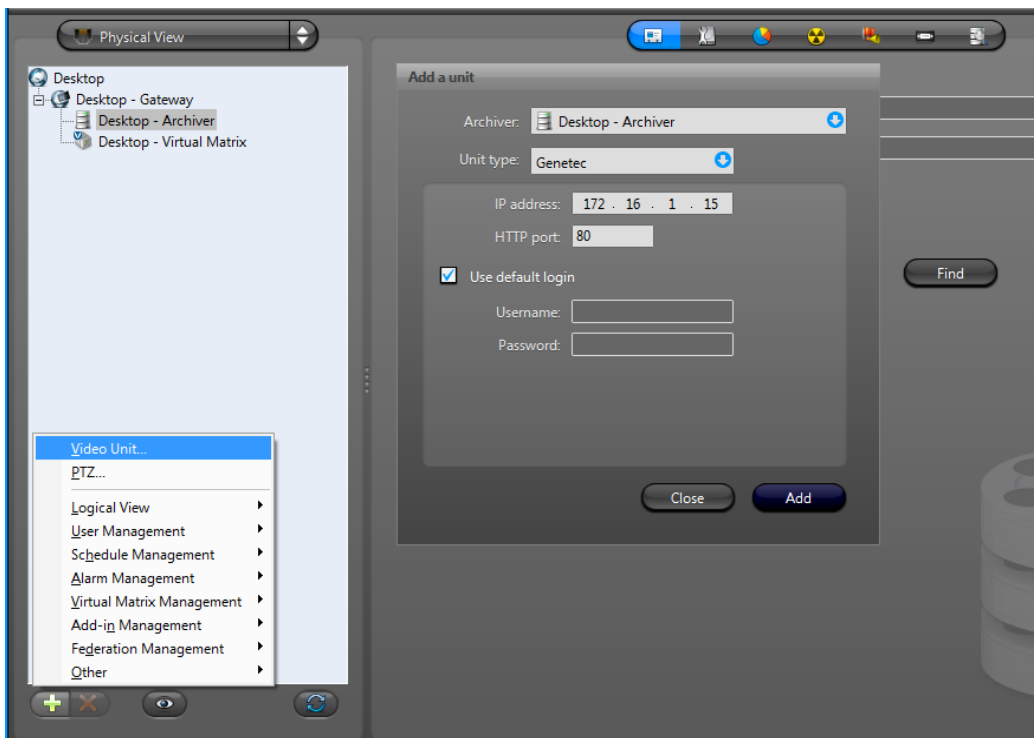
To discover unit please log-in to Config tool.

- Select **Physical view** in view selection pane of **Omnicast Config Tool**.
HWg-Juno inputs and outputs are not visible in Logical view.
- Select system **Directory** and then **Discovery tool** tab.
- Select the Discovery option to Genetec
- Press **Start** button to initiate discovery process

After few seconds (depends on size of your network) you will see all units discovered using Genetec protocol. The units could be discovered only if they are on non-routed network. Any L2 type network will be fine and will support automatic discovery.

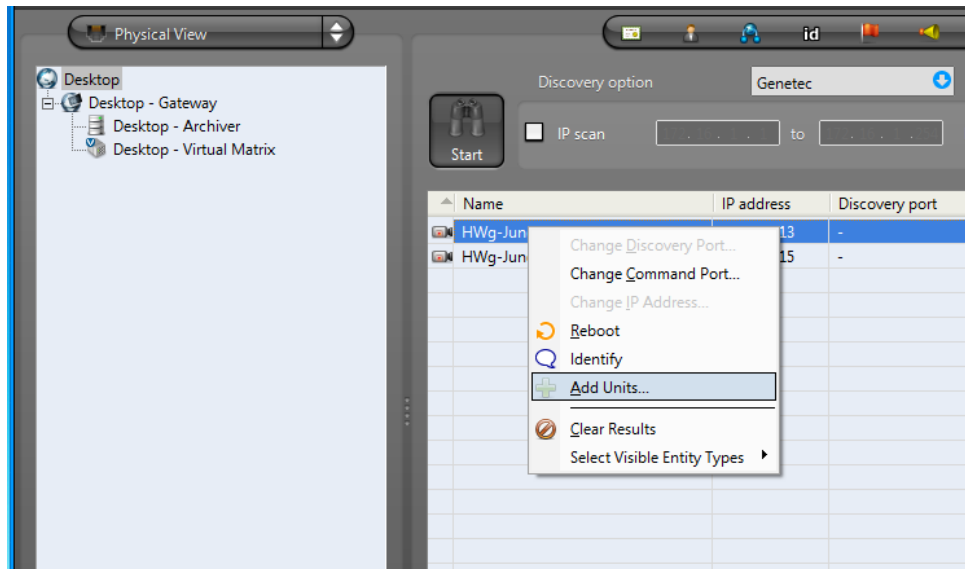


If you are on IP routed network then you have to add unit manually.



To manually add unit to selected archiver

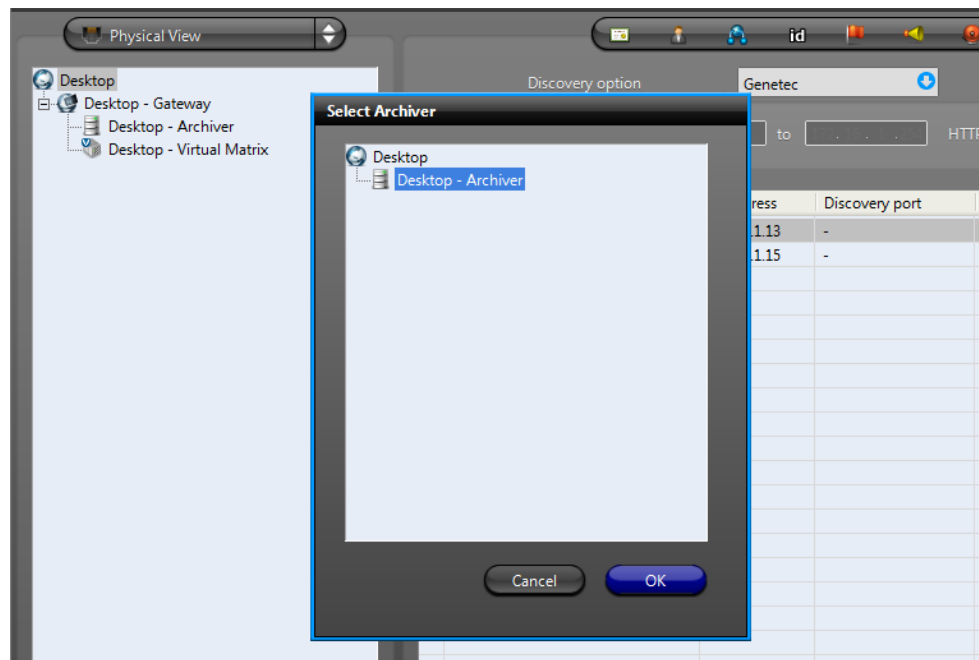
- Click on **+ >Video Unit..** and get **Add a unit** dialog.
- Select **Archiver** which you want to use for managing HWg-Juno unit
- Enter **IP address** and **HTTP port**
- Press **Add** button



To add discovered HWg-Juno unit to archiver.

- Select unit you want to add from list of discovered.
- *Right-click on unit* to get context menu.
- Select menu item *Add Units*
- Select **Archiver** where you want to Add your unit
- Press **OK** button.

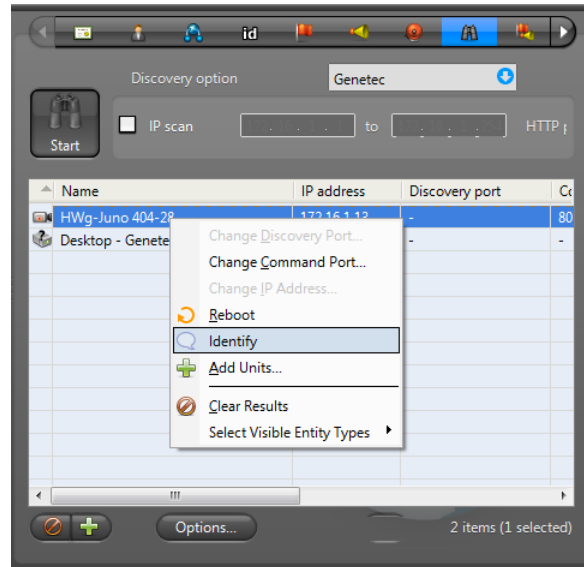
After few seconds (length depending on your network traffic) the unit will be shown in Physical View of View selection pane.



Discovery tools allow you to reboot HWg-Juno unit and also enable Identification LED, available on all HWg-Juno units. Identification LED is used for linking SW configuration to physical unit.

To Identify or reboot HWg-Juno unit

- Right click on the HWg-Juno unit to open context menu dialog
- Select appropriate action. Reboot or Identify.

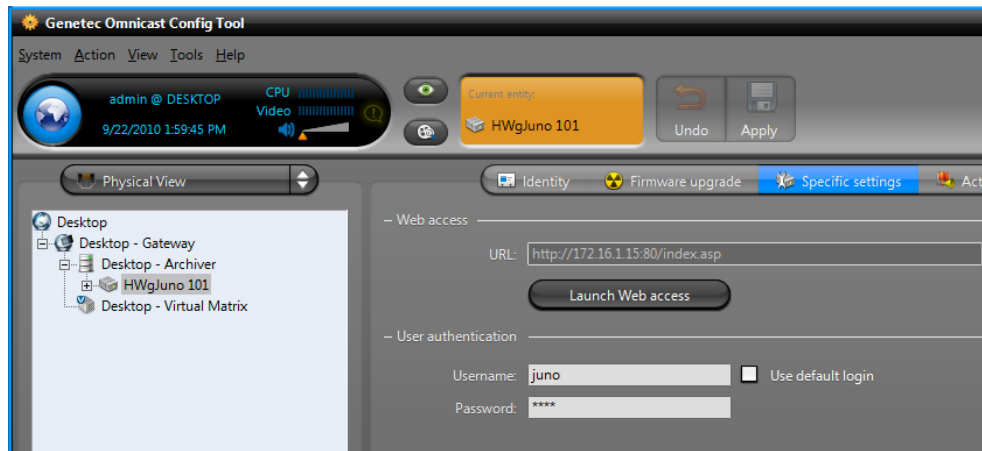


The dimmed options are currently unsupported by Genetec protocol.

HWg-Juno unit security

HWg-Juno has implemented password protected access to the unit from Omnicast and secure access to HWg-Juno configuration. Security user name and password are set in the HWg-Juno admin interface. Once set all access to unit configuration will require identification.

To enable secure communication select the HWg-Juno unit in Genetec Config Tool.

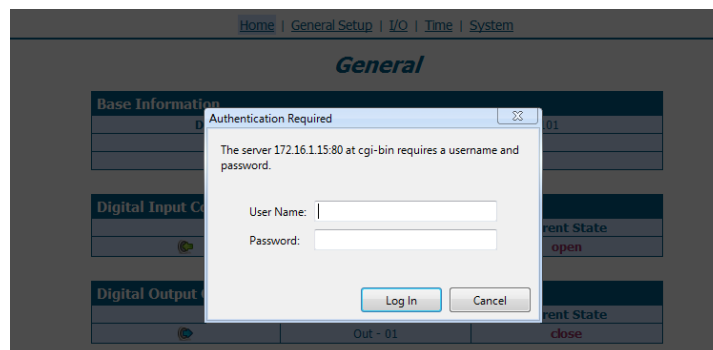


Select unit configuration tab Specific settings and Launch Web access to HWg-Juno unit. In HWg-Juno web configuration select General setup tab and enter desired user name and password into Security section

Security: Device Admin		
Name	Value	Description
Username	<input type="text" value="juno"/>	Admin username/password for device configuration changes [0 to 16 characters]
Password	<input type="password" value="****"/>	
<input type="button" value="Save"/>		

You have to **reboot** the HWg-Juno unit to enable secure communication. After reboot the unit will become inaccessible from Genetec Omnicast. All communication between the HWg-Juno is now secured and access to HWg-Juno web will by password protected.

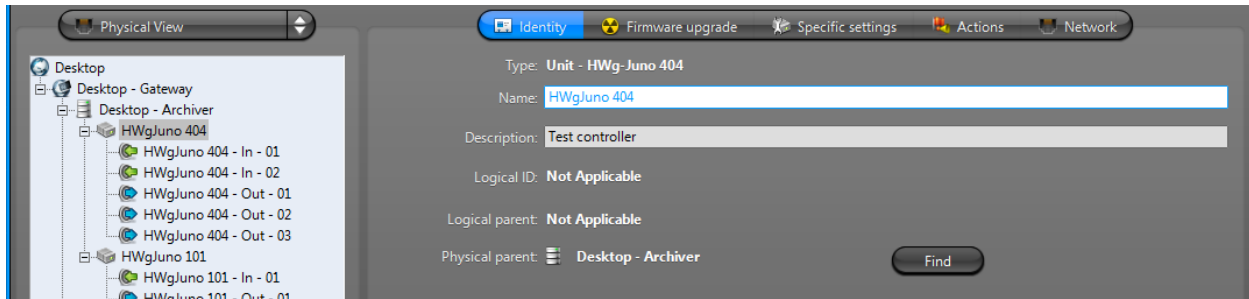
Enter user name and passord into Unit >Specific settings >Unit authentication to restore access to unit



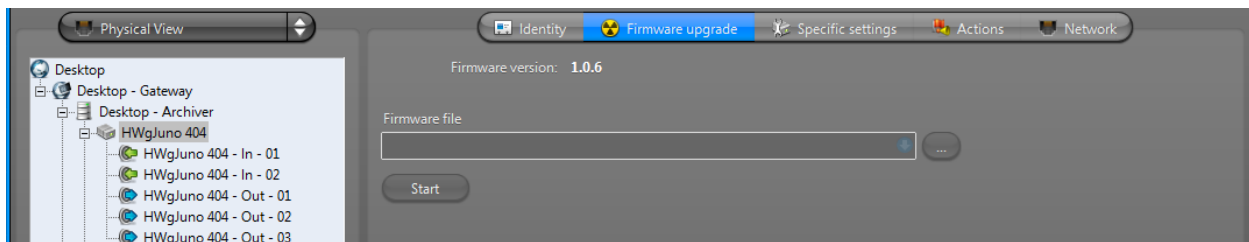
HWg-Juno unit configuration options

Select the HWg-Juno unit in *Physical view of Selection pane* and number of configuration tabs becomes available.

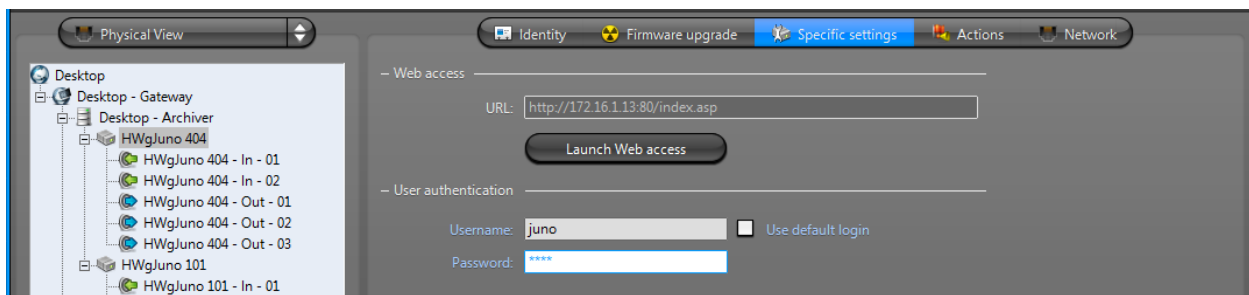
Identity tab allow you to set name and description to the unit. Enter descriptive name usually used for equipment inventory management.



Firmware upgrade tab is used for updating unit’s firmware. This option is currently unavailable due limitation in Genetec protocol. Firmware upgrade must be executed in units web interface.

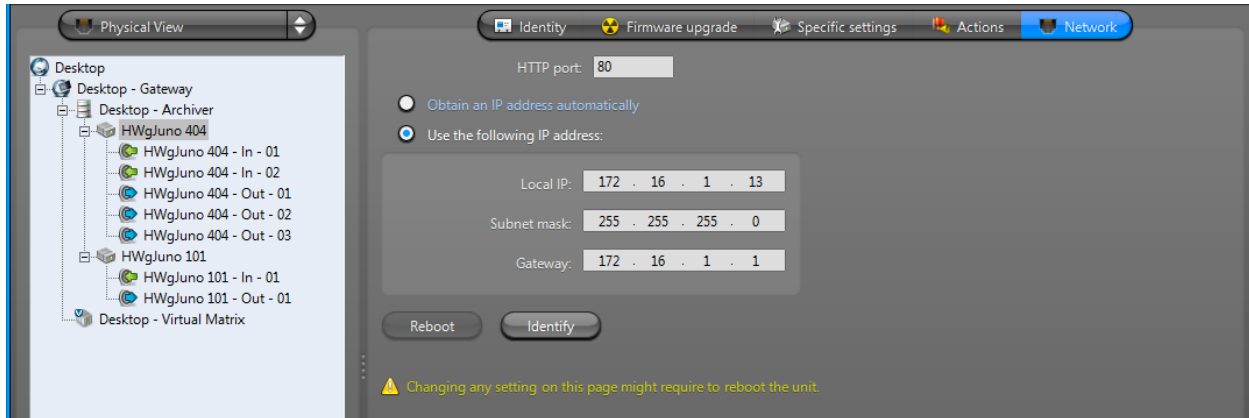


Specific settings tab allow you to enter user authentication for unit and launch web access to HWg-Juno.



Network configuration tab allow you to modify the existing IP configuration of the unit. The unit must be rebooted to implement the change. Here is possible to select if static or automatic assignment of IP address will be used.

Button **Identify** enables HWg-Juno identification LED so the unit could be found.



Using I/O in Genetec Omnicast

An event is a signal that Omnicast sends when HWg-Juno inputs is activated. All events are attributed to a source entity which is the main focus of the event.

Events can be used to trigger actions such as starting the recording on a camera, triggering an alarm, opening the relay output, or sending a message to a user. The ability to associate actions to specific events allows the administrator to program intelligent system behaviors.

Monitoring events

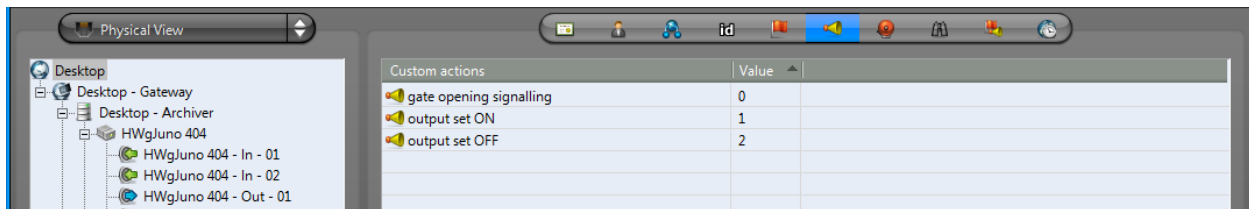
Events can be monitored in real time with the Live Viewer. Events can be filtered and displayed chronologically in an event list as they occur.

Event reports

Omnicast can also be configured to create event logs and event reports for analysis and debugging purposes. To set up event logs for the Directory and the Archiver, go to Server admin tool and enable file logging for each Genetec Archiver used for managing HWg-Juno.

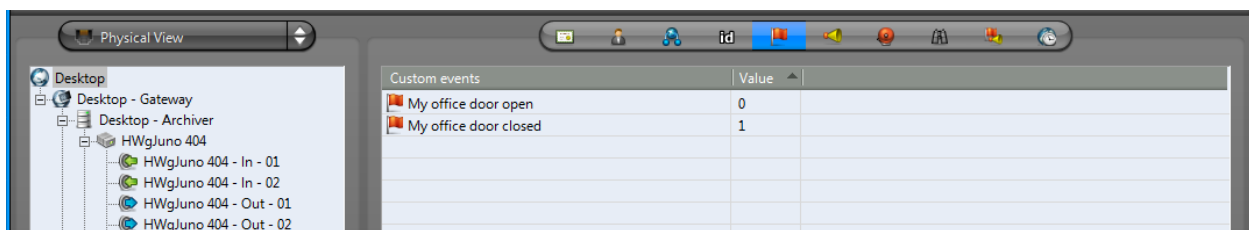
Custom Actions

Custom actions can be defined in the Config Tool. Every custom action is defined by a description and a value. A custom action is nothing more than a meaningful name that can be assigned to an output relay state to ease programming. Once a custom action is defined, it will appear in the Action type drop-down list of the *Create >Edit* an action dialog.



Custom events

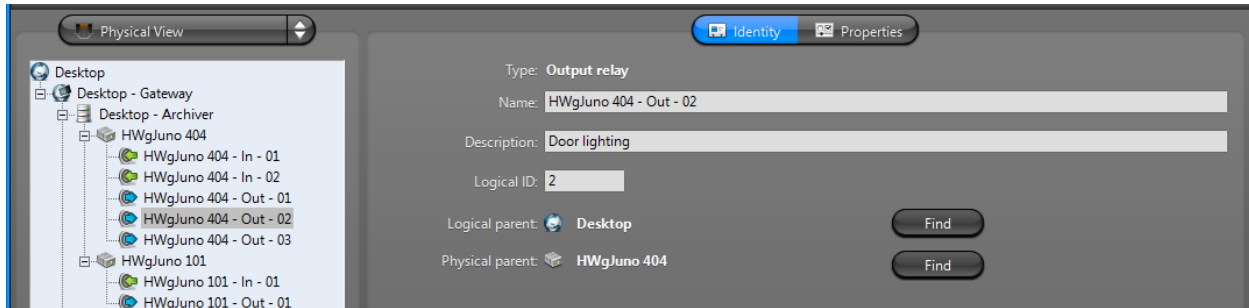
The events defined at Omnicast installation are called system events. Custom events can be defined by users. Unlike system events, custom events can be renamed and deleted. Custom events is nothing more than meaningful name that can be assigned to a dry contact input state to ease programming.



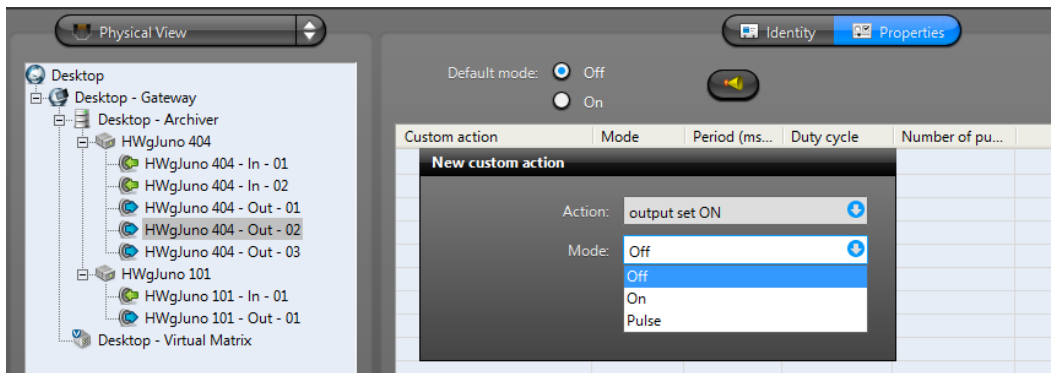
Configuration option for outputs

Each relay output used in a system could be configured.

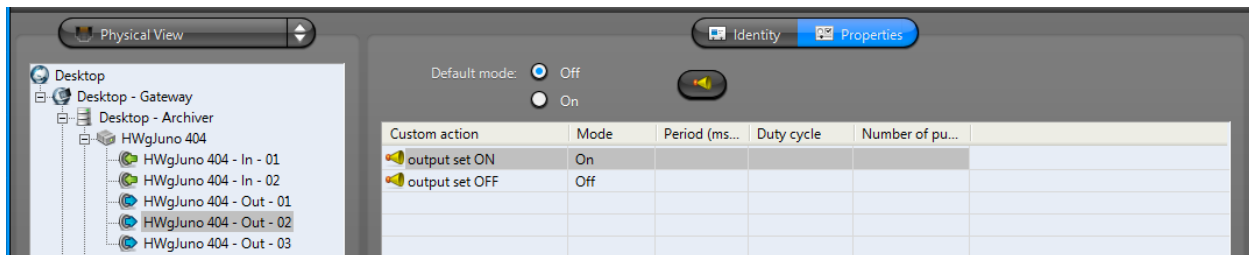
Identity Tab allows you to enter descriptive name and further description.



Properties tab of relay output allow you to set default relay mode. Relay outputs supports **relay output modes**: ON, OFF and PULSE.



Custom action created could be now assigned to relay output and provide meaningful name to action. (Example of action: Lighting in corridor ON, Lighting in corridor OFF)

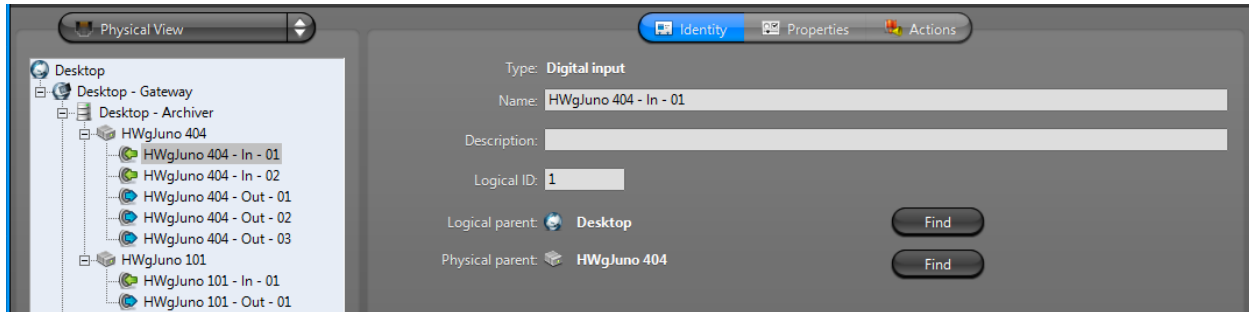


Expert tip: Custom action name will be saved into Archiver log and displayed in Live Viewer to all operators. It is highly recommended to use custom actions for all used ports to make logs human readable.

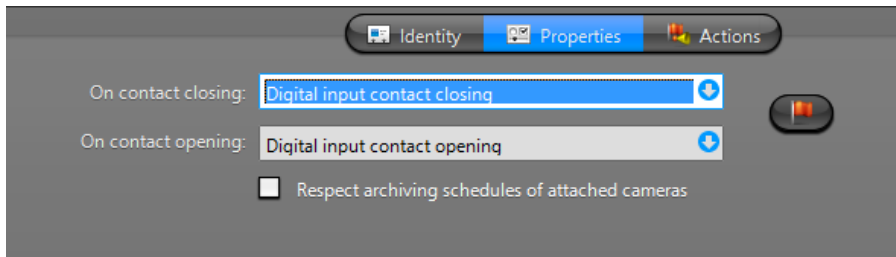
Configuration option for inputs

Each dry contact input used in a system could be configured.

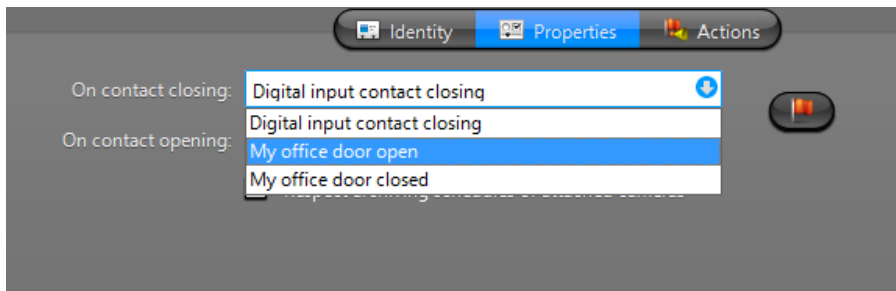
Identity Tab allows you to enter descriptive name and further description.



Properties Tab of the input allow you to set meaningful name to each port status either closed or open.



Expert tip: Select custom event name from the drop down list of Custom events. It is highly recommended to use custom events for all used ports as archiver logs and live viewer events become human readable. Information „Input port XYZ Opened“is not much useful. Compare with event „Money vault room door OPEN“

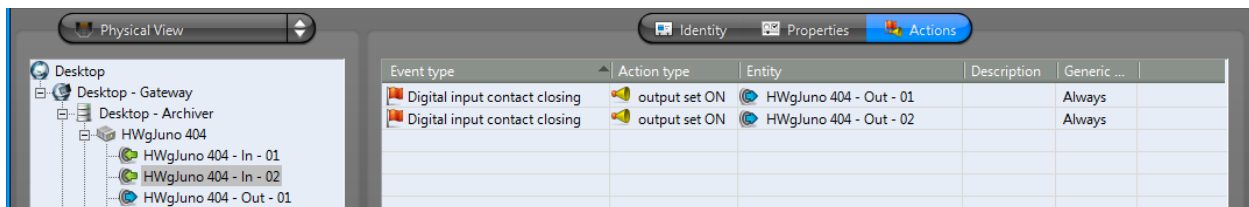


Using HWg-Juno inputs and outputs - Coupling Actions to Events

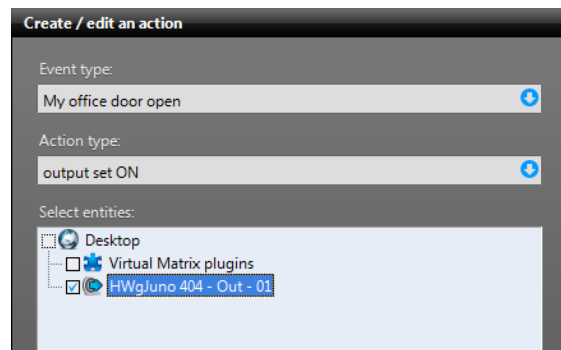
All events generated by Omnicast can be used to trigger actions. This is by far the most powerful and versatile method for handling events. Some entities have an Actions tab in the Config Tool where you can associate actions to the events pertaining to that entity. You can program custom system behavior as follows.

To couple an action to an event

- Select *Physical view* and an *entity* from the **Config Tool**. By default, the actions are displayed in a tabular form where each row represents a single event-to-action association. Each event-to-action association is described by the *Event type*, the *Action type*, the object of the action (Entity), specific action parameters (*Description*), and when the action is active (*Generic schedule*).



- Click at the bottom of the Configuration pane. The **Create / edit an action** dialog box appears.



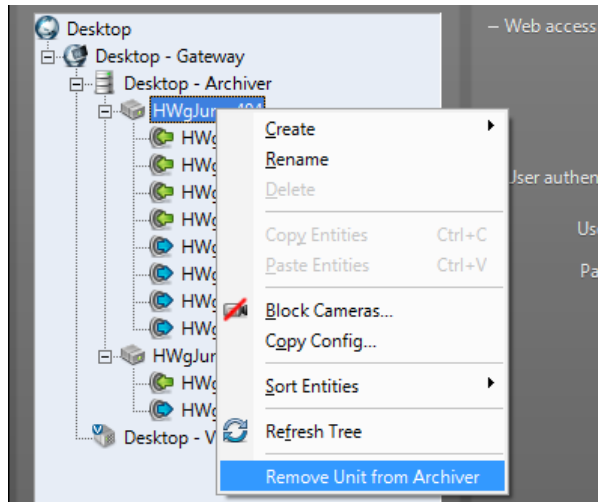
- Select the *event type* that will trigger the action.
- Select the *action type* that should be triggered. The dialog box will dynamically adjust itself to show the required parameters of the selected action type.
- Enter all required parameters.
- Select the *schedule* during which this action will be active.
- Click **OK** to add the action(s). One or more actions may be added depending on what you entered.
- Click to **save** the changes.

Disabling unused I/O ports – Genetec I/O license use optimization

HWg-Juno support custom configuration of number of input and output presented to Genetec Omnicast system. If you have HWg-Juno unit with 4 inputs and you want to use only 2 of them, you could disable unused ports in HWg-Juno admin interface. This configuration option is applicable for inputs and outputs.

To disable not used ports on HWg-Juno unit:

- Open **Config Tool**
- Select the unit you want to work with
- Right click the entity to get context menu.
- Select *Entity > Remove Unit from Archiver*



- Open the **HWg-Juno unit web interface**
- Go to **I/O tab** and enter number of ports you want to keep. (you have to deduct ports you want disable from total)
- Click **Save** button (No reboot is necessary as the unit makes changes in real-time)

HWg-Juno 404

Home | General Setup | **I/O** | Time | System

I/O Setup

I/O Setup		
Name	Value	Description
Number of inputs in use	<input type="text" value="2"/>	Values range 0 .. 4
Number of outputs in use	<input type="text" value="3"/>	Values range 0 .. 4

Output Relay Power up state	
Name	Value
Mode	<input type="text" value="Auto by protocol"/>

Live status of the ports is displayed on Home tab of unit web interface.

HWg-Juno 404

[Home](#) | [General Setup](#) | [I/O](#) | [Time](#) | [System](#)

General

Base Information	
Device Name	HWg-Juno 404
Time	14:24:28
Date	22.09.2010

Digital Input Contact		
	Name	Current State
	In - 01	open
	In - 02	open
	In - 03	disabled
	In - 04	disabled

Digital Output Contact		
	Name	Current State
	Out - 01	open
	Out - 02	open
	Out - 03	open
	Out - 04	disabled

To enforce new unit configuration in Genetec Omnicast it is necessary to re-Add unit into Genetec Omnicast.

- Go to **Config Tool** and discover unit that you just removed from archiver.
- Select the HWg-Juno unit and **add it them to the same archiver you removethem from**. Omnicast system will add the unit back to archiver but update number of Inputs and outputs in Physical view
- **Select all disabled ports** (red color) and delete them by selecting **Delete item** in context menu.

