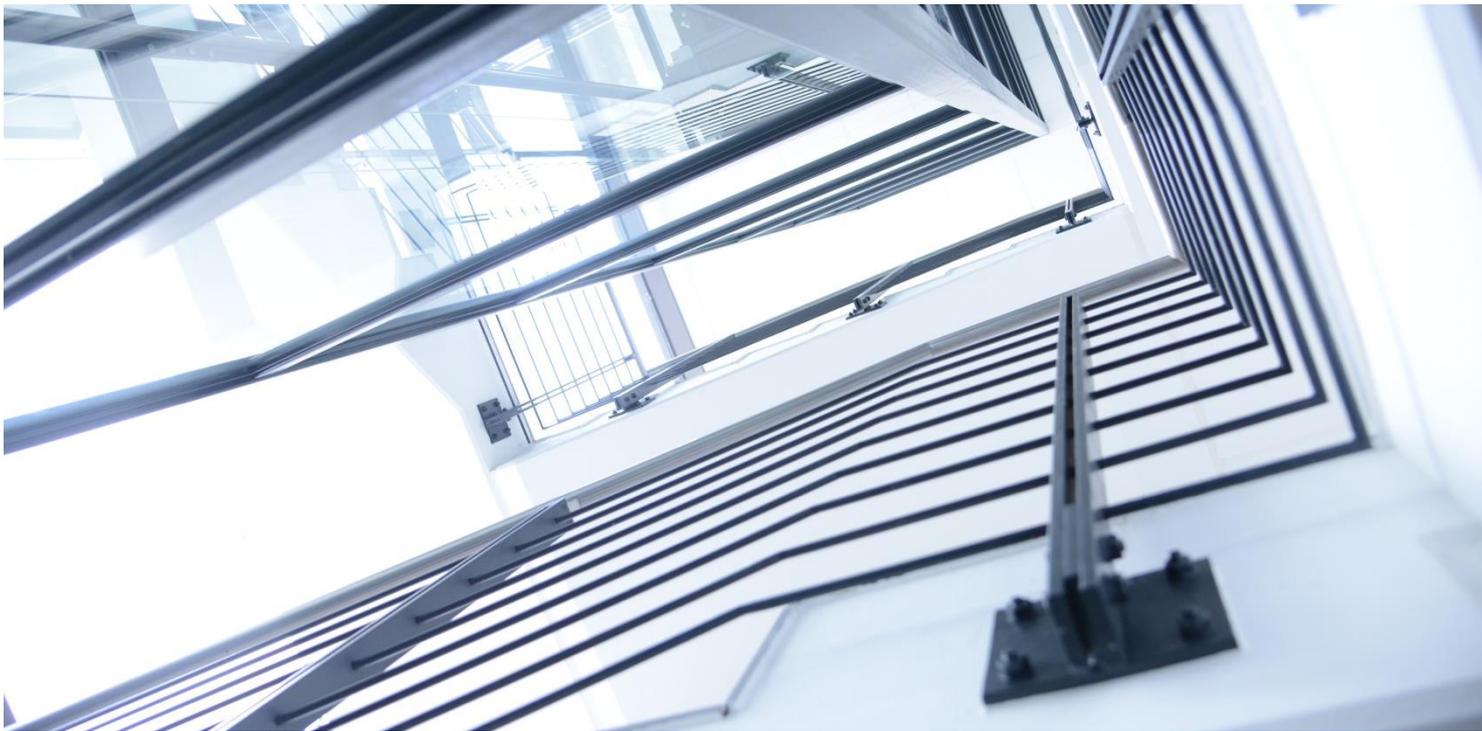


KEEP IT SIMPLE!



XPROTECT PLUGIN EVENTFORWARDER

Administrator and User Manual

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1 Introduction

The EventForwarder is a small but powerful plugin. It enables the user to share information of XProtect event servers with any third party software providing an HTTP(S) endpoint.

The EventForwarder plugin simply adds an action to the existing XProtect rules engine. Therefore, the power and flexibility of the rules engine can be fully exploited to forward XProtect events based on several filter options.

A use case for the EventForwarder plugin might be the integration of XProtect into a global monitoring and alerting system by forwarding e.g. metadata, warnings and errors. Another case of application could be the extraction of information gathered by the cameras in order to run business processes based on this data.

In combination with the XProtect License Plate Recognition (LPR) plugin, a concrete application could be car park management. Based on the camera footage the LPR plugin creates events with license plate information and timestamps on entry and exit of vehicles. An external software could use these events to calculate the parking duration.

In general, any software that builds on or benefits from data of video management systems can be connected and supplied with the necessary information.

2 How to install

2.1 Installation of the plugin

After downloading the plugin, copy the plugin directory "EventForwarder" into the MIPPlugins folder inside the XProtect installation folder. The resulting folder layout should be:

```
[MilestoneFolder]\MIPPlugins\EventForwarder
.\EventForwarder.dll
.\Newtonsoft.Json.dll
.\plugin.def
```

In order to use the EventForwarder plugin, restart the event server as well as the XProtect Management Client.

2.2 Activation of the plugin

The next step is to activate the EventForwarder plugin. The plugin uses the standard XProtect workflow for licensing and activation. Open the XProtect Management Client and go to “License Information”. At the bottom of the page in the dropdown, “Activate License Manually...” choose “Online”. The “Activate Online” dialog will be opened:

Activate Online ✕

Enter the user credentials.
You should always log in as the same user when activating the license.

User name: [Create new user](#)

Password:

Enable automatic activation

[Privacy statement](#)

Enter your credentials and your EventForwarder license that is stored in your account will be activated.

After successfully activating the plugin, the EventForwarder plugin appears under “Installed Products” with an expiration date on the “License Information” page:

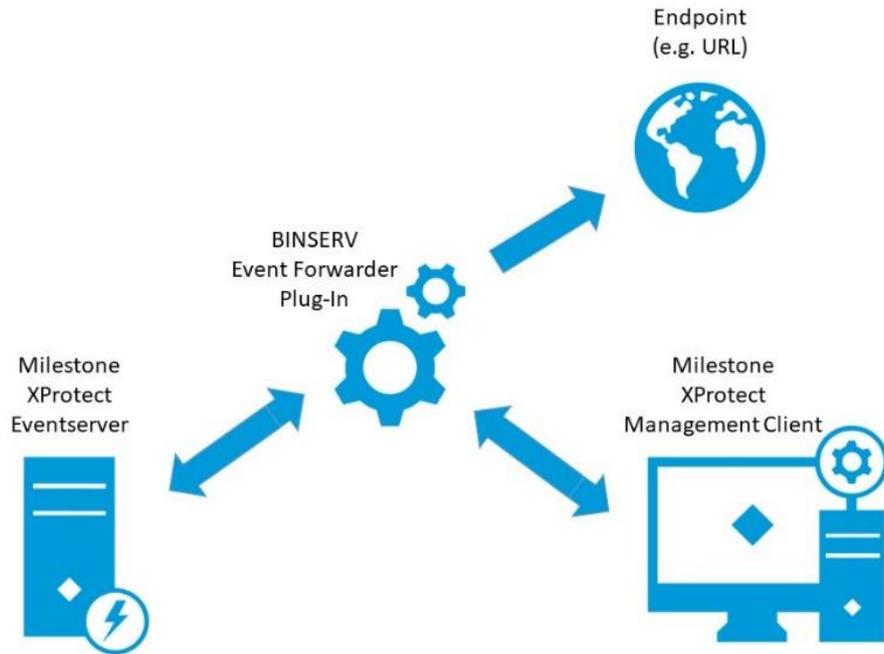
The screenshot shows the XProtect Management Client interface. The left sidebar contains a navigation tree with 'MIP Plugins' expanded to show 'BINSERV EventForwarder'. The main content area displays the 'License Information' page for 'milestone | XProtect'. It includes a 'Milestone Care' section, an 'Installed Products' table, a 'License Overview - All sites' table, and a 'License Details - Current Site' table. The 'BINSERV EventForwarder v1.0.0.0' entry in the 'Installed Products' table is highlighted with a red box. The 'EventForwarder License' entry in the 'License Overview' and 'License Details' tables is also highlighted with a red box.

Product Version	Software License Code	Expiration Date	Milestone Care Plus	Milestone Care Premium
XProtect Corporate		16.02.2021	N/A	N/A
Milestone XProtect Smart Wall		Unlimited	Unlimited	
BINSERV EventForwarder v1.0.0.0	N/A	05.11.2022	05.11.2022	

License Type	Activated
Hardware Device	8 out of 25
EventForwarder License	1 out of 1

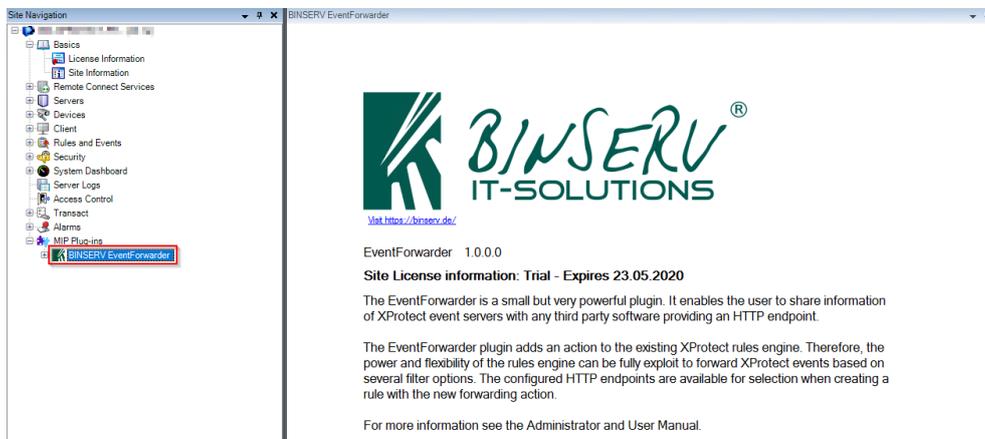
License Type	Activated	Changes without activation	In Grace Period	Grace Period Expired	Without License
Hardware Device	8	0 out of 10	0	0	0
EventForwarder License	1	N/A	0	0	0

2.3 Architectural overview



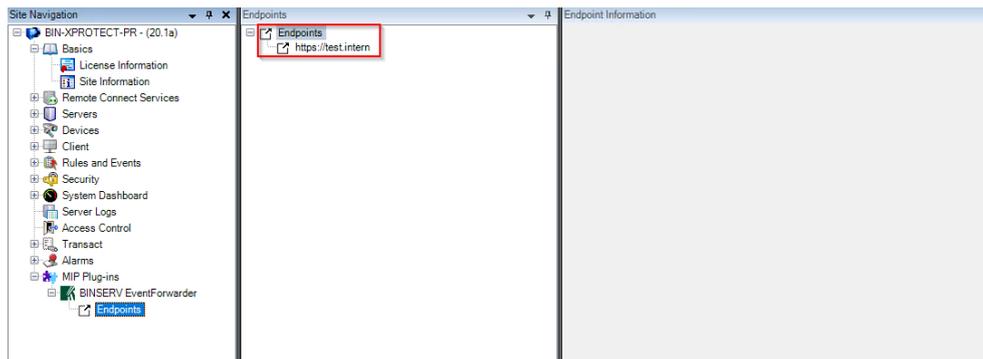
3 How it works

After a successful installation and activation, the EventForwarder plugin is listed as “Installed Product” on the “License Information” page and is available as a „MIP Plugin“:

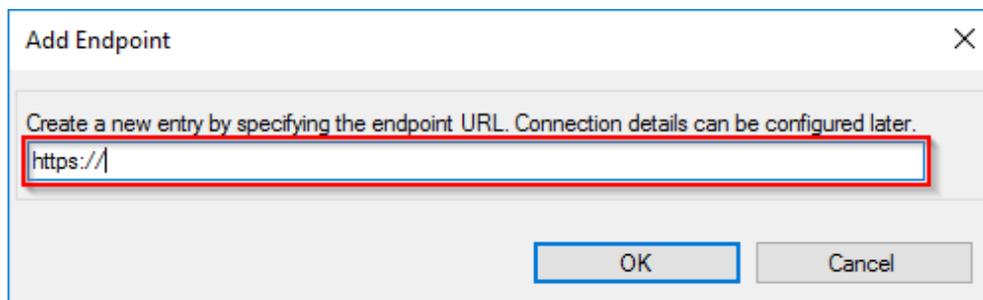


3.1 Configuration of HTTP endpoints

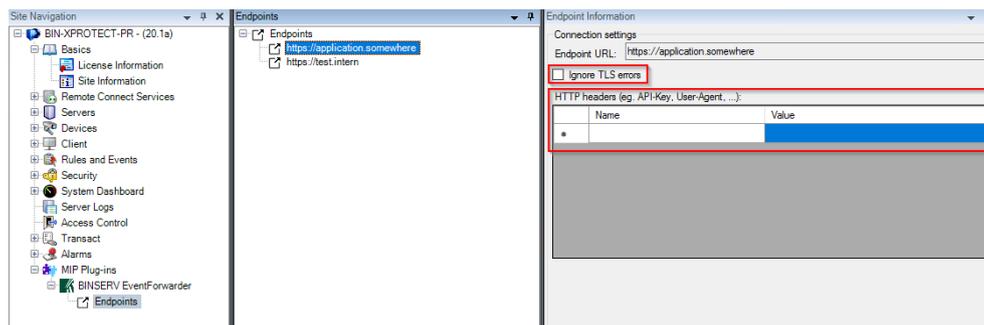
Before you can forward events to HTTP(S) endpoints, you first have to configure them. Below the menu item “BINSERV EventForwarder” on the item “Endpoints” this configuration takes place:



The context menu for the top-level entry “Endpoints” contains an “Add New...” action. Alternatively, you can press “Ctrl” + “N”, to open the “Add Endpoint” dialog:



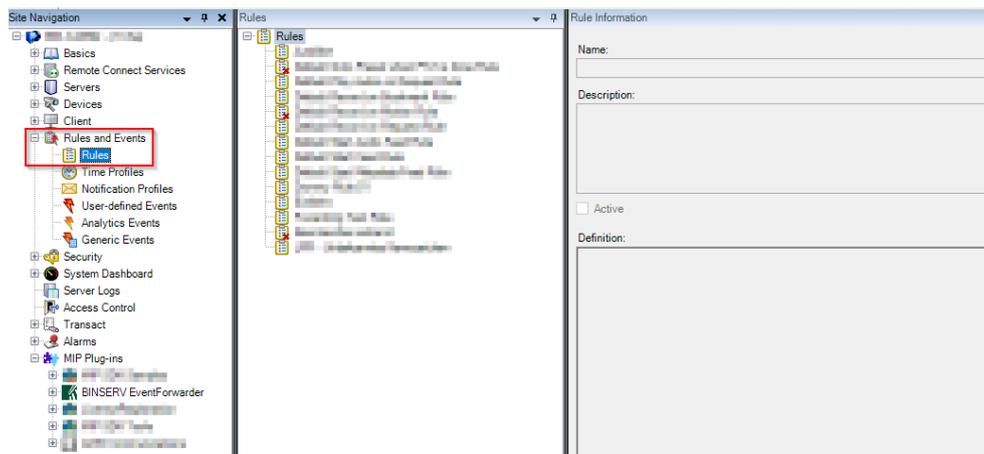
After entering the URL, a new endpoint will be created by clicking „OK“. Besides the URL you can define additional HTTP headers as key value pairs, which will be set for every HTTP request. Additionally, you can suppress TLS errors e.g. for development or test purposes by checking “Ignore TLS errors”:



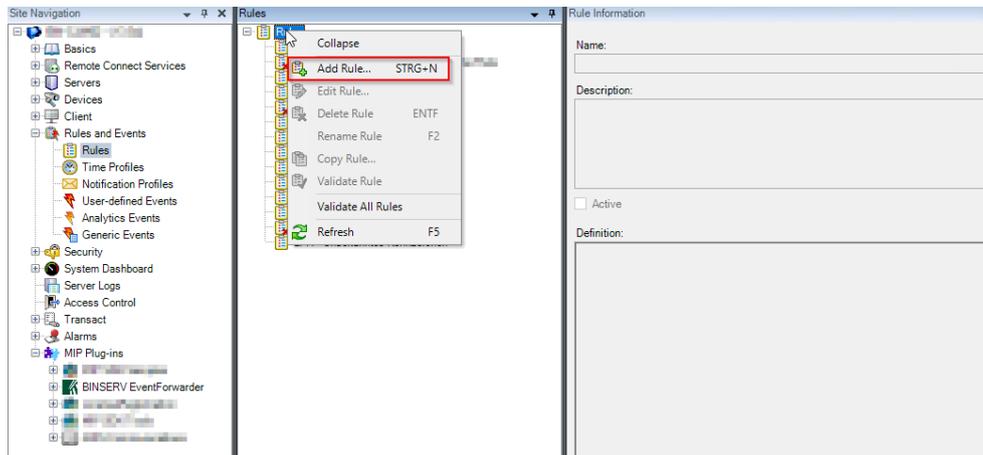
3.2 Creating a new rule

After configuring at least one HTTP(S) endpoint, you can use the plugin. In order to forward certain events you have to create a rule. The Management Client already provides a rules engine to perform actions based on triggered events.

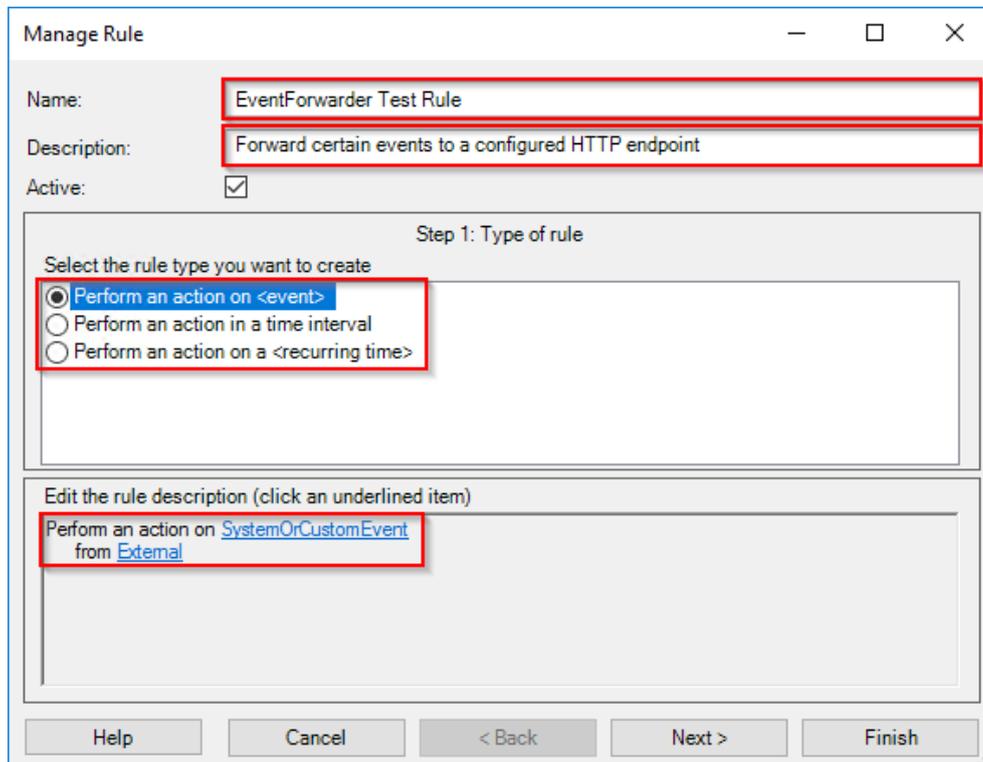
In the tree menu under “Rules and Events” -> “Rules”, all configured rules are listed:



The context menu for the top-level entry “Rules” contains an “Add Rule...” action. Alternatively, you can press “Ctrl” + “N”, to open the “Manage Rule” dialog.



To create a new rule you now have to enter a rule name, a description optionally, activate or deactivate the rule and a rule type. The last bit of configuration in the first step is to specify the events and servers or devices on which an action should be performed. For this purpose click the underlined items in the box at the bottom and select the appropriate objects:



In step 2 of creating a new rule, you can define additional conditions.

Manage Rule

Name: EventForwarder Test Rule

Description: Forward certain events to a configured HTTP endpoint

Active:

Step 2: Conditions

Select conditions to apply

- Within selected time in <time profile>
- Outside selected time in <time profile>
- Within the time period <start time> to <end time>
- Day of week is <day>
- Event is from <motion window>

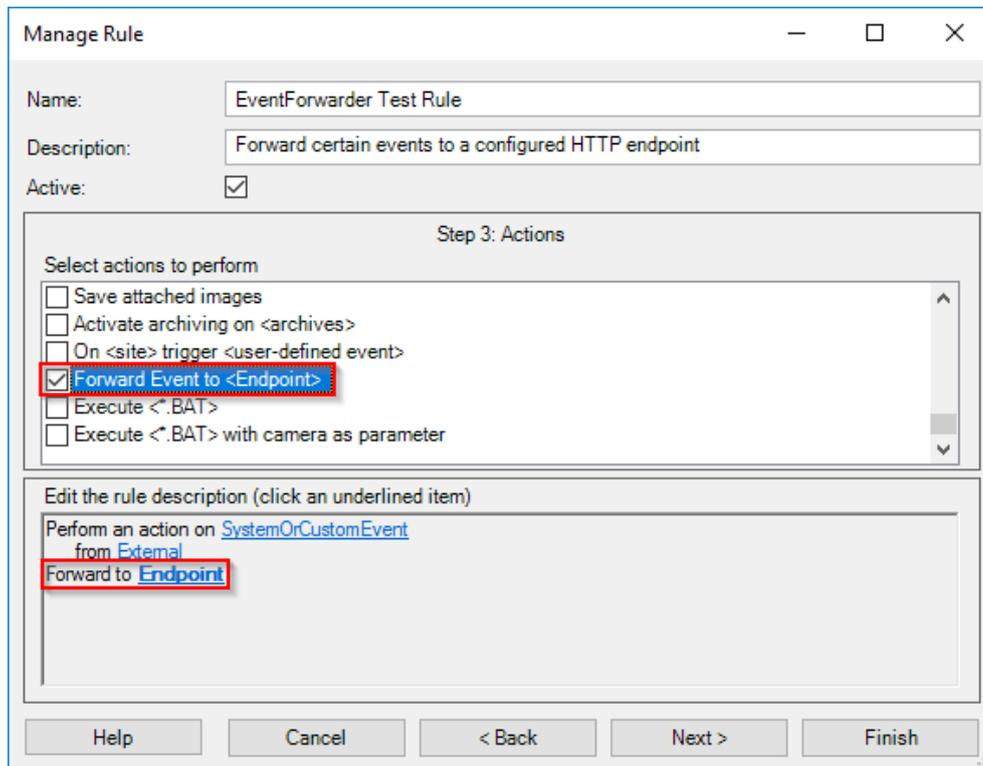
Edit the rule description (click an underlined item)

Perform an action on SystemOrCustomEvent
from External

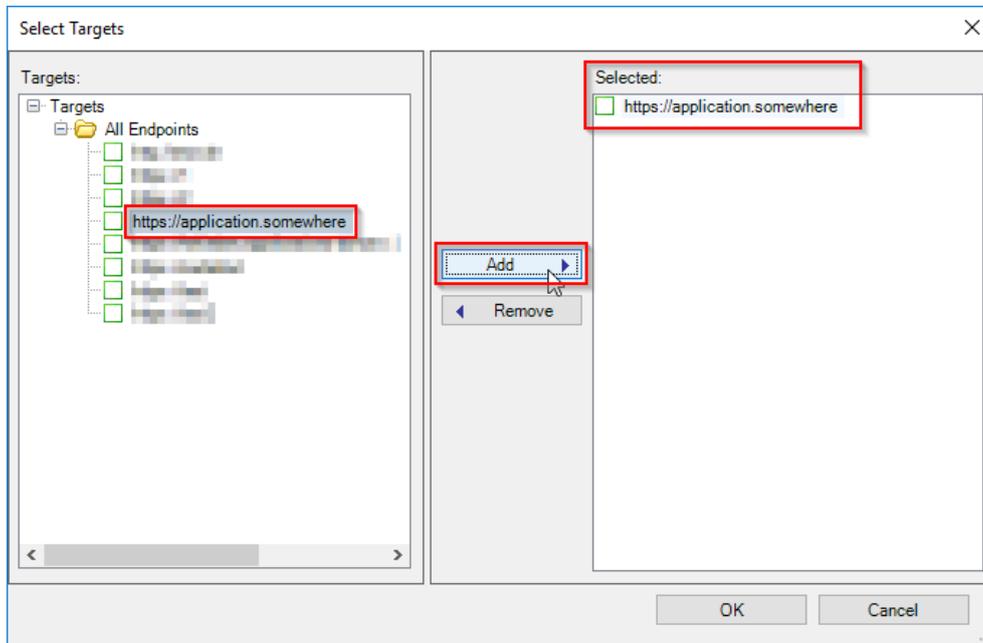
Help Cancel < Back Next > Finish

By now, you have specified on which events the new rule should operate. The next step is to determine which actions the rule should perform on events meeting the criteria.

Once you have installed the EventForwarder plugin, an action called “Forward Event to <Endpoint>” is available:



After checking this action, you can open the target selection dialog by clicking “Endpoint” in the “Edit the rule description” box:



On the left hand side, all previously configured HTTP endpoints are available. By marking one and clicking “Add”, you add the marked entry to the selected list on the right hand side. It is possible to select more than one endpoint.

The action “Forward Event to <Endpoint>” and the target selection dialog are the only components our plugin introduces to the rules engine. Everything else, the rules engine itself and all dialogs for creating and editing rules are a standard XProtect features.

In step 4, you select a stop criterion:

Manage Rule

Name:

Description:

Active:

Step 4: Stop criteria

Select stop criteria

Perform stop action on <event>

Perform stop action after <time>

No actions performed on rule end

Edit the rule description (click an underlined item)

Perform an action on [SystemOrCustomEvent](#)
from [External](#)
Forward to [https://application.somewhere](#)

Help Cancel < Back Next > Finish

Now, everything is configured and you can complete the rule creation by clicking “Finish”. Your new rule will be displayed in the list:

Site Navigation

Rules

EventForwarder Test Rule

Rule Information

Name:

Description:

Active:

Definition:

3.3 Forwarding events

After creating a new rule or activating a disabled one, the rule will instantaneously be used for all new events. No further user action is necessary.

All events matching the rule's criteria will be forwarded as JSON to the configured HTTP endpoint(s), e.g.

```
{
  "EventHeader": {
    "ID": "6f51c7a7-0f88-4475-bed5-50167878634d",
    "Timestamp": "2020-04-15T14:45:02.3846446Z",
    "Type": "System Event",
    "Version": "1.0",
    "Priority": 1,
    "PriorityName": "High",
    "Name": "External Event",
    "Message": "External Event",
    "Source": {
      "Name": "SystemOrCustomEvent",
      "FQID": {
        "ServerId": {
          "Type": "XPCO",
          "Hostname": "camera-server",
          "Port": 80,
          "Id": "e43ff0c5-8e94-43dc-af8d-...",
          "Scheme": "http"
        },
        "ParentId": "e43ff0c5-8e94-43dc-af8d-...",
        "ObjectId": "da111229-1448-48dc-8dbf-...",
        "FolderType": 0,
        "Kind": "c9bdac3f-41dc-4afa-b057-..."
      }
    },
    "MessageId": "0fcb1955-0e80-4fd4-a78a-db47ee89700c"
  }
}
```