

## Events management



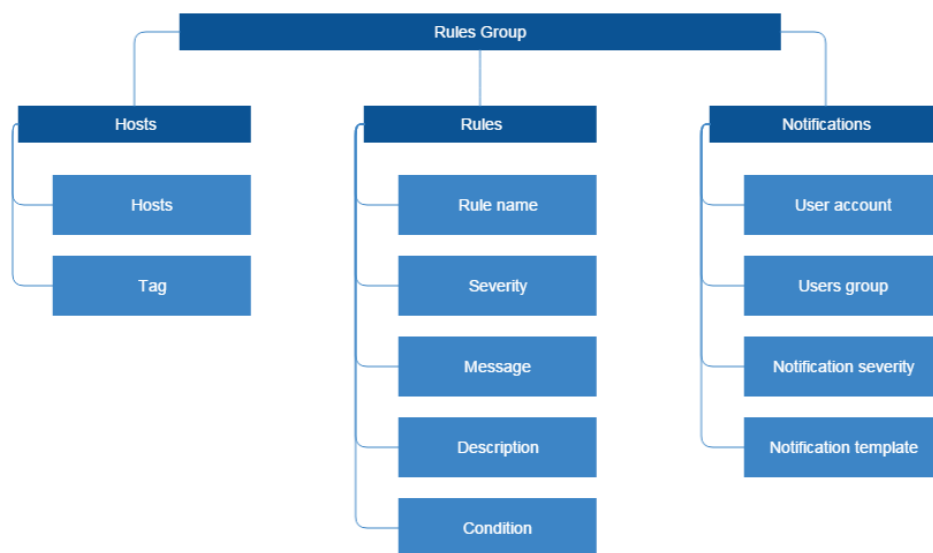
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- Group of rules creation
  - [Hosts](#)
  - [Rules](#)
  - [Notifications](#)
- [Rules creation](#)
- [Retention period](#)

All events could be created only by specified rules. Rules in **InfMONITOR** contains matching conditions.

The events generation subsystem chart is shown below



**Figure - The events generation subsystem organisation**

Each rules group includes:

- **Hosts** - the hosts list to be used for events generation
- **Rules** - events would be generated according to rules conditions list
- **Notifications** - notifications would be created to send notifications for the **InfMONITOR** operators about the events which has been generated for the selected hosts according to the hosts rules conditions.

## Group of rules creation

Rules management for the events accessible in the section "Settings" -> "Event rules" -> "Groups of rules". In order to create a new group click the "**Create Group**" button, the form with three sections will appear. By default, the section "Hosts" is opened.

### Hosts

The section "Hosts" is used to select hosts for the events generation. This section includes the following parameters:

- "Group name" - rules group name
- "Assigned hosts" - hosts list within the rules group. In order to exclude the host from the group select it and click the "**Remove selected**" button or drag it with the mouse from the "Assigned hosts" list into the "Available hosts" list

- "Available hosts" - all available in InfiMONITOR hosts. In order to add the host into the rules group select it and click the "Assign selected" button or drag it with the mouse from the "Available hosts" list into the "Assigned hosts" list.

**NOTE**

The hosts can be added one by one and a group with a tag. If at least one host in the section "Network Monitoring"-> "Hosts" has been assigned to at least one tag, it will be available in the "Available hosts" list. If you want to add the host group with the exception of some of them, such hosts can be placed in the exclusion list. To do this, find the corresponding hosts and select in the "Available hosts" list, and then click the "Exclude selected" button. Thus, the events will be generated for all hosts with the selected tag, but not for added to the exclusion.

**Create new group of rules**

Hosts Rules Notifications

Group name:  ☐ Apply to all hosts

**Assigned hosts**

Search...

Host name
TestDevice-930002
TestDevice-930008

Remove selected Remove all

**Available hosts**

Search...

Host name
TestDevice-930001
TestDevice-930004
TestDevice-930007
TestDevice-930009
TestDevice-930010
TestDevice-930011
TestDevice-930012

Assign selected Exclude selected

**Excluded hosts**

Search...

Host name

Select hosts and click "Exclude selected" or drag & drop them here to exclude.

Remove selected Remove all

Create Cancel

Figure - Adding hosts into the rules group

## Rules

After the hosts selection it is necessary to assign the rules with the conditions to generate events. The rules would be applied only to hosts added to the rules group. Proceed to the section "Rules", which list the following parameters:

- "Assigned rules" - selected rules list which added to the created rules group. In order to exclude the rule from the group select it and click the "**Remove selected**" button or drag it with the mouse from the "Assigned rules" list into the "Available rules" list
- "Available rules" - available rules for **InfimONITOR**. In order to add the rule into the group rules select it and click the "**Assign selected**" button or drag it with the mouse from the "Available rules" list into the "Assigned rules" list.

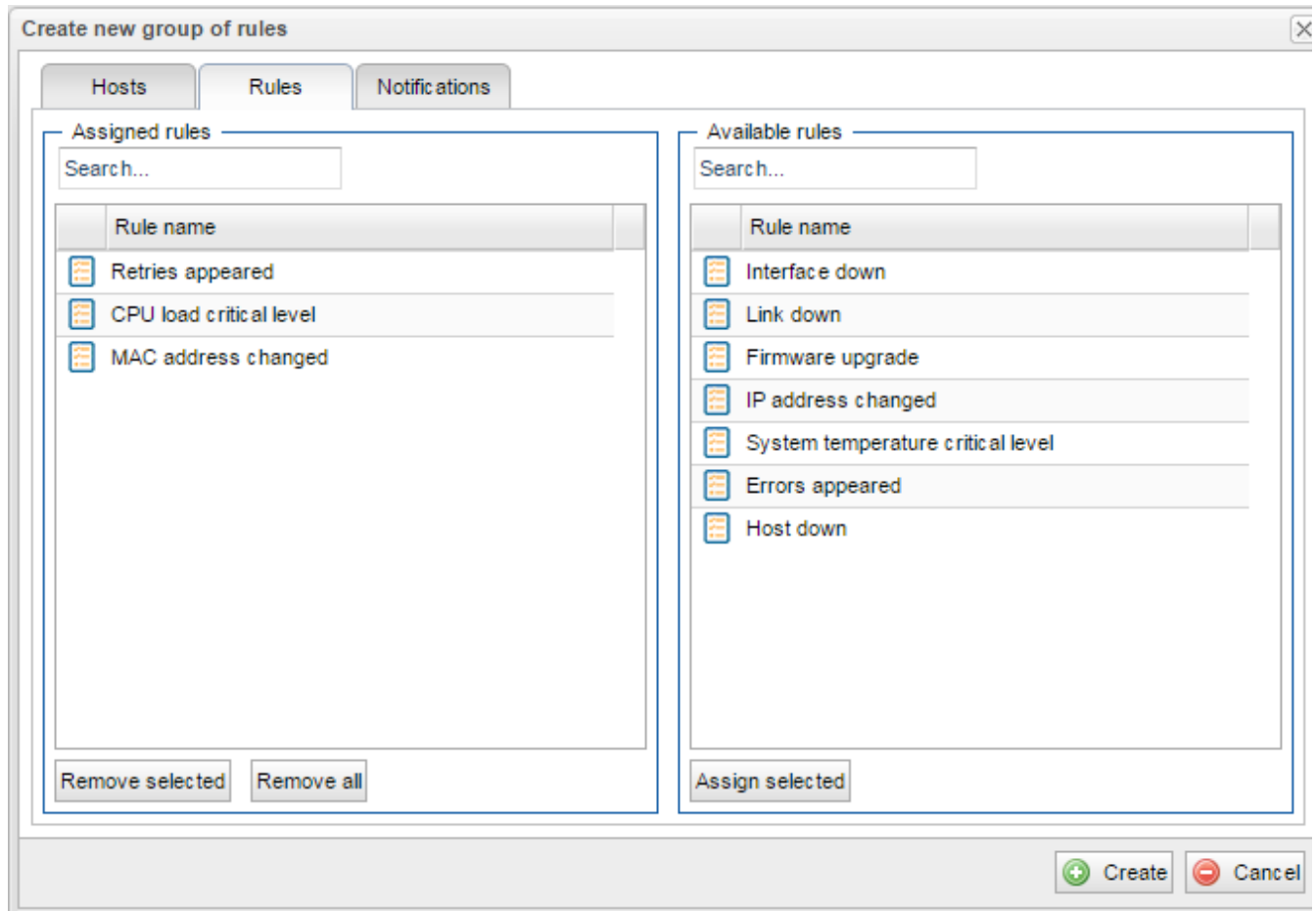


Figure - Adding rules into the rules group

## Notifications

After the hosts and rules selection, it is required to choose **InfimONITOR** operators to receive events notification by email. Proceed to the section "Notifications", which has the the following parameters:

- "Assigned users" - list of the users and groups which require notifications. In order to exclude the user from the group select it and click the "**Remove selected**" button or drag it with the mouse from the "Assigned users" list into the "Available users" list
- "Available users" - list of all users and groups available in **InfimONITOR**. In order to add the user into the group of rules select it and click the "**Assign selected**" button or drag it with the mouse from the "Available users" list into the "Assigned users" list
- "Send notifications" - enable/disable notifications for the selected users
- "Severity" - the lowest priority for the event to send the notification. Thus, if the severity is set to "Warning" the users would be notified with the "Warning" and "Critical" priorities. If the event has the "Info" priority, the notification will not be sent
- "Subject" - notification message subject. The text could include variables values with the event parameters. To get the complete list of all variables click the "?" icon next to the field
- "Body" - the notification text. The text could include variables values with the event parameters. To get the complete list of all variables click the "?" icon next to the field.

Create new group of rules

Hosts Rules **Notifications**

**Assigned users**

Search...

Name
Drag and drop users here to assign

Remove selected Remove all

**Available users**

Search...

Name
Mon_eng
Administrator
Monitoring (Group)

Assign selected

☐ Notifications enabled

**Template for e-mail notification**

Severity : Warning ▼ *Lowest severity to notify*

Subject : InfiMONITOR: {Status} {Severity} event, {Rule} - {Object}

Body :

```

Hello {Username}.

This is notification that the event has occurred:
Message - {Message}

Where - {Object}
Status - {Status}

Severity - {Severity}
Affected rule - {Rule}

Your InfiMONITOR

```

Create Cancel

Figure - Notification management in the rules group

Click "Create" button to finish creation of rules group.

## Rules creation

The rule - is the key component of the events generation subsystem. Rule specifies the condition whether to create the event or not. Rules can be managed via in the section "Settings"-> "Event rules"-> "Rules".

## Settings / Event rules

Groups of rules		Rules
Search...		
Rule name	Description	Severity
Link down	This rule will fire events when link changes status to Down. When link changes...	CRITICAL
Retries appears	This rule will fire events when there is noticeable retries level on link. When ret...	WARNING
System temperature critical level	This rule will fire events when device board temperature exceeds critical level....	NOTICE
IP address changed	This rule notifies about IP address changes.	INFO
Errors appears	This rule will fire events when errors are observed on link. When there are no ...	WARNING
CPU load critical level	This rule will fire events when device CPU load exceeds critical level. When de...	NOTICE
Interface down	This rule will fire events when interface operational status is not Up. When inte...	INFO
Firmware upgrade	This rule notifies about firmware upgrades.	INFO
MAC address changed	This rule notifies about MAC address changes.	INFO
Host down	This rule will fire events when device changes status to Unreachable or Unkno...	CRITICAL

Figure - The events generation rules list

Click the "Create rule" button to create new rule, the window form with two sections will appear:

- "Settings" - common rules parameters
- "Condition" - conditions to create event.

The "Settings" section is opened by default, it includes the following fields:

- "Rule name" - rule name
- "Severity" - priority assigned to the event, created by the rule
- "Message" - message created by the event, formed by the rule. The variables replaced with the real values of the corresponding event parameters can be used in the text. To get the complete list of possible variables click the "?" icon next to the field
- "Description" - rule description
- "May be resolved automatically" - the checkbox indicating whether the status of the event can be automatically changed into "Resolved" in a case of overcoming the condition which have triggered the event. Such checkbox applicable for reversible events, for example, communication loss/restore events. When the communication will restore, and the checkbox is set, then the "Resolved" status would be automatically assigned. However in a case of irreversible events this checkbox doesn't make any sense. For example, in case of firmware version upgrade - the event only generate single notification.

**Edit rule: Link down**

**Settings**   **Condition**

Rule name :

Severity :

Message :

Description :

☒ May be resolved automatically

**Figure - The events generation rule main parameters**

The "Condition" section list conditions, which execution will generate event. The "Condition" section has three components:

- "The logical operator" - the operators "and", "or" and "not" indicate the parameters comparison options specified in the condition. Logical operators can be nested into each other
  - "And" - the condition will be executed in case the comparison results of all parameters is true
  - "Or" - the condition will be executed in case the comparison result of at least one parameter is true
  - "Not" - the condition will be executed in case the comparison results of all parameters is false
- "Parameter" - values of the various parameters belonging to host or wireless link, which can be compared
- "The comparison operator" - the operators "empty", "not empty", "equals", "not equal", "changed", "not changed", "greater than", "greater than or equal to", "less than", "less than or equal to" indicate comparison option:
  - "empty" - result of the operator execution will be true if the parameter value is empty, otherwise - false
  - "not empty" - result of the operator execution will be true if the parameter value is not empty, otherwise - false
  - "equals" - result of the operator execution will be true if the parameter value is equal to the specified value, otherwise - false
  - "not equal" - result of the operator execution will be true if the parameter value isn't equal to the specified value, otherwise - false
  - "changed" - result of the operator execution will be true if the parameter value changed in relation to previous, otherwise - false
  - "not changed" - result of the operator execution will be true if the parameter value didn't change in relation to previous, otherwise - false
  - "greater than" - result of the operator execution will be true if the parameter value is greater than the specified value, otherwise - false
  - "greater than or equal to" - result of the operator execution will be true if the parameter value is greater than or equal to specified value, otherwise - false
  - "less than" - result of the operator execution will be true if the parameter value is less than the specified value, otherwise - false
  - "less than or equal to" - result of the operator execution will be true if the parameter value is less than or equal to specified value, otherwise - false



Figure - The events generation rule conditions

To finalize the rule creation click the "**Apply**" button. Now it can be added to the rules group.

## Retention period

To prevent disk space exhaustion InfiMONITOR automatically removes all events with statuses "Resolved" or "Aged", when the date of their appearance exceeds the retention period. By default the retention period is 1 month. The administrator of InfiMONITOR may change the retention period in the section "Settings" -> "System" up to 12 months.

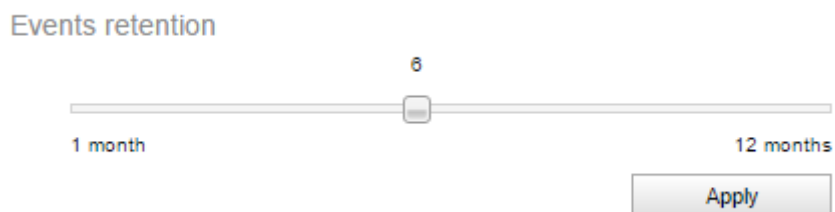


Figure - Events retention period