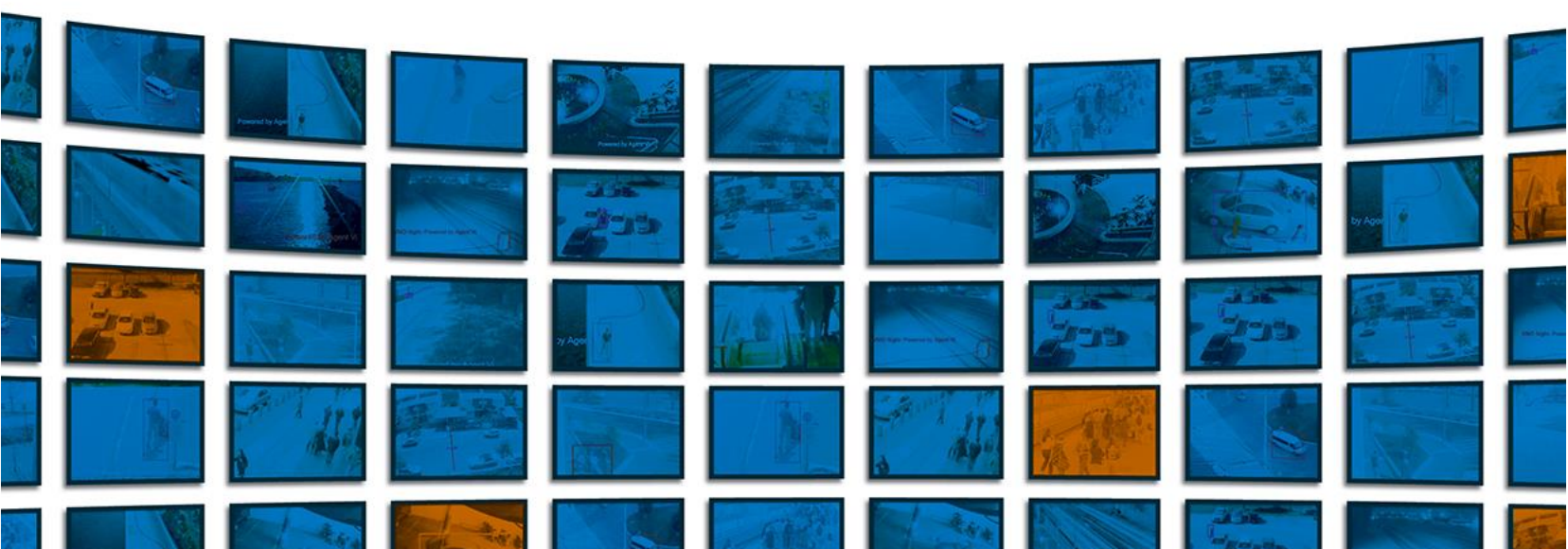




*Comprehensive Video Analytics Solutions*

# savVi Digital I/O Tool – User Guide

savVi 5.4 & 5.5



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# 1 savVi Digital I/O Tool - User Guide

This guide covers the installation, configuration and operation of savVi Digital I/O Tool. This tool is presently compatible with Axis devices/cameras that have I/O interfaces that can managed via VAPIX. This in particular includes the P8221 (Audio and I/O Module).

## 1.1 functional description

There are 2 main capabilities that are enabled via savVi Digital I/O Tool:

1. Changes in **Digital Input** status that are made on Axis devices (i.e., opening or closing the circuits) can activate or de-activate analytics rules in savVi. The typical use case is when using an external alarm system that is activated at the end of a business day, that should then activate the analytics rules in savVi.
2. Analytics events generated in savVi can trigger a signal which is sent to a **Digital Output** on Axis device. Using the use case of an alarm system, a violation of an analytics rule in savVi (i.e., an intruder entered the protected area) would generate analytics event that will then trigger a Digital Output signal to turn on a buzzer or similar.

## 1.2 component description

savVi Digital I/O Tool contains the following components:

1. savVi Digital I/O Service – backend of the application which is responsible for:
  - a. Communication with the savVi Server, such as listening to alarms and Enabling/Disabling analytics rules
  - b. Communication with Axis I/O devices
  - c. Storing Configuration
2. savVi Digital I/O Tool Client – Provides a user interface for configuring the savVi Digital I/O Service:
  - a. Managing Axis I/O devices configuration
  - b. Associating savVi's analytics rule with Axis input/output ports
  - c. Configuring event actions

## 1.3 Installation

Prerequisites:

1. .NET Framework 4.5

In order to install the tool:

1. Download savVi Digital I/O Tool installer
2. Run the installer and proceed with the default configuration

After the installation, the service and the UI Client are installed. savVi Digital I/O Tool Client should be accessible via Windows “Start” button.

## 1.4 Configuration

In order to configure the server component of the tool, perform the following:

1. Open the installation folder: “C:\Program Files (x86)\AgentVi\savVi Digital IO Tool\”
2. Open as Administrator the configuration file: “savViEventProxy.Service.exe.config”. The configuration settings are as follows:

3.

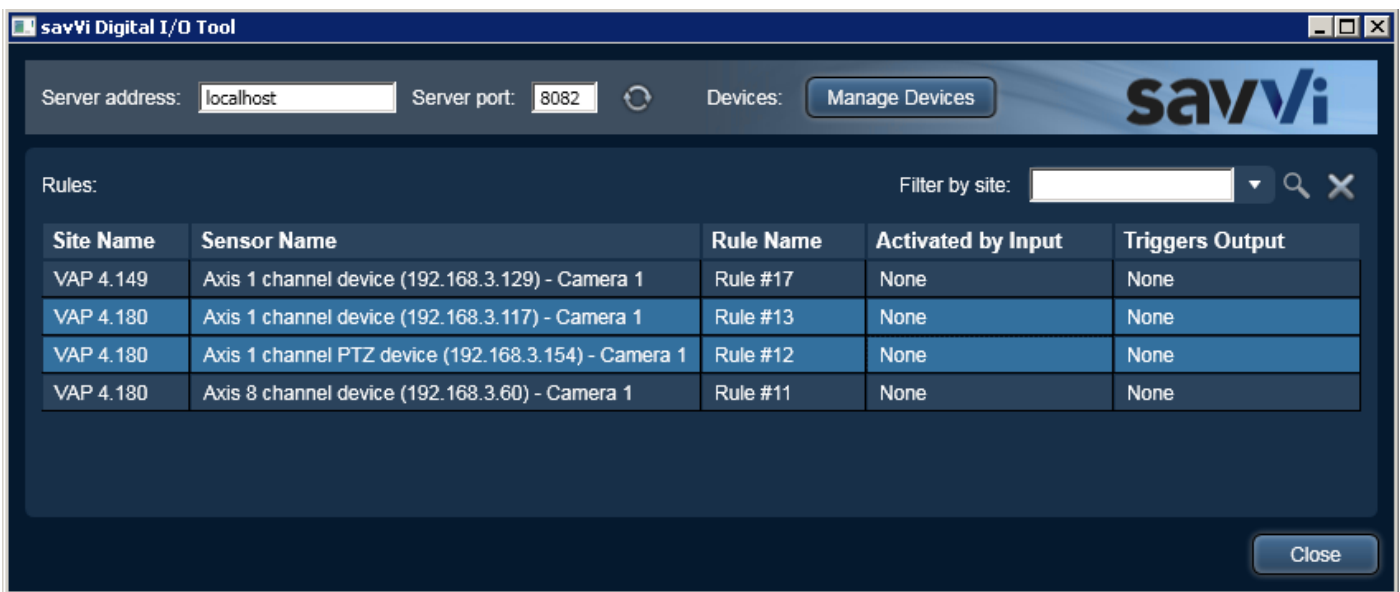
- a) **GatewayPrimaryServerIP:** Primary LBS address (default is set to 127.0.0.1)
- b) **GatewayPrimaryPort:** Primary LBS Web Service port (default is set to 8080)
- c) **GatewayBackupServerIP:** Secondary LBS address (whenever applicable)
- d) **GatewayBackupServerPort:** Secondary LBS Web Service Port (whenever applicable)
- e) **WebServicePort:** Port to connect with digital I/O tool client (default is set to 8082)
- f) **UserName:** savVi User Name (default Admin)
- g) **UserPassword:** savVi Password (default Master)
- h) **OutputDuration:** Duration (in seconds) for activating a digital **output**
- i) **InputStatusInterval:** How often (in seconds) to check the status of **input** interfaces
- j) **DeactivateRulesWhenPortIs:** 1 = Active; 0 = Inactive (default). This setting defines in what state the rules will be deactivated (the rules will be activated on the opposite state).
- k) **OutputNormalState:** 1 = Closed circuit (default); 0 = Open circuit. This setting defines the default steady state of the digital output meaning that analytics rule event triggers a change in this state.


Note: Whenever the settings are changed, a service restart is required.

## 1.5 client Operations

After configuring the service, the GUI Client can be started.

Initially, the GUI would look as follows:

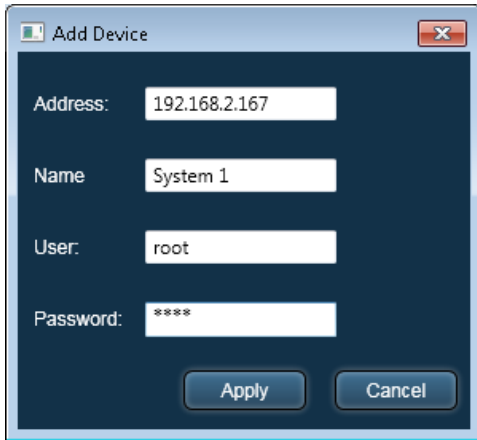


When installing only the client component, there is a need to update the server address and port (port is defined in savViEventProxy.Service.exe.config file as 'WebServicePort') of the “Digital I/O” server component and click refresh (  ) in order to connect to the I/O server, and only then the rule list would appear.

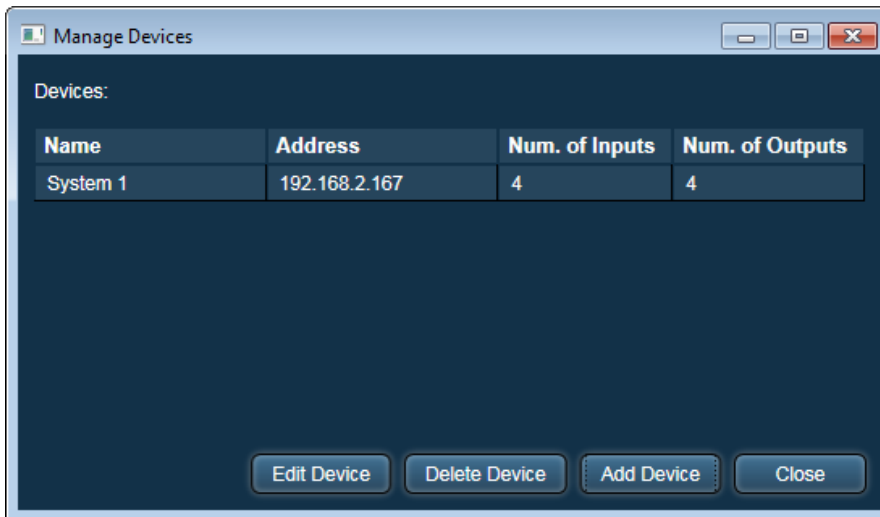
### 1.5.1 Add a device

In order to add a device, perform the following:

1. Click on **Manage Devices** and then click **Add Device** to add Axis I/O devices
2. Fill the device details and click **Apply** (you can give the device a local name e.g. System 1)

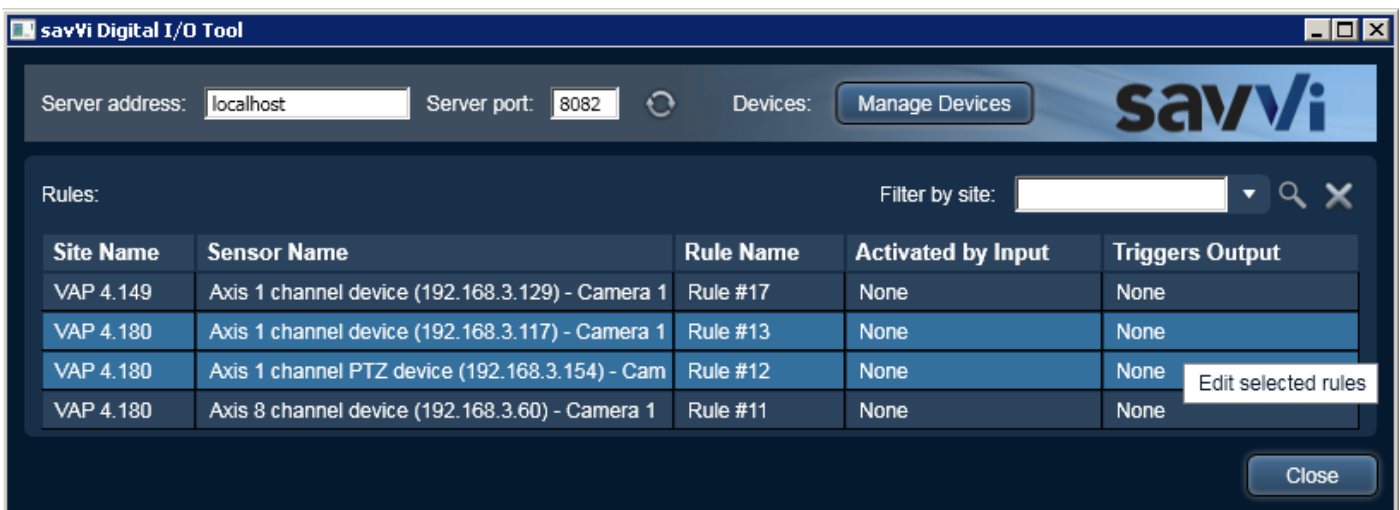


When a device is added, its details look as follows:

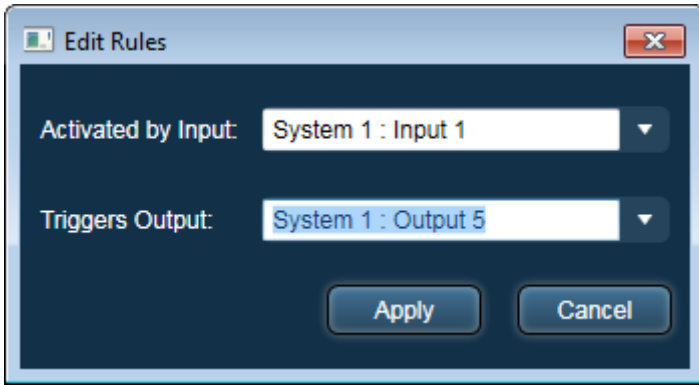


### 1.5.2 Event Action Configuration

1. After configuring Digital I/O devices, it is possible to define rule to I/O mapping for event actions by right clicking **Edit selected rules** on the relevant row(s):



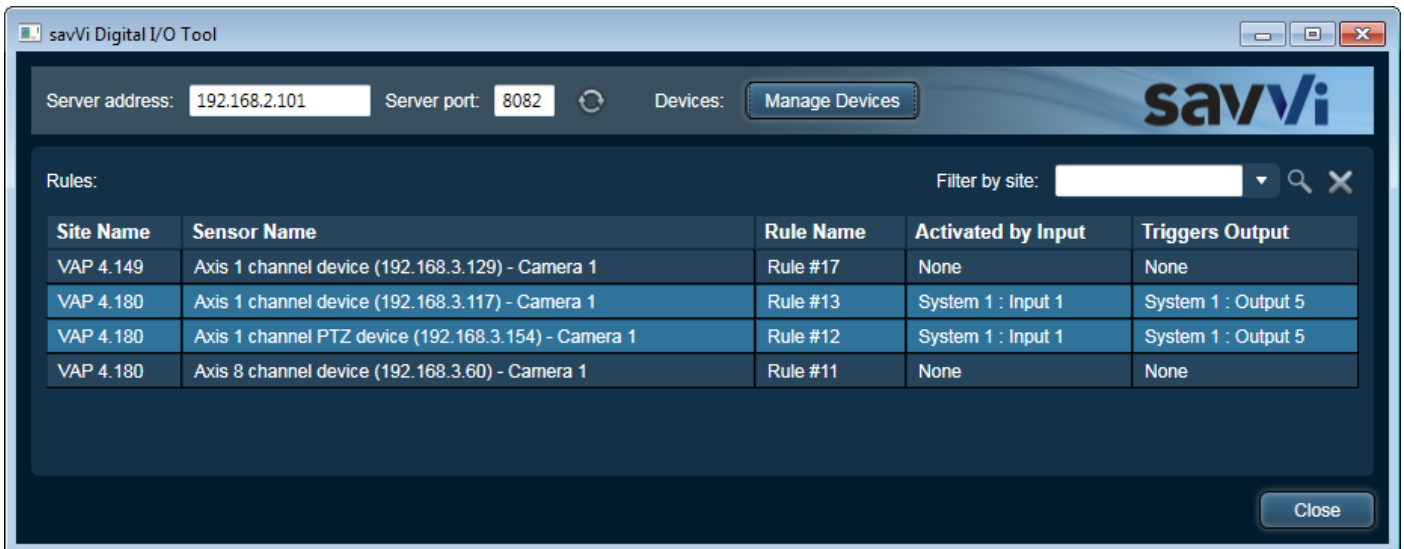
2. Choose a relevant Input & output configuration and click **Apply**:



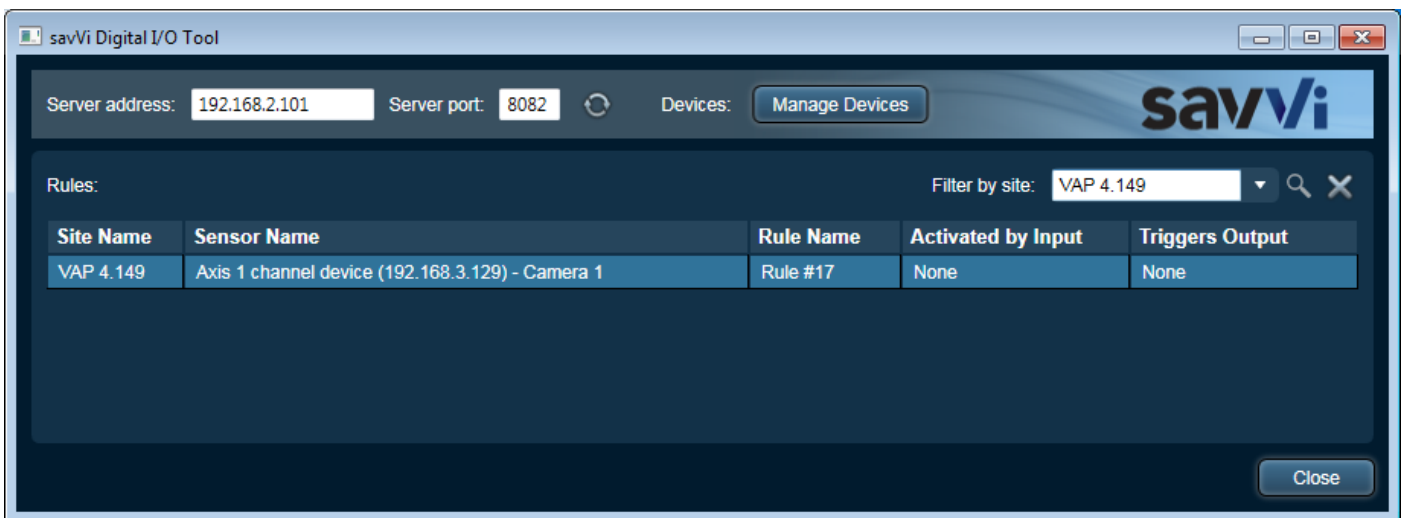
**Note:**

- a. By specifying **Activated by Input**, the rule will be activated & de-activated according to changes in this input interface
- b. By specifying **Triggers Output**, the events generated for this rule will be triggering a signal to this output interface

3. Now the relevant rule rows contain the Event Actions configuration:



4. You can filter the rules by site using the search box at the top right:





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[www.agentvi.com](http://www.agentvi.com)  
[support@agentvi.com](mailto:support@agentvi.com)