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Webinar

The power of tags

all our microphones are muted

ask your questions in Q&A, not in the Chat

use Chat for discussion, networking or applause

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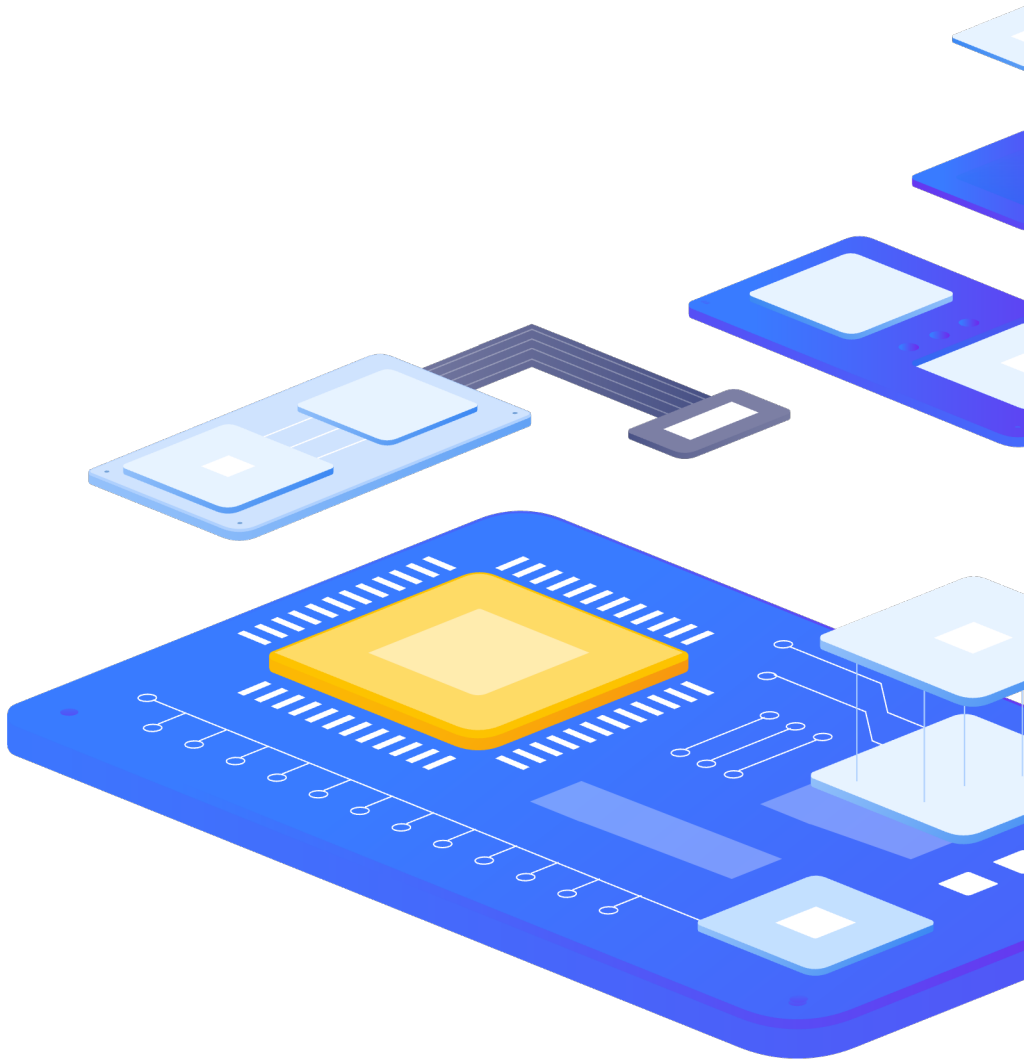
The power of tags

WHAT ARE TAGS?

- A tag is a keyword or term assigned to a piece of information.
- Tags are generally chosen informally and personally by the entity's creator or by its viewer.
- They may also be chosen from a controlled vocabulary, i.e., naming policy.



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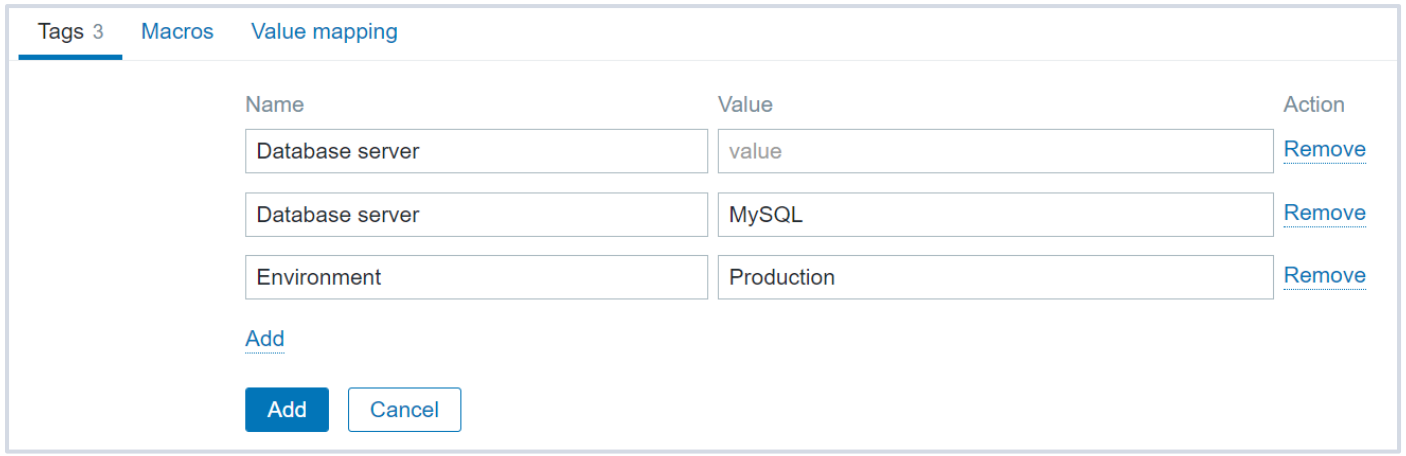
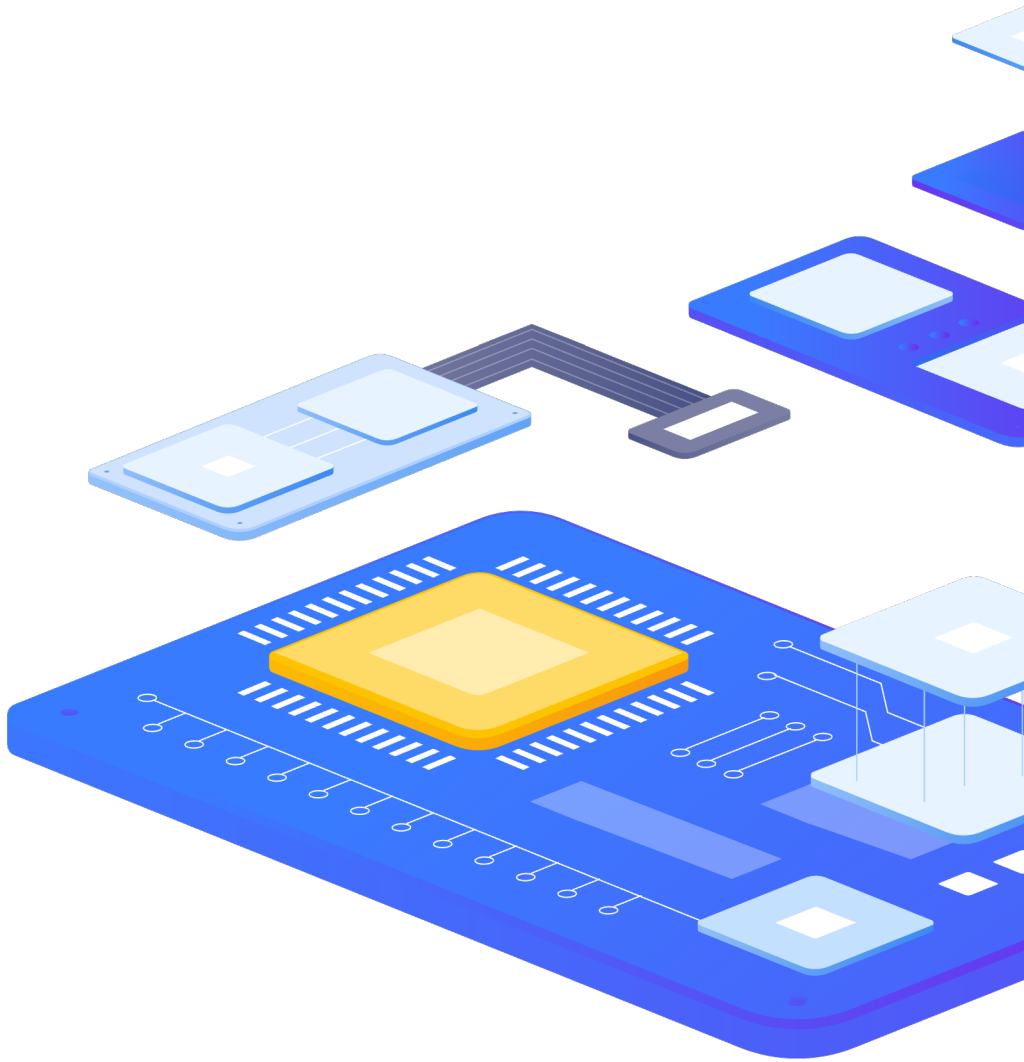
WHAT ARE TAGS?

- In Zabbix, tags are realized as a pair of the tag name and value.
- But you can also use only the name or pair it with a value.

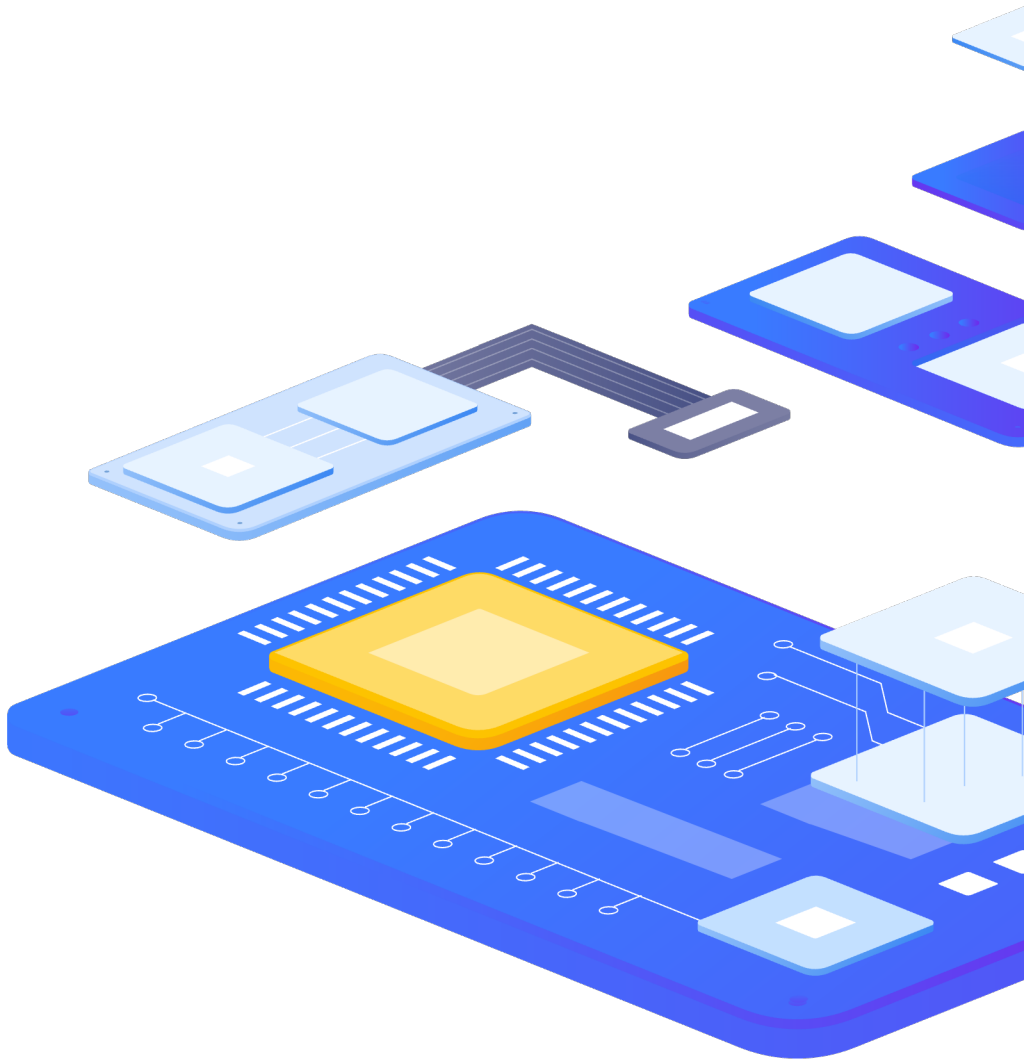




Where can we define tags?

Tags can be defined for various entities in Zabbix:

- templates
- hosts
- items
- web scenarios
- triggers
- template items and triggers
- host, item and trigger prototypes
- services



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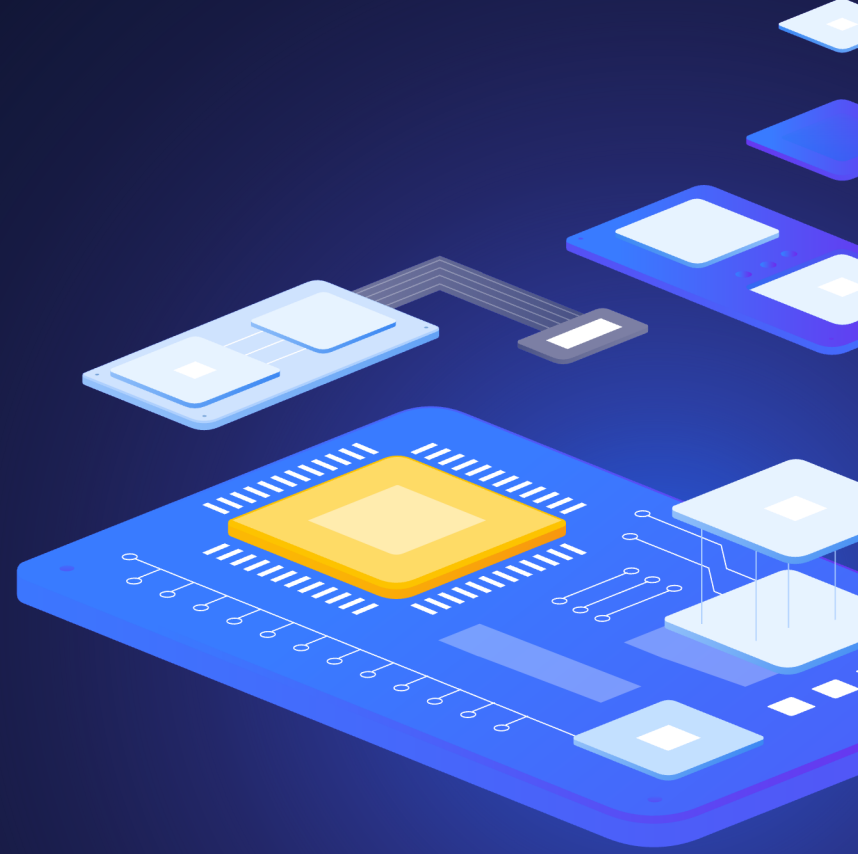
The purpose of the tags



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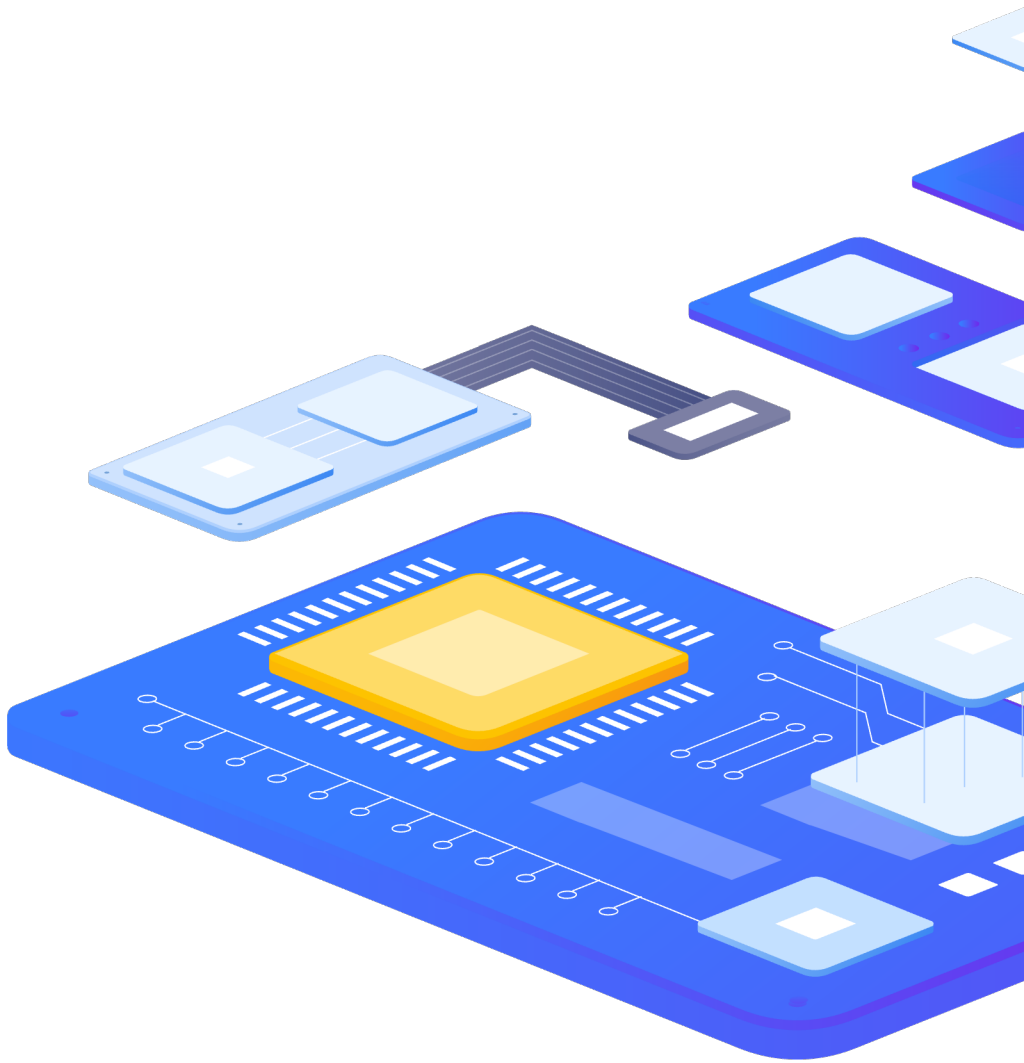
WHY DO WE NEED TAGS ?

Tags have several uses, most notably, to mark events.
If entities are tagged, the corresponding new events
get marked accordingly:

- with tagged templates - any host problems created by relevant entities (items, triggers, etc) from this template will be marked
- with tagged hosts - any problem of the host will be marked
- with tagged items, web scenarios - any data/problem of this item or web scenario will be marked
- with tagged triggers - any problem of this trigger will be marked



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Marking events

Depending on location of tag, different types of macros can be used:

- {HOST.HOST}, {HOST.NAME}, {HOST.CONN}, {HOST.DNS}, {HOST.IP}, {HOST.PORT} and {HOST.ID}
- {INVENTORY.*} macros
- User macros

A problem event inherits all tags from the whole chain of templates, hosts, items, web scenarios, triggers.

Identical tag:value combinations (after resolved macros) are merged into one, when marking the event.

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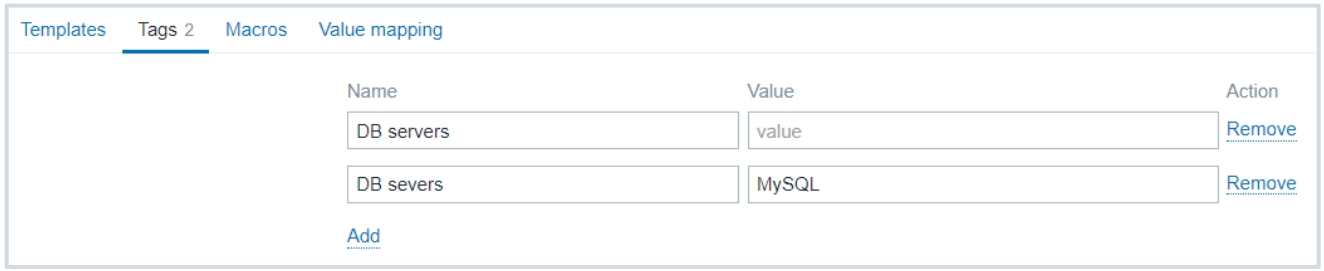
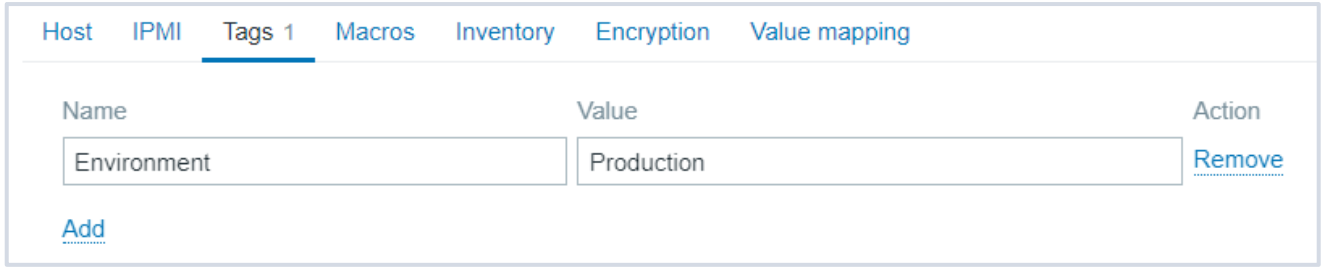
Marking events

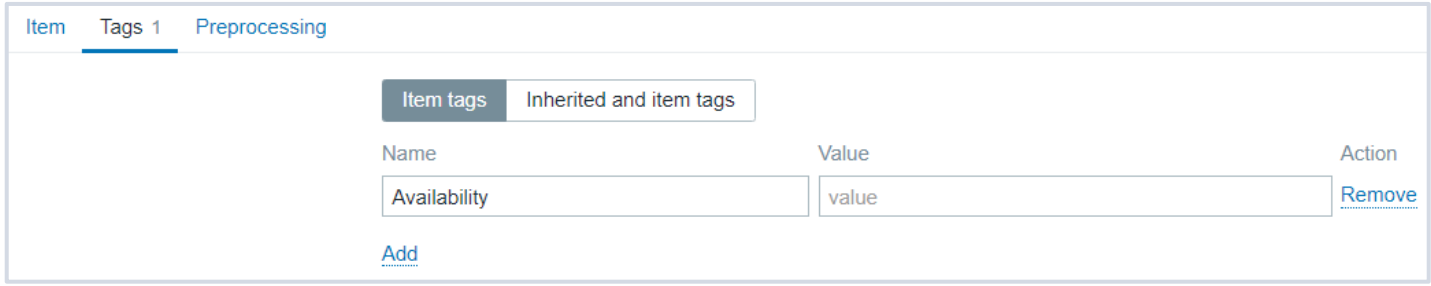
Template level:



Host level:



Item level:



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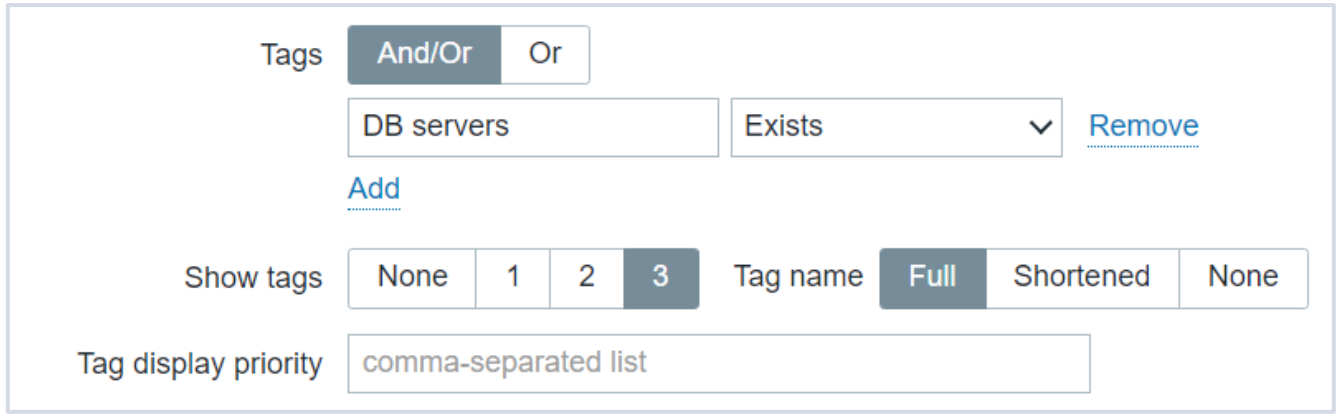
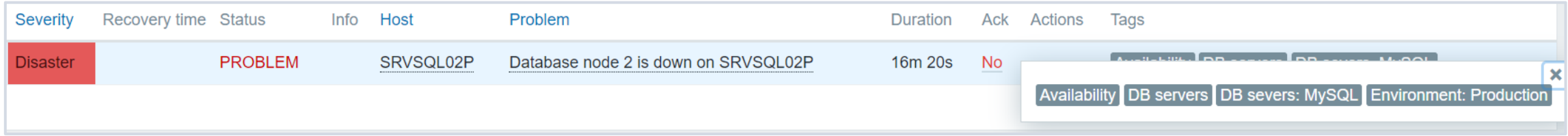
Marking events

We will get a problem event, which we can easily track down using Monitoring - > Problems page tag filters:



And it will be marked with all previously created tags:



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Marking events

We can mark hosts, by using Hosts level and Template level tags:

Name ▲	Interface	Availability	Tags	Problems
Pre-release server	172.10.127.1:10050	ZBX	Application: PostgreSQL, Environment: Develop…	
SRVSQL02P			DB servers, DB severs: MySQL, Environment: Production	1
Zabbix server	127.0.0.1:10050	ZBX	Application: Zabbix, Environment: Production	

We can mark items, by using item level tags:

Zabbix server	Linux: Available memory	51s	3.34 GB	-2.45 MB	component: memory	
Zabbix server	Linux: Available memory in %	50s	57.7941 %	+0.000725 %	component: memory	
Zabbix server	Linux: Free swap space	54s	806.87 MB	+256 KB	component: memory	component: storage
Zabbix server	Linux: Free swap space in %	53s	82.7563 %	+0.02564 %	component: memory	component: storage

Allowing us to mark, group, find and understand current state of our infrastructure and, do much more.

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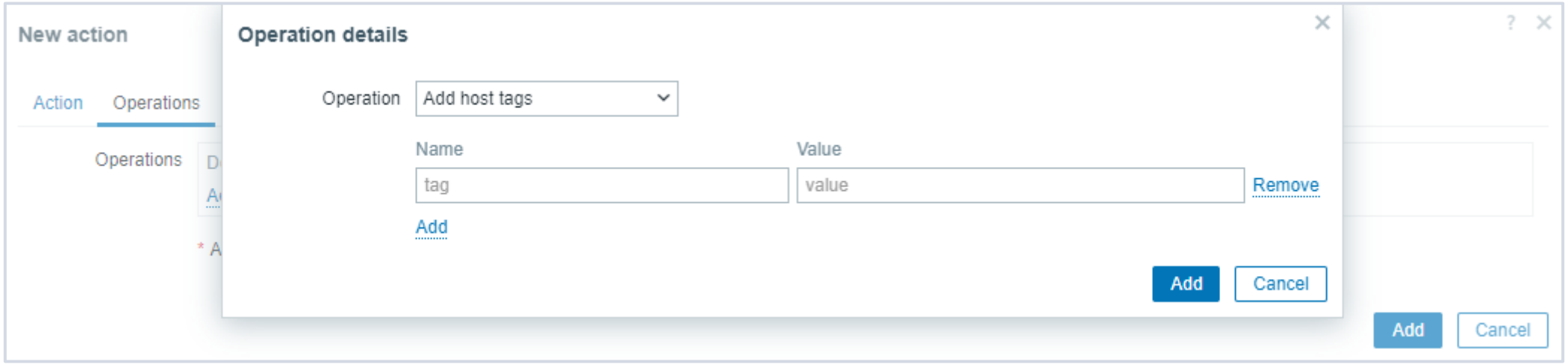
ZABBIX 7.0 News

Adding host tags during discovery/autoregistration

Additional operations are now available for discovery and autoregistration events:

- Add host tags
- Remove host tags
- Macro {HOST.METADATA}



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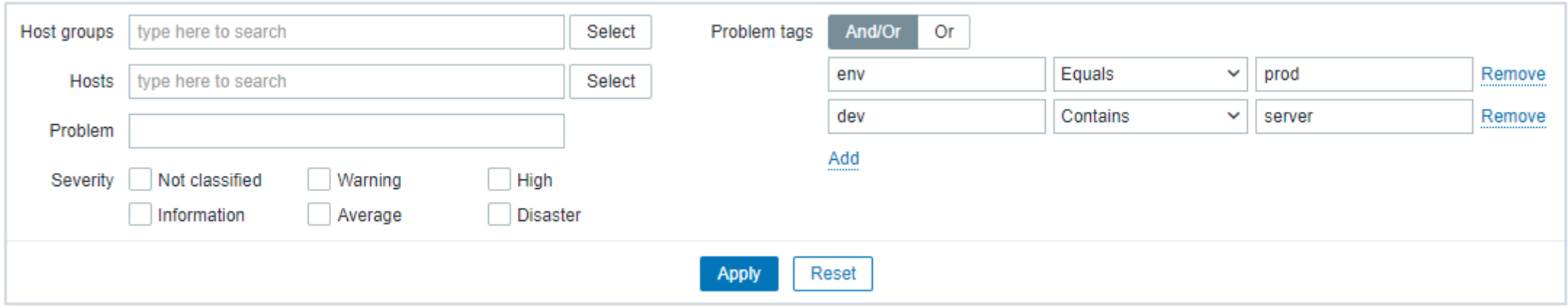
ZABBIX 7.0 News

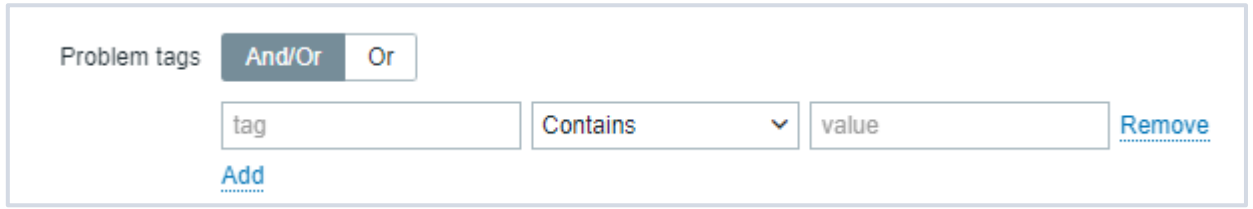
Improved menu section for top triggers

- The possibility to filter triggers by problem name and tags has been added



Some dashboard widget parameters with the label Tags have been renamed for more clarity:

- Item tags (for Data overview widget), Scenario tags (for Web monitoring widget); Problem tags (for Graph, Problem hosts, Problems, Problems by severity, and Trigger overview widget);



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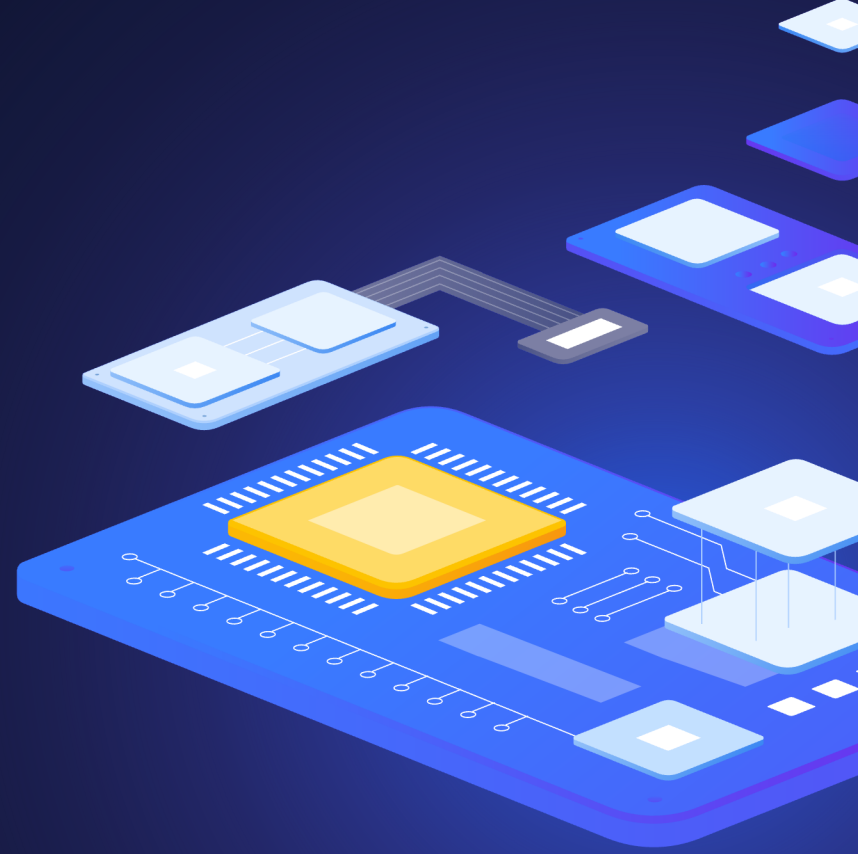
Tag use cases



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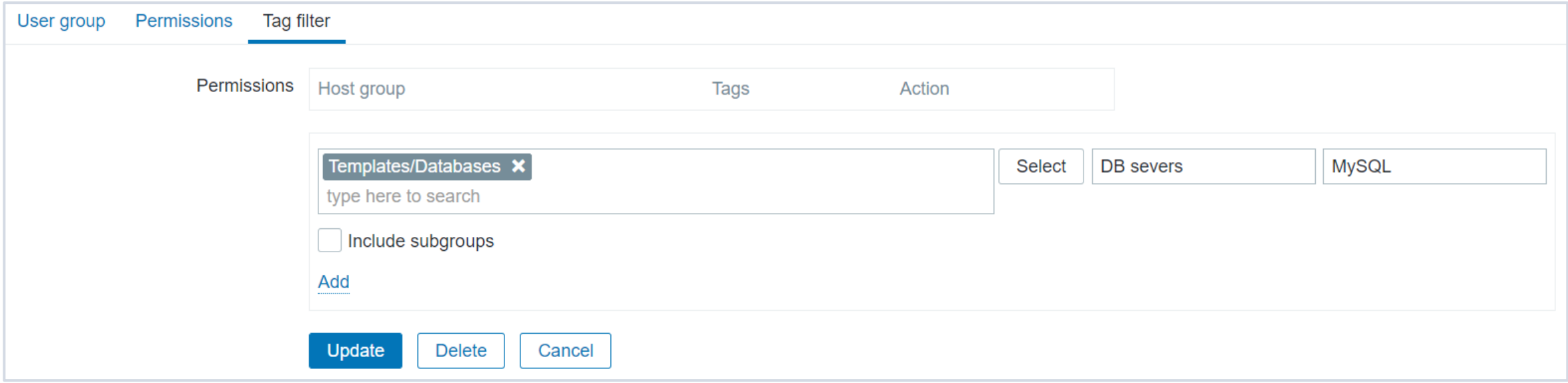
DIFERRENT TAG USE CASES

Limit MySQL administrators to only see MySQL server problems.

- Go to Administration → User groups
- Click on Create user group or select an existing one
- Click on the Tag filter tab, select a host group and specify tag DB severs:MySQL



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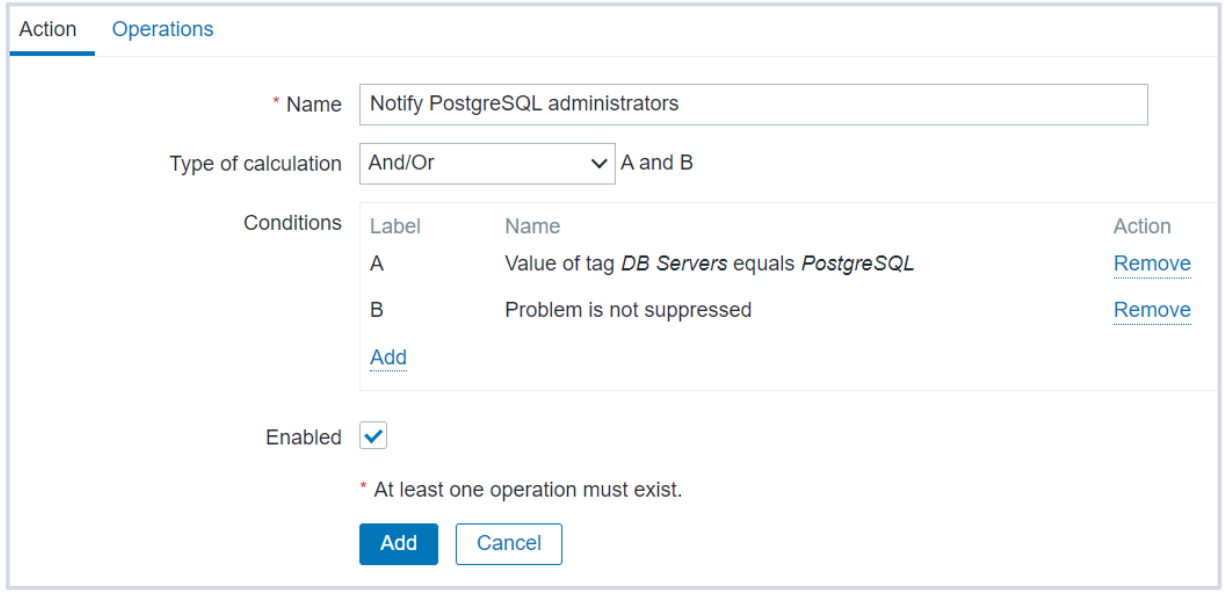
DIFERRENT TAG USE CASES

Notify PostgreSQL administrators only about PostgreSQL server problems.

- Go to Configuration → Actions → Trigger actions
- Click on Create action
- Name the action
- Selection condition type:Tag value and specify tag DB servers:PostgreSQL



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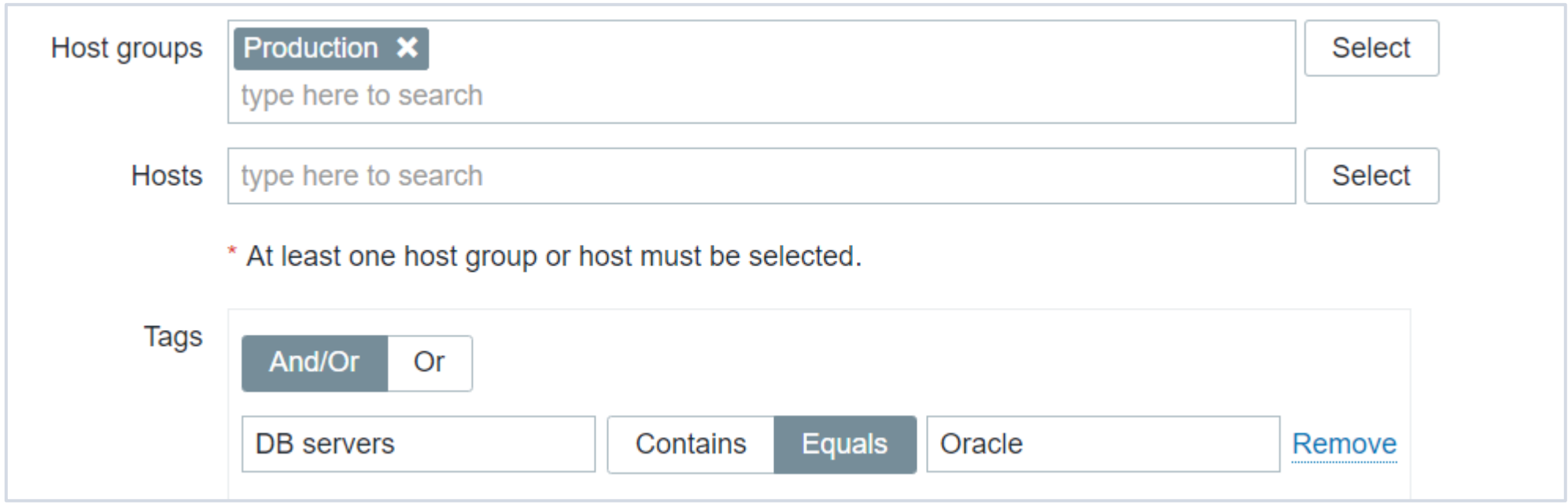
DIFERRENT TAG USE CASES

Supress Oracle related problems, while database is under maintenance

- Go to Configuration → Maintenance
- Click on Create maintenance period
- Fill in required fields, Select host groups or hosts
- Specify tag DB Servers:Oracle



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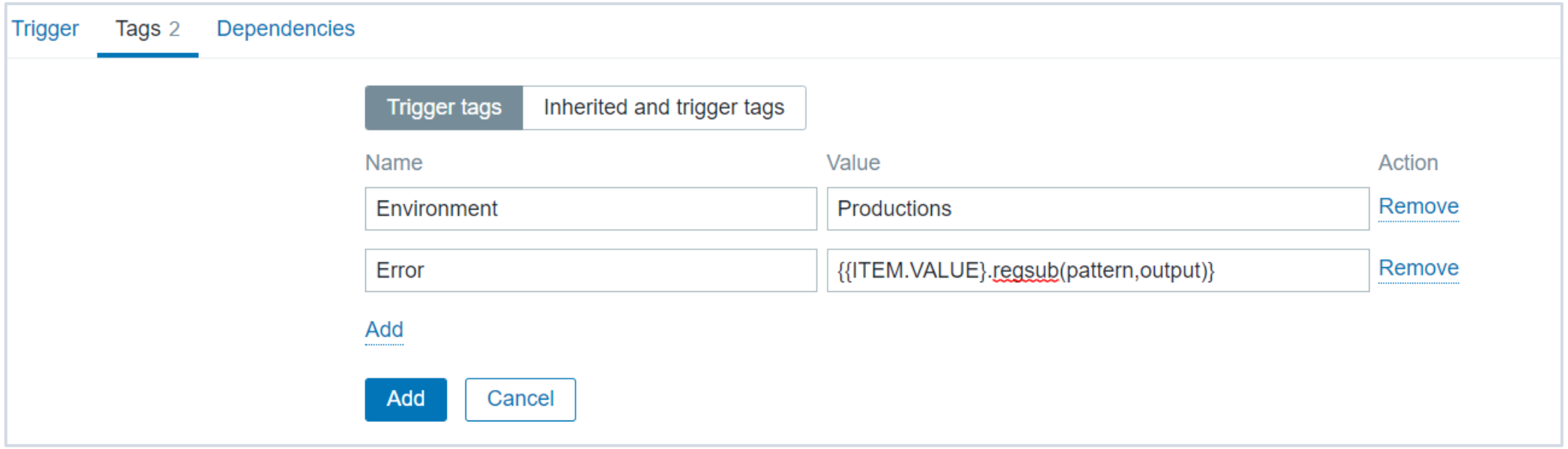
DIFERRENT TAG USE CASES

Use information extracted from item value as tag

- Go to trigger configuration
- Fill in the required fields
- Use an {{ITEM.VALUE<N>}.regsub()} macro in the tag value



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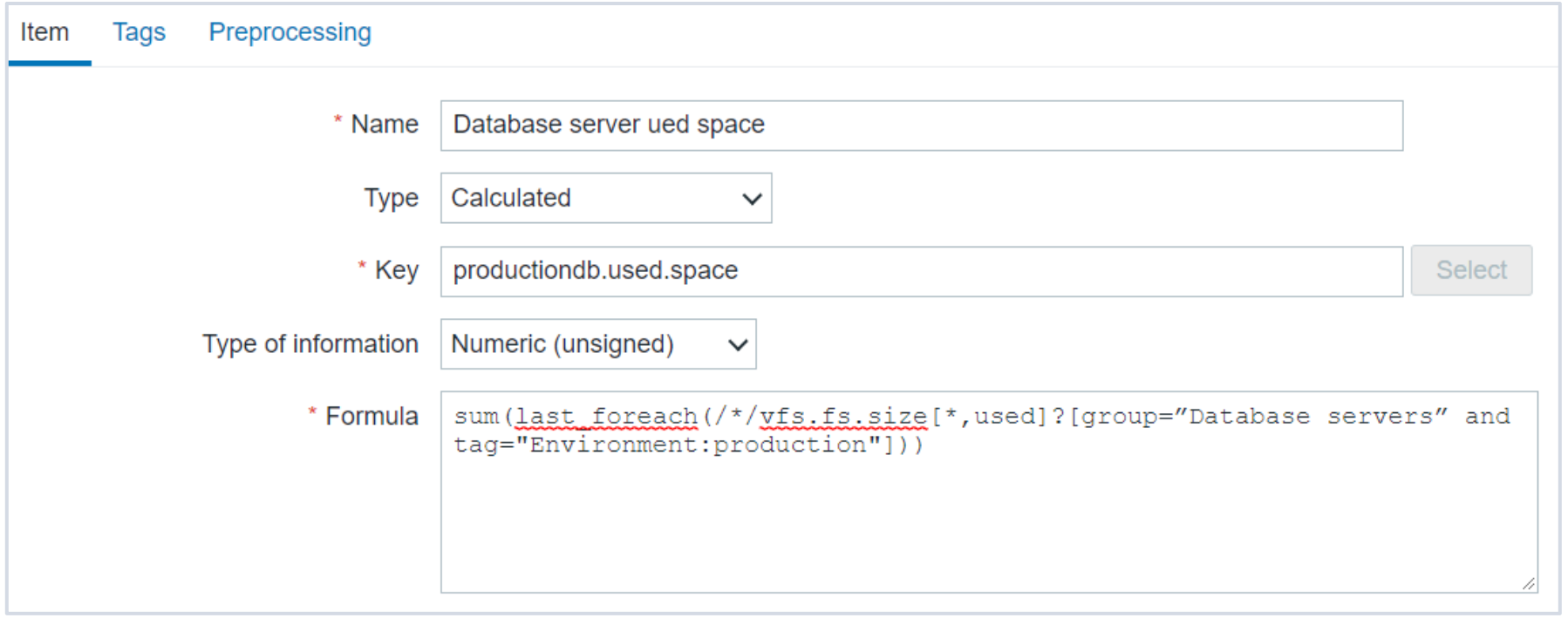
DIFERRENT TAG USE CASES

Aggregation by tag:value

- Go to item configuration
- Select type Calculated
- Create a custom key
- Specify the calculation formula



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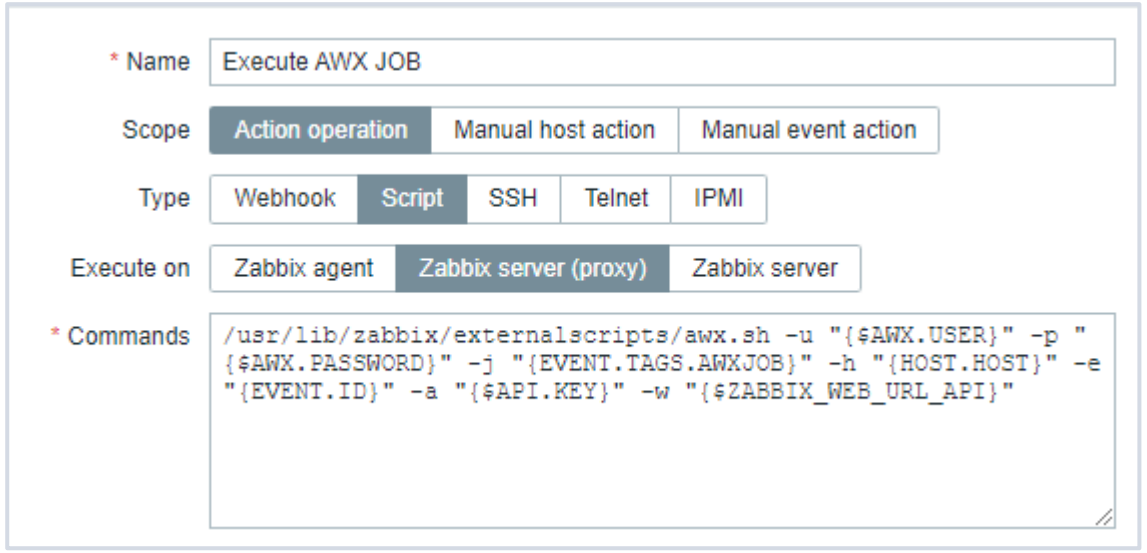
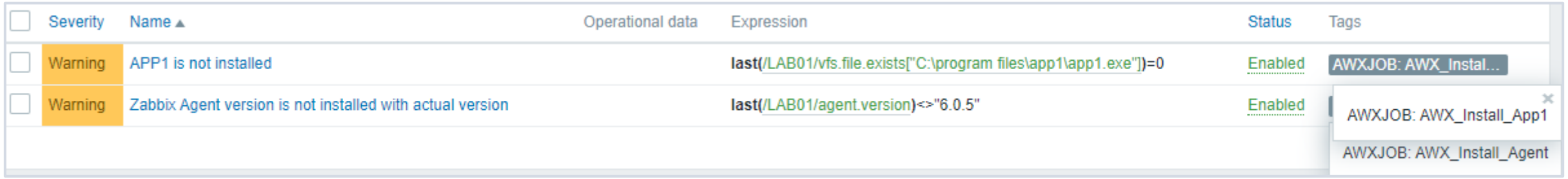
DIFERRENT TAG USE CASES

Executing script with parametter tag:value

- How to pass parameters to script?
- Set Tag in trigger
- Pass Tag value to script





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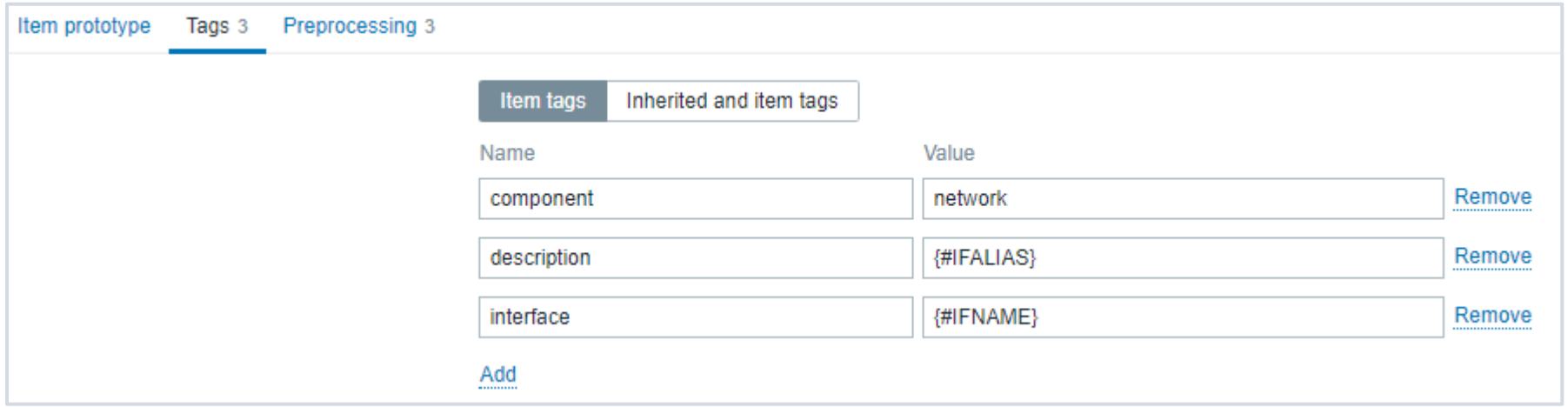
DIFERRENT TAG USE CASES

Tags in LLD

- Filtering by collected data
- Multiple Tag settings



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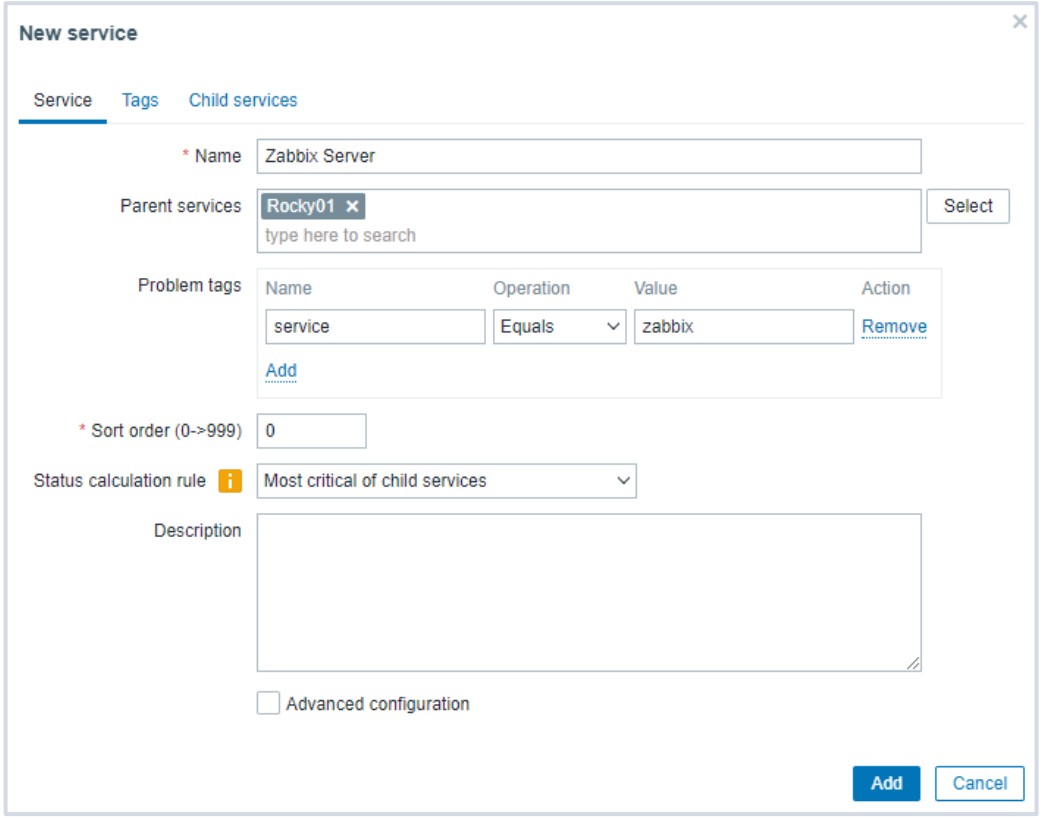
SLA and Services

Based directly on Tags

- Tags for Service state condition definition
- New Tags Service state result



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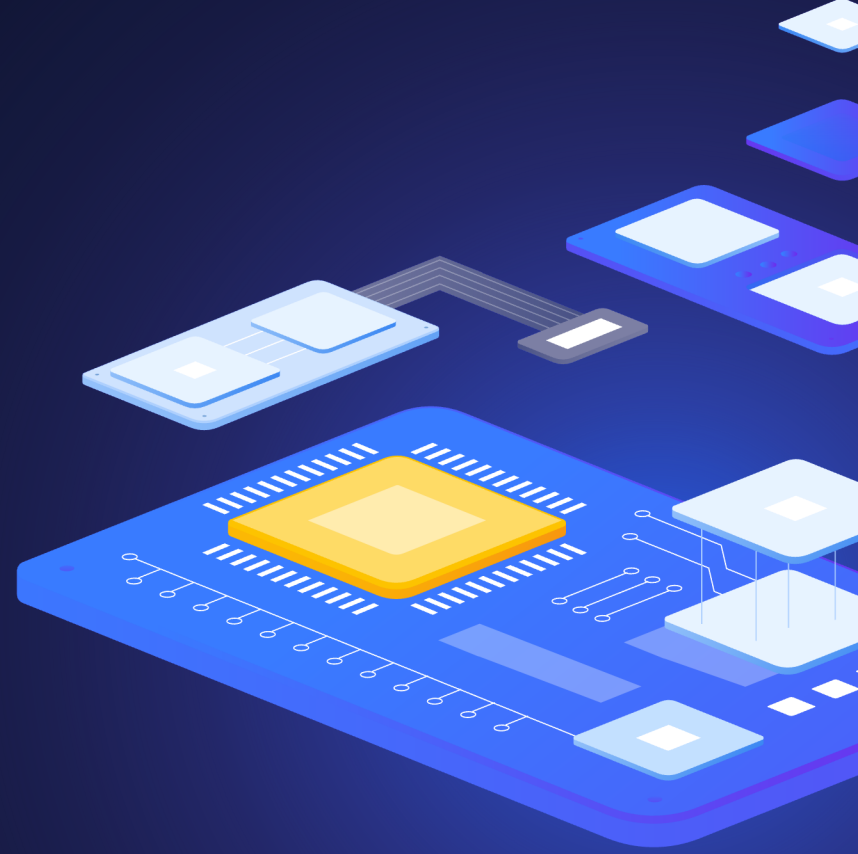
Event correlation



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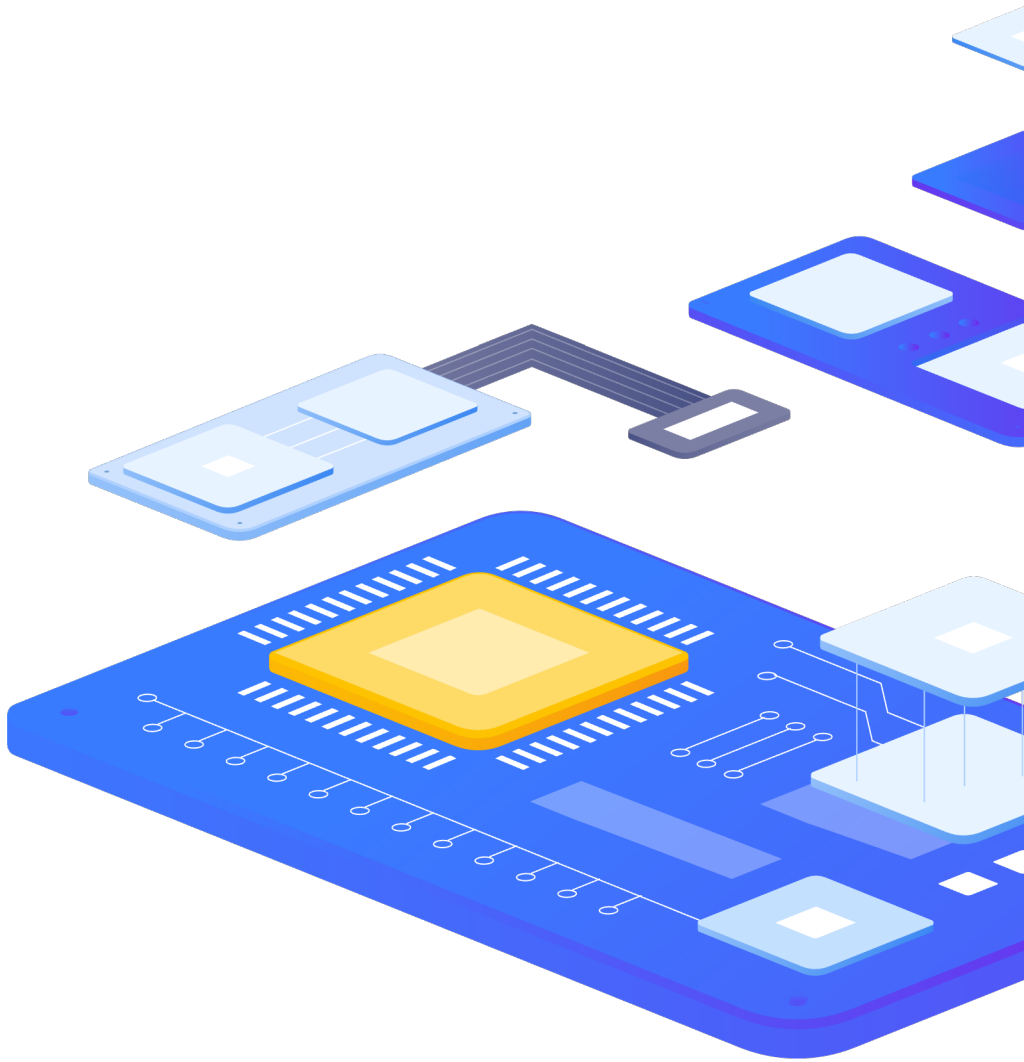
EVENT CORRELATION

In Zabbix, it is possible to correlate problem events with their resolution.

- On trigger level - Allows to correlate separate problems reported by one trigger, need to have Multiple Problem Event Generation mode enabled for a trigger
- Globally - Problems reported from different triggers can be correlated using global correlation rules

Avoid using common tag names that may end up being used by different correlation configurations



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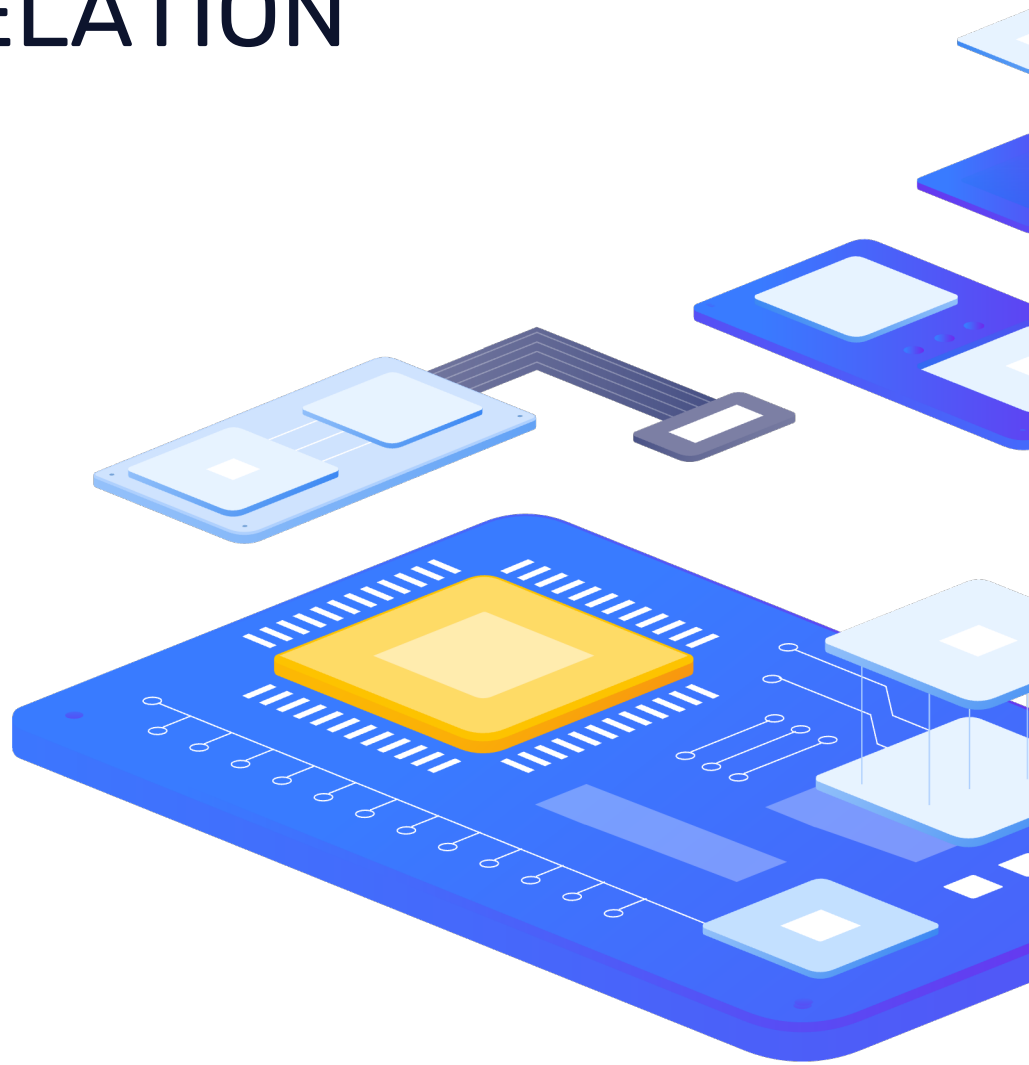
TRIGGER-BASED EVENT CORRELATION

In general, an OK event closes all problem events created by one trigger, but there are cases when we require a more detailed approach.



Correlate separate problems reported by one trigger

- Tags are used to extract values and create identification for problem events
- Problems can be closed individually based on matching tags and their values

Useful for events, log files, SNMP traps, etc.

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TRIGGER-BASED EVENT CORRELATION

Substring extraction is usually used for populating the tag name or tag value, with a specific value using a macro function, i.e. :

```
{{ITEM.VALUE}.regsub(pattern, output)}
{{ITEM.VALUE}.iregsub(pattern, output)}
{{#LLDMACRO}.regsub(pattern, output)}
{{#LLDMACRO}.iregsub(pattern, output)}
```

- By applying a regular expression to the value obtained by the {ITEM.VALUE}, {ITEM.LASTVALUE} macro or a low-level discovery macro

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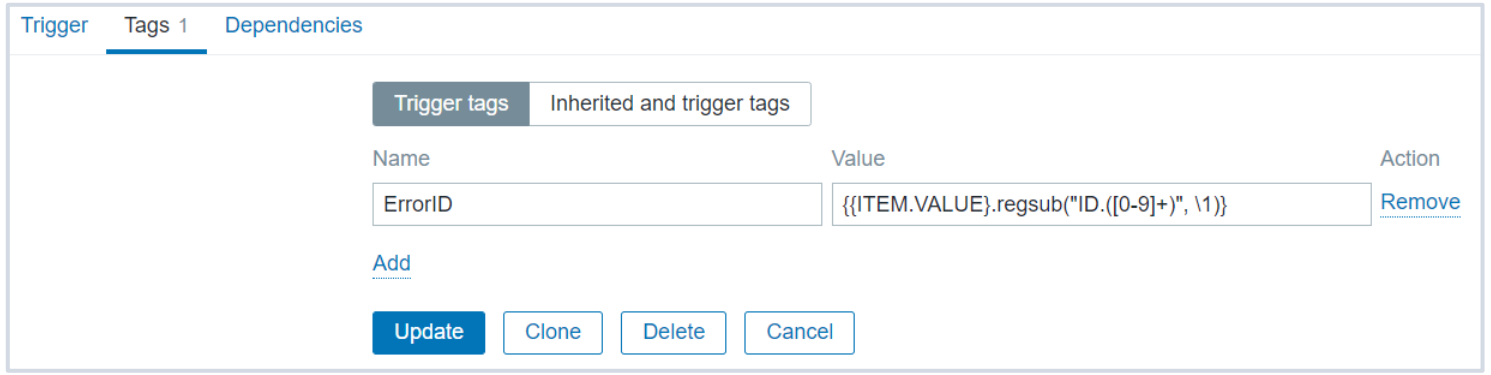
TRIGGER-BASED EVENT CORRELATION

So, creating a trigger with an example tag:



Would allow us to extract error ID from a log line:

```
Error ID:123 encountered
```

To create a problem that would be informative and possible to correlate:

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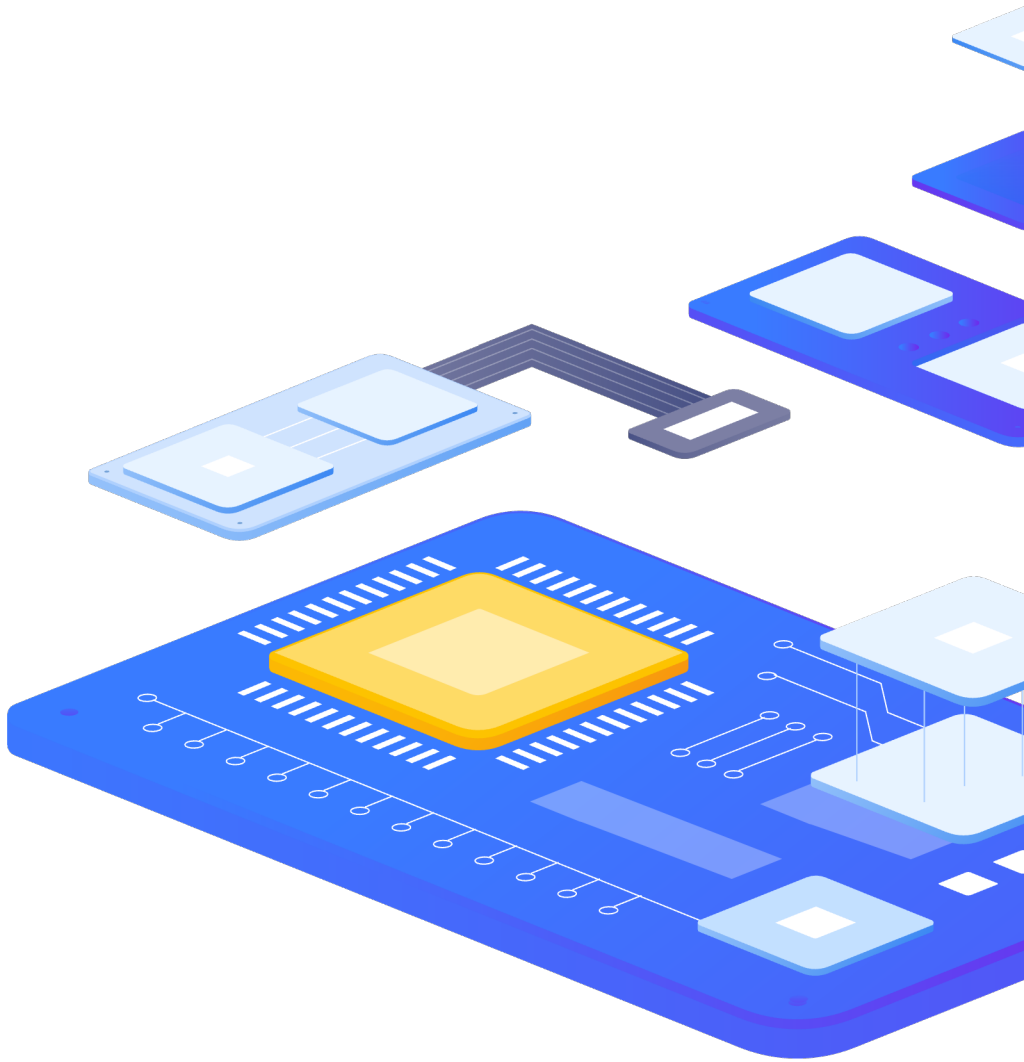
GLOBAL EVENT CORRELATION

Global event correlation allows to reach out over all metrics monitored by Zabbix and create correlations

Resolves problems reported by one trigger with completely different trigger

- Problems matching correlation rules are closed automatically
- Events are still generated, but actions are not executed

Focus on root causes of a problem by saving yourself from repetitive notifications



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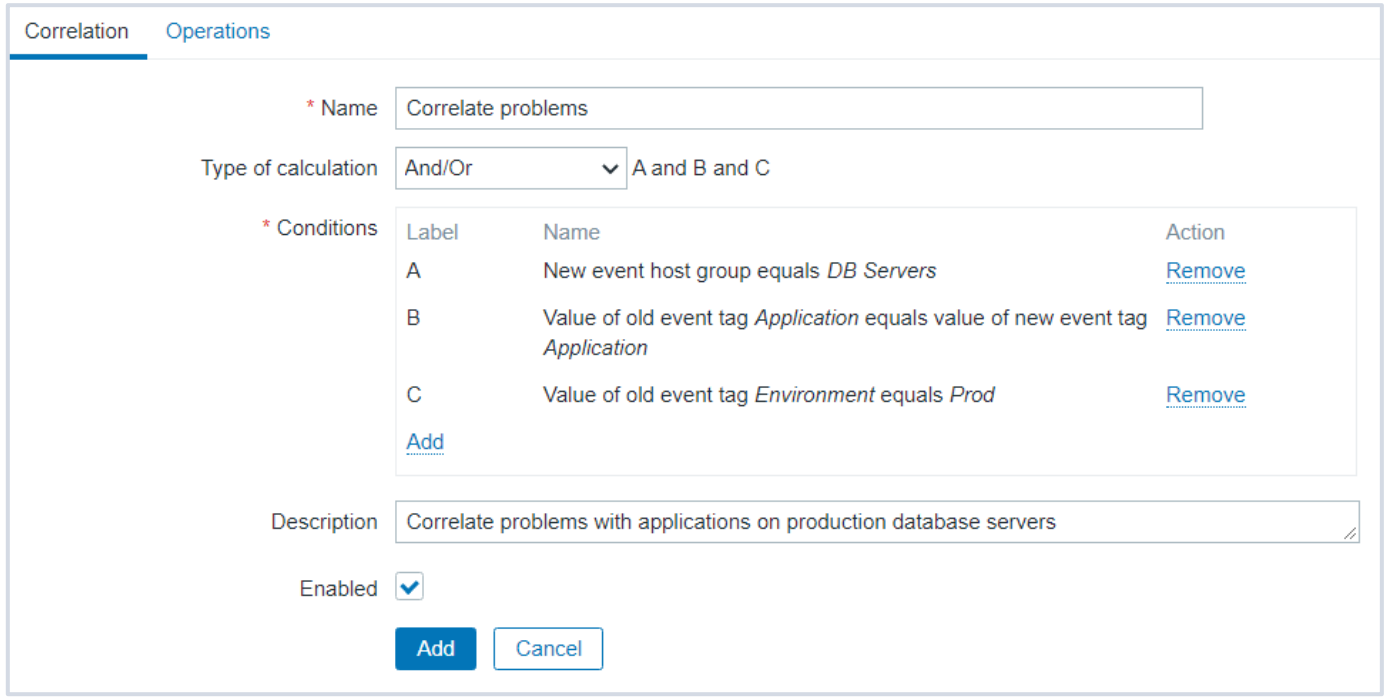
GLOBAL EVENT CORRELATION

Configuring global correlation rules is available to Zabbix Super Admins only

- Open Configuration > Event correlation to configure global event correlation rules
- Define conditions for the correlation rule



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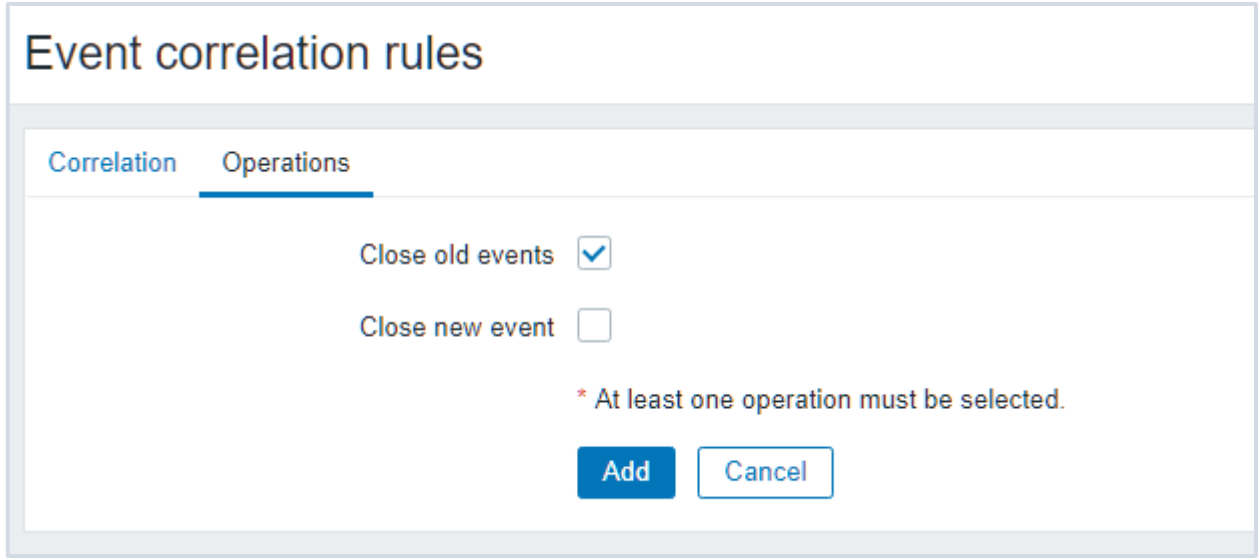
GLOBAL EVENT CORRELATION

Operations define what to do in case of a match:

- Close old events - close old events when a new event happens
- Close new event - close new event immediately when it happens



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GLOBAL EVENT CORRELATION

Global event correlation must be configured very carefully:

- Always set a unique tag for the new event that is paired with old events
- It can close all existing problems in the worst case
- Use a condition based on the old event when using the "Close old event" operation
- Keep the number of correlation rules limited to the ones you really need

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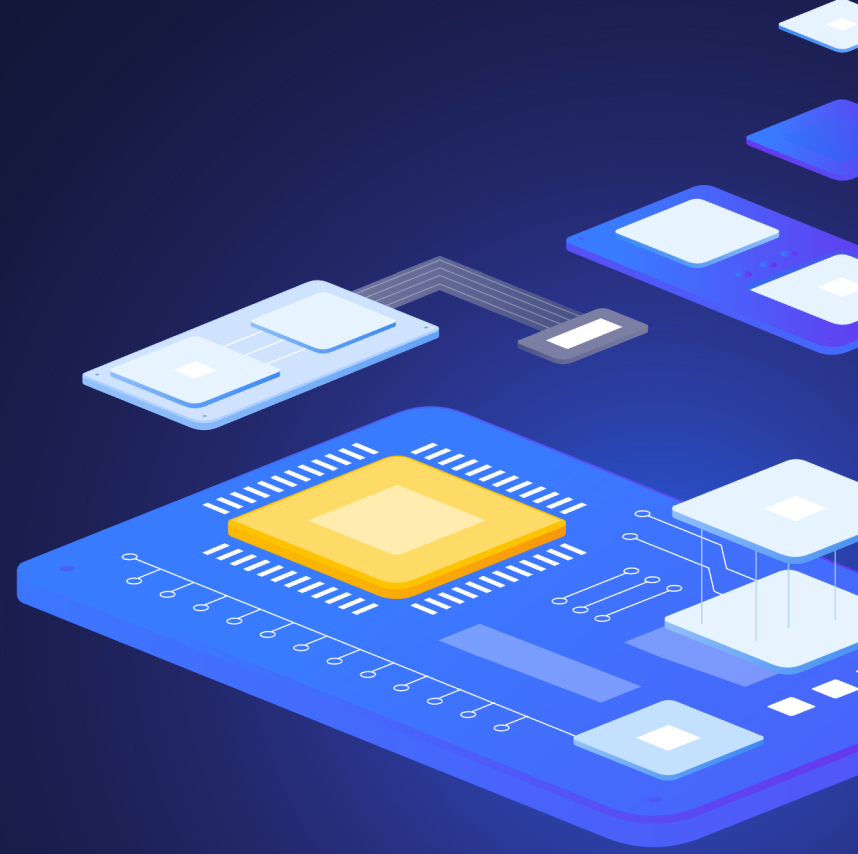
Demonstration



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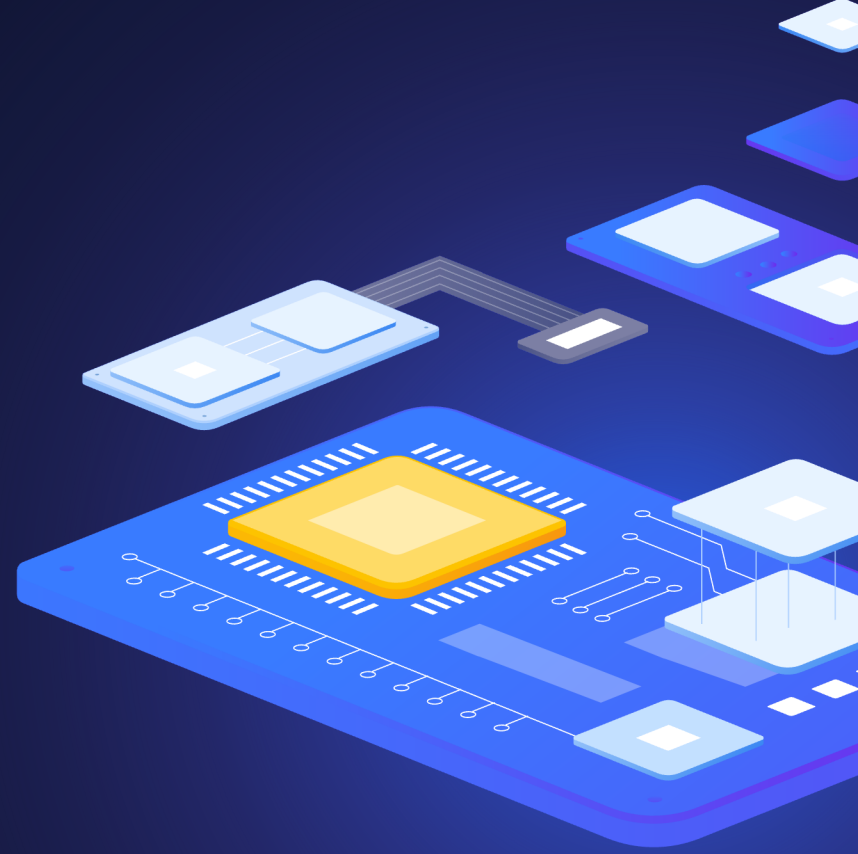
Questions?



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