

ZABBIX

The Enterprise-class Monitoring Solution for Everyone

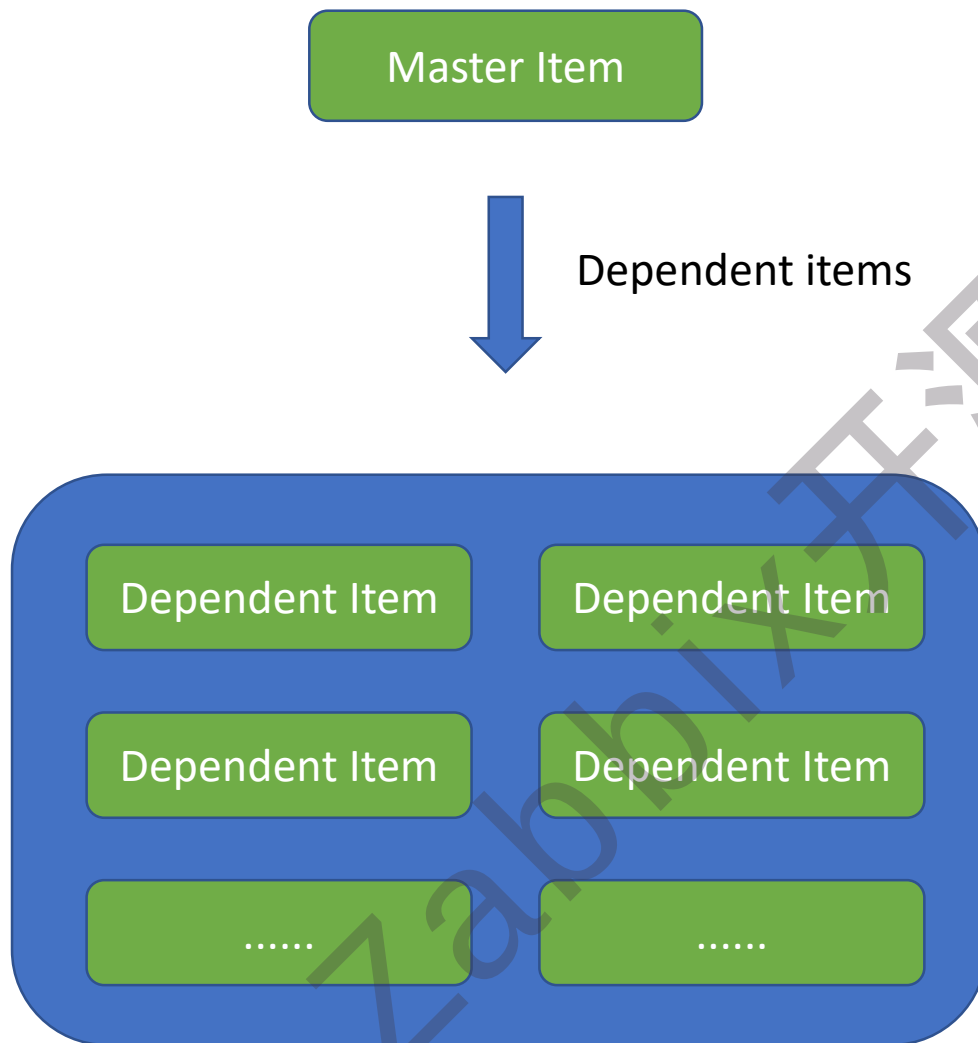
Zabbix 3.4版本新功能实践
及常见问题

当代张思德
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- CactiFans
- Zabbix
- DevOps
- K8s
- Golang

Zabbix开源社区

- Dependent items
- Limitless preprocessing of collected data
- Efficient monitoring of network devices
- Parallel processing of alerts
- Elasticsearch



Simultaneously

Dependent items

Item Preprocessing

Name

Type Dependent item

Key Select

Master item Select

Type of information Numeric (unsigned)

Units

History storage period

Trend storage period

Show value As is [show value map](#)

Item Preprocessing

Name

Type Dependent item

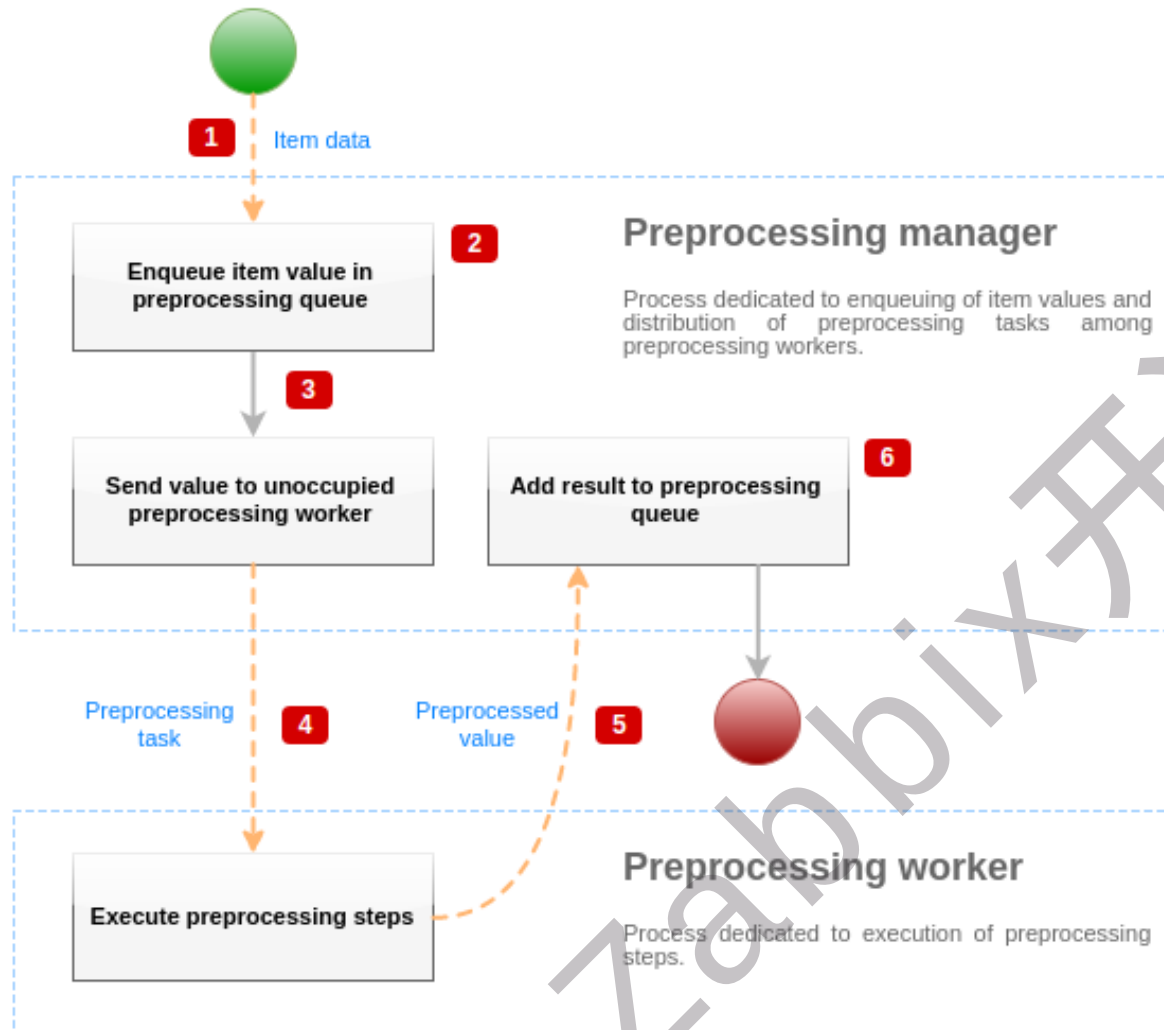
Key Select

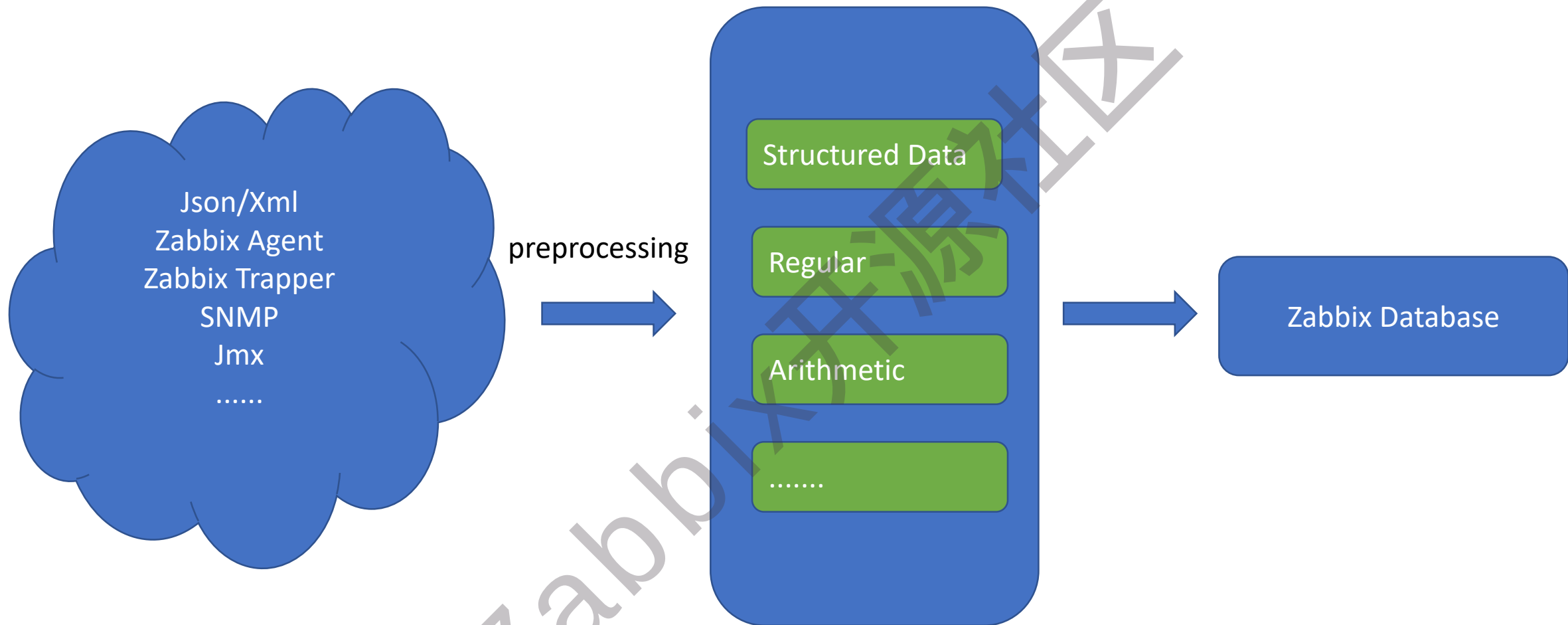
Master item Select

Type of information Numeric (unsigned)

Units

History storage period





Nginx Status Monitor

- Nginx+[Nginx-module-vts](#)
- Zabbix Agent+UserParameter
- Zabbix preprocessing

Demo

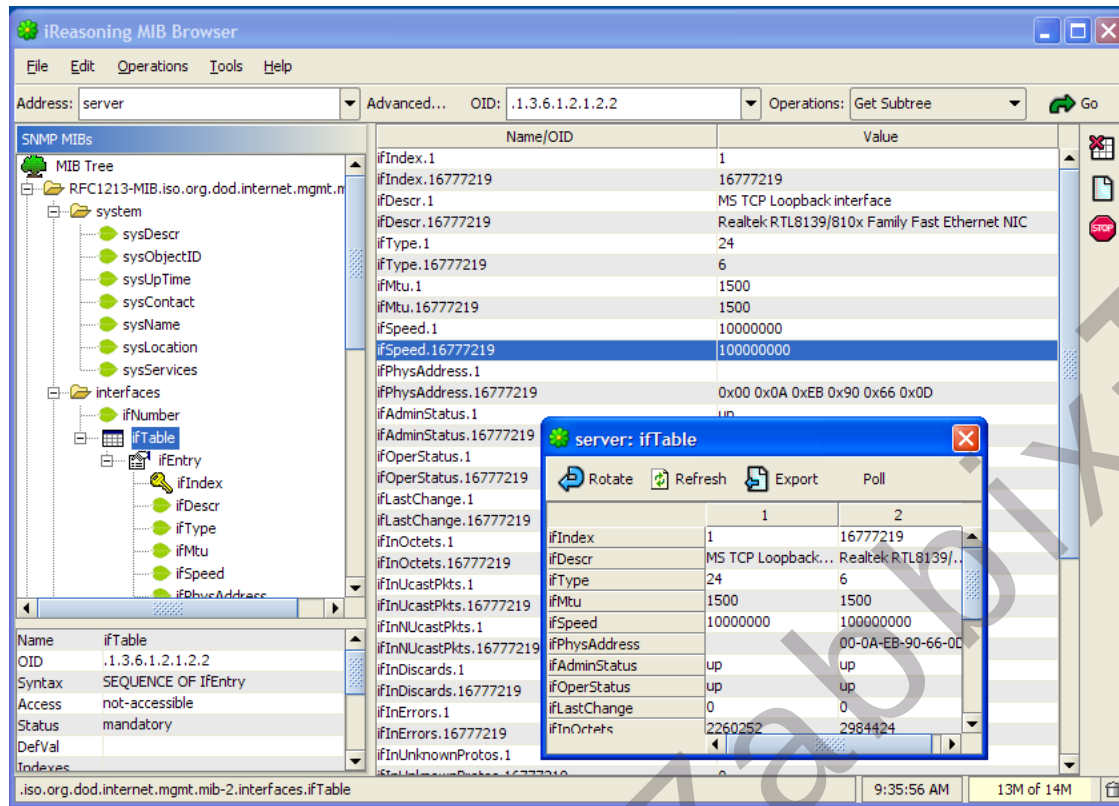
API Status Monitor

- **Http Status API**
- **Zabbix Agent+UserParameter**
- **Zabbix preprocessing**

Demo

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MIB Browser



☐	Wizard	Name ▲
☐	...	Interface {#IFNAME}{#IFALIAS}: Bits received
☐	...	Interface {#IFNAME}{#IFALIAS}: Bits sent
☐	...	Interface {#IFNAME}{#IFALIAS}: Inbound packets discarded
☐	...	Interface {#IFNAME}{#IFALIAS}: Inbound packets with errors
☐	...	Interface {#IFNAME}{#IFALIAS}: Interface type
☐	...	Interface {#IFNAME}{#IFALIAS}: Operational status
☐	...	Interface {#IFNAME}{#IFALIAS}: Outbound packets discarded
☐	...	Interface {#IFNAME}{#IFALIAS}: Outbound packets with errors
☐	...	Interface {#IFNAME}{#IFALIAS}: Speed

snmpwalk

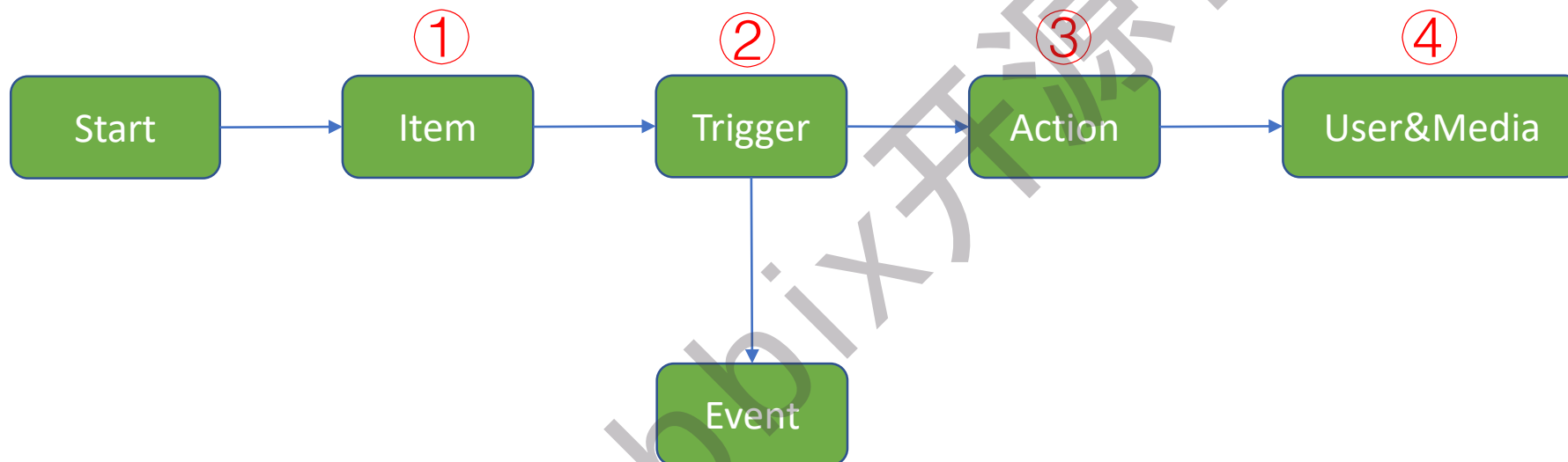
```
[root@localhost etc]# snmpwalk -v2c -c 14.51.20.14 14.51.20.14
SNMPv2-MIB::sysDescr.0 = STRING: Huawei Versatile Routing Platform Software
Software Version: VRP (R) Software, Version 5.160 USG6300 V500R001C30SPC100
Copyright (C) 2014-2016 Huawei Technologies Co., Ltd.
```

```
SNMPv2-MIB::sysObjectID.0 = OID: SNMPv2-SMI::enterprises.2011.6.133.23
DISMAN-EVENT-MIB::sysUpTimeInstance = Timeticks: (1758569421) 203 days, 12:54:54.21
SNMPv2-MIB::sysContact.0 = STRING: R&D Huawei Technologies Co.,Ltd.
SNMPv2-MIB::sysName.0 = STRING: USG6300
SNMPv2-MIB::sysLocation.0 = STRING: China
SNMPv2-MIB::sysServices.0 = INTEGER: 78
IF-MIB::ifNumber.0 = INTEGER: 18
IF-MIB::ifIndex.1 = INTEGER: 1
IF-MIB::ifIndex.2 = INTEGER: 2
IF-MIB::ifIndex.3 = INTEGER: 3
IF-MIB::ifIndex.4 = INTEGER: 4
IF-MIB::ifIndex.5 = INTEGER: 5
IF-MIB::ifIndex.6 = INTEGER: 6
IF-MIB::ifIndex.7 = INTEGER: 7
IF-MIB::ifIndex.8 = INTEGER: 8
IF-MIB::ifIndex.9 = INTEGER: 9
IF-MIB::ifIndex.10 = INTEGER: 10
```

snmpget

```
[root@localhost etc]# snmpget -v2c -c 14.51.20.14 14.51.20.14 IF-MIB::ifDescr.3
IF-MIB::ifDescr.3 = STRING: Console0/0/0
```

Alerts Pipeline



Mdeia

Permission

```
chmod a+x xxxx  
su - zabbix
```

ZABBIX Monitoring Inventory Reports Configuration Administration

General Proxies Authentication User groups Users **Media types** Scripts Queue

Media types

Name

Type

Script name

Script parameters

PARAMETER	ACTION
{ALERT.SENDTO}	Remove
{ALERT.SUBJECT}	Remove
{ALERT.MESSAGE}	Remove
Add	

必须!

Enabled ☒

[Update](#) [Clone](#) [Delete](#) [Cancel](#)

Action&Conditions

Actions

Action Operations Recovery operations Acknowledgement operations

Name

Type of calculation And A and B

Conditions

Label	Name	Action
A	Maintenance status not in <i>maintenance</i>	Remove
B	Host group = <i>Linux servers</i>	Remove

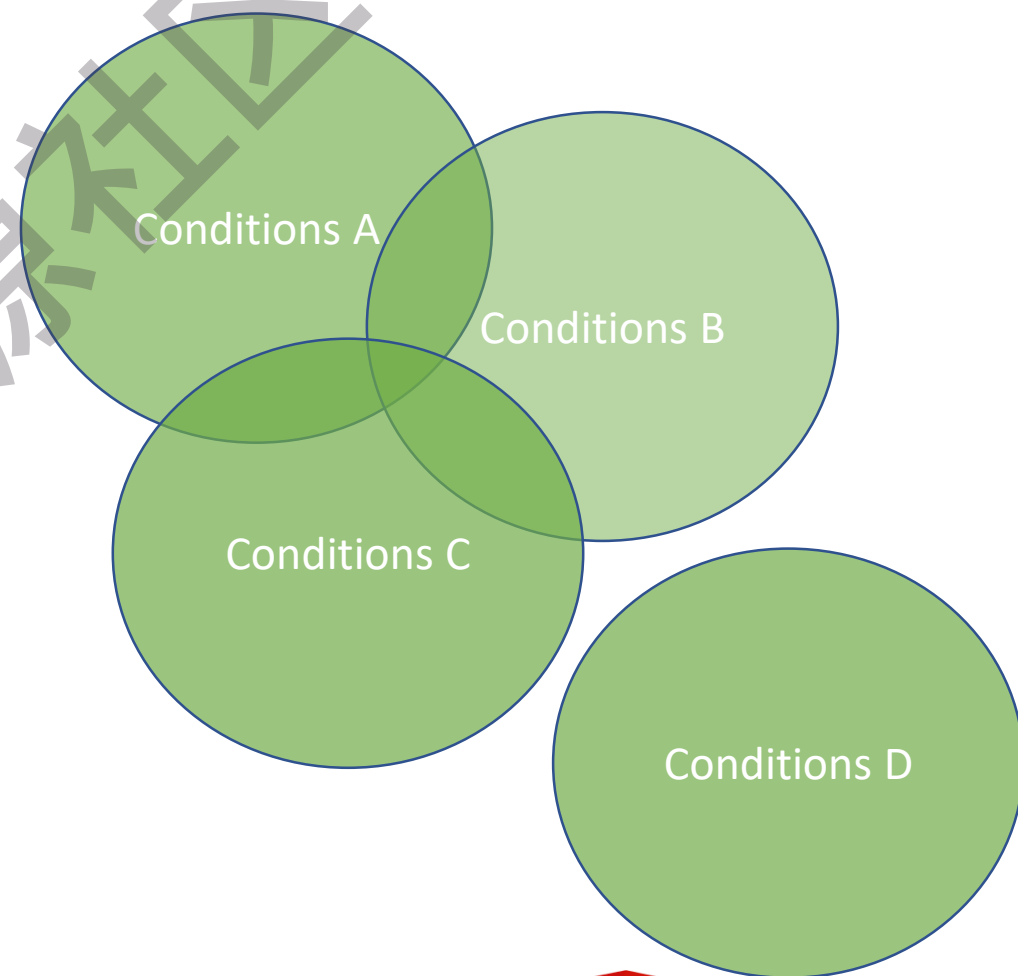
New condition

Template = Select

[Add](#)

Enabled ☐

Update Clone Delete Cancel



Return code

ZABBIX Monitoring Inventory Reports Configuration Administration

Status of Zabbix Availability report Triggers top 100 Audit **Action log** Notifications Central NOC

Action log

Filter ▼

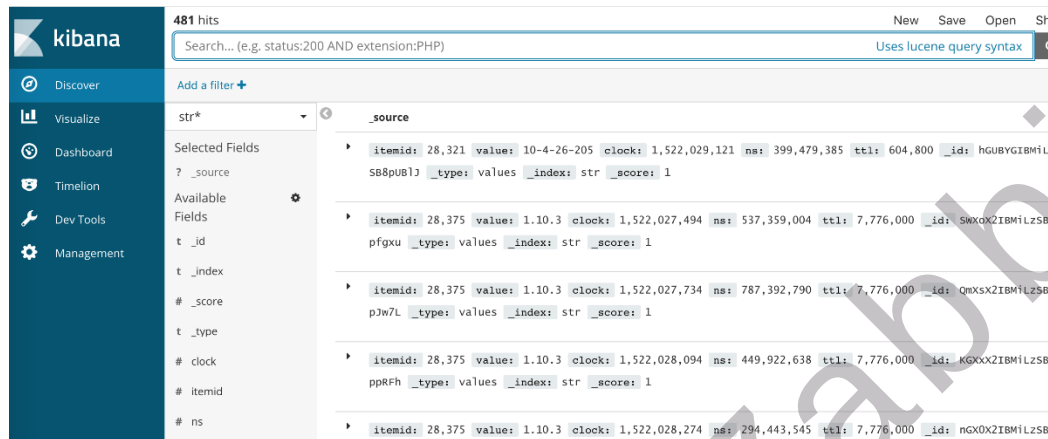
Time	Action	Type	Recipient	Message	Status	Info
2017-08-16 13:28:12	Report problems to Zabbix administrators	AlertScript	John.doe (John Doe) john.doe@ny.datacenter.com	Subject: OK: Version of zabbix_a Message: Trigger: Version of zabb Trigger status: OK Trigger severity: Informa... Trigger URL: Item values: 1. Version of zabbix_agent(d) running (Zabbix server.agent.version): 3.4.0 2. *UNKNOWN* (*UNKNOWN*:*UNKNOWN*): *UNKNOWN* 3. *UNKNOWN* (*UNKNOWN*:*UNKNOWN*): *UNKNOWN* Original event ID: 256	Failed	File "/usr/lib/zabbix/alertscripts/alertscript.py", line 3 def send_notification() SyntaxError: invalid syntax

Displaying 1 of 1 found

Zabbix 3.4.0. © 2001–2017, Zabbix SIA

zabbix_server.conf

HistoryStorageURL=http://test.elasticsearch.lan:9200
HistoryStorageTypes=str,log,text



zabbix.conf.php

global \$DB, \$HISTORY;

```
// Elasticsearch url (can be string if same url is used for all types).
$HISTORY['url'] = [
    'uint' => 'http://localhost:9200',
    'text' => 'http://localhost:9200' ];
// Value types stored in Elasticsearch.
$HISTORY['types'] = ['uint', 'text'];
```

Deploy

<https://github.com/zabbix/zabbix-docker>

- [zabbix-agent](#) - Zabbix agent
- [zabbix-server-mysql](#) - Zabbix server with MySQL database support
- [zabbix-server-pgsql](#) - Zabbix server with PostgreSQL database support
- [zabbix-web-apache-mysql](#) - Zabbix web interface on Apache2 web server with MySQL database support
- [zabbix-web-apache-pgsql](#) - Zabbix web interface on Apache2 web server with PostgreSQL database support
- [zabbix-web-nginx-mysql](#) - Zabbix web interface on Nginx web server with MySQL database support
- [zabbix-web-nginx-pgsql](#) - Zabbix web interface on Nginx web server with PostgreSQL database support
- [zabbix-proxy-sqlite3](#) - Zabbix proxy with SQLite3 database support
- [zabbix-proxy-mysql](#) - Zabbix proxy with MySQL database support
- [zabbix-java-gateway](#) - Zabbix Java Gateway
- [zabbix-snmptraps](#) - Additional container image for Zabbix server and Zabbix proxy to support SNMP traps

Monitor

<https://github.com/monitoringartist/zabbix-docker-monitoring>

- [Zabbix-Template-App-Docker.xml](#) - standard (recommended)
- [Zabbix-Template-App-Docker-active.xml](#) - standard template
- [Zabbix-Template-App-Docker-Mesos-Marathon-Chronos.xml](#)

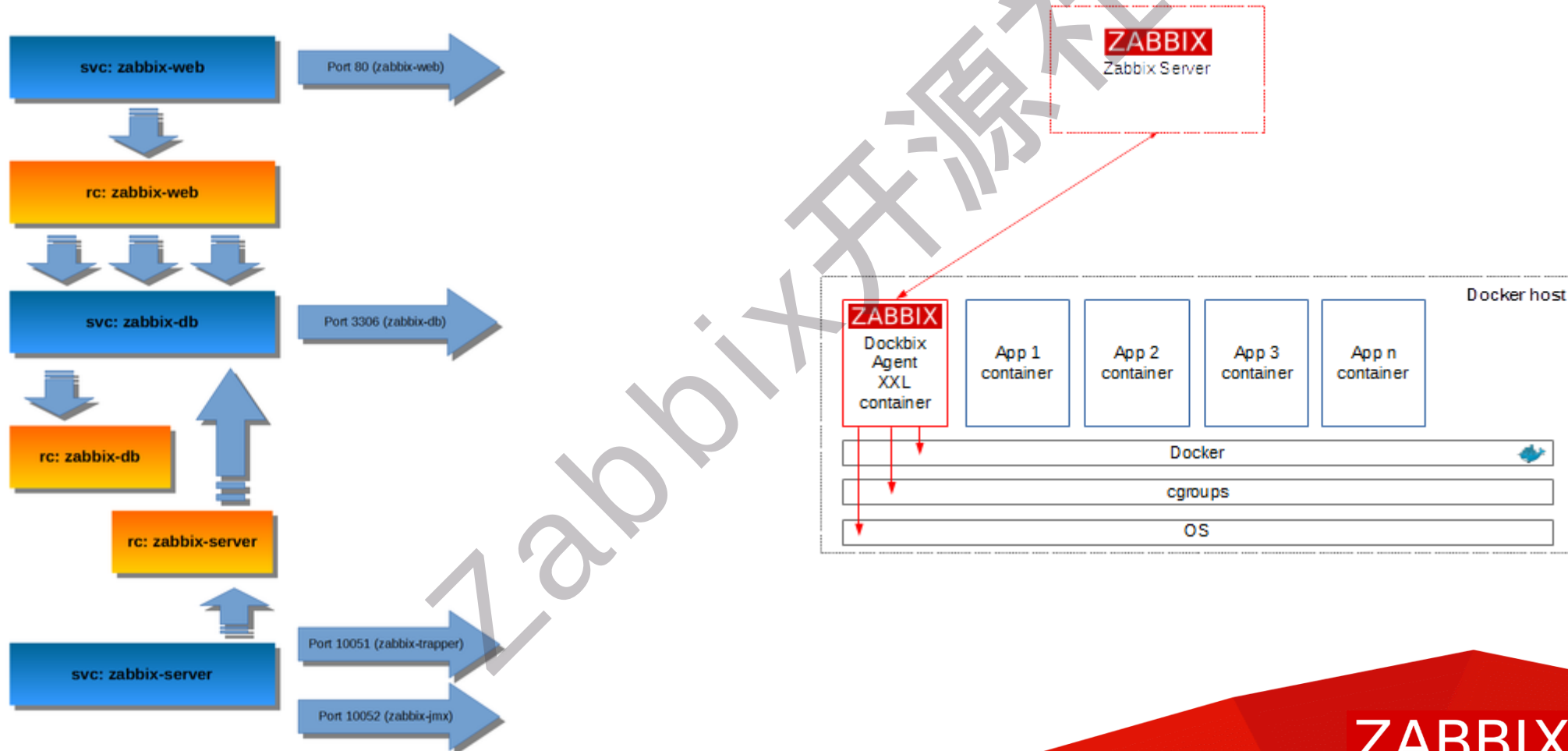
```
LoadModule=zabbix_module_docker.so
```

```
docker run \  
  --name=dockbix-agent-xxl \  
  --net=host \  
  --privileged \  
  -v /:/rootfs \  
  -v /var/run:/var/run \  
  --restart unless-stopped \  
  -e "ZA_Server=<ZABBIX SERVER IP/DNS NAME/IP RANGE>" \  
  -e "ZA_ServerActive=<ZABBIX SERVER IP/DNS NAME>" \  
  -d monitoringartist/dockbix-agent-xxl-limited:latest
```

Zabbix on Kubernetes

<https://github.com/monitoringartist/kubernetes-zabbix>

kubectl create -f zabbix-all-in-one-bare-metal.yaml



Partitioning Tables

<https://github.com/itnihao/zabbix-book/tree/master/03-chapter>

Zabbix 3.4

https://github.com/itnihao/zabbix-book/blob/master/03-chapter/partitiontables_gt_zbx34.sh

Zabbix 2.4

<https://github.com/itnihao/zabbix-book/blob/master/03-chapter/partitiontables.sh>

history
history_log
history_str
history_text
history_uint

```
SELECT PARTITION_NAME, TABLE_ROWS
FROM INFORMATION_SCHEMA.PARTITIONS
WHERE TABLE_NAME = 'history_uint';
```

PARTITION_NAME	TABLE_ROWS
p20180224	0
p20180225	0
p20180226	0
p20180227	0
p20180228	0
p20180301	0
p20180302	0
p20180303	0
p20180304	0
p20180305	0
p20180306	0
p20180307	0
p20180308	0
p20180309	0
p20180310	0
p20180311	0
p20180312	0
p20180313	0
p20180314	0
p20180315	0
p20180316	0
p20180317	0
p20180318	0
p20180319	0
p20180320	0
p20180321	0
p20180322	0
p20180323	0
p20180324	4146
p20180325	68640
p20180326	57089
p20180327	0
p20180328	0
p20180329	0
p20180330	0
p20180331	0
p20180401	0
p20180402	0

38 rows in set (0.00 sec)

```
Mon Mar 26 23:06:14 CST 2018
Warning: Using a password on the command line interface can be insecure.
create_partition(zabbix,history,p20180329,1522339200)
create_partition(zabbix,history,p20180330,1522425600)
create_partition(zabbix,history,p20180331,1522512000)
create_partition(zabbix,history,p20180401,1522598400)
create_partition(zabbix,history,p20180402,1522684800)
create_partition(zabbix,history_log,p20180329,1522339200)
create_partition(zabbix,history_log,p20180330,1522425600)
create_partition(zabbix,history_log,p20180331,1522512000)
create_partition(zabbix,history_log,p20180401,1522598400)
create_partition(zabbix,history_log,p20180402,1522684800)
create_partition(zabbix,history_str,p20180329,1522339200)
create_partition(zabbix,history_str,p20180330,1522425600)
create_partition(zabbix,history_str,p20180331,1522512000)
create_partition(zabbix,history_str,p20180401,1522598400)
create_partition(zabbix,history_str,p20180402,1522684800)
create_partition(zabbix,history_text,p20180329,1522339200)
create_partition(zabbix,history_text,p20180330,1522425600)
create_partition(zabbix,history_text,p20180331,1522512000)
create_partition(zabbix,history_text,p20180401,1522598400)
create_partition(zabbix,history_text,p20180402,1522684800)
create_partition(zabbix,history_uint,p20180329,1522339200)
create_partition(zabbix,history_uint,p20180330,1522425600)
create_partition(zabbix,history_uint,p20180331,1522512000)
create_partition(zabbix,history_uint,p20180401,1522598400)
create_partition(zabbix,history_uint,p20180402,1522684800)
create_partition(zabbix,trends,p201805,1527782400)
create_partition(zabbix,trends,p201806,1530374400)
create_partition(zabbix,trends_uint,p201805,1527782400)
create_partition(zabbix,trends_uint,p201806,1530374400)
```

zabbix_server.conf

HistoryStorageURL=http://test.elasticsearch.lan:9200

HistoryStorageTypes=str,log,text

zabbix.conf.php

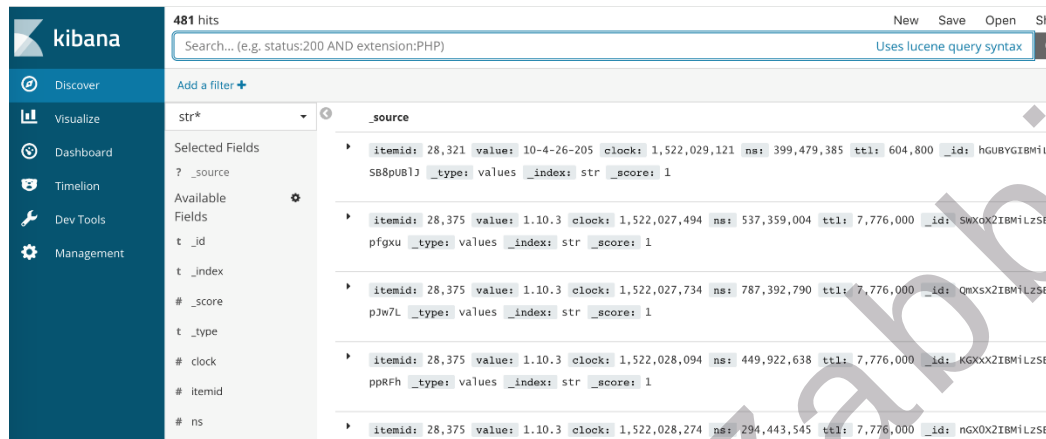
global \$DB, \$HISTORY;

// Elasticsearch url (can be string if same url is used for all types).

```
$HISTORY['url'] = [
    'uint' => 'http://localhost:9200',
    'text' => 'http://localhost:9200' ];
```

// Value types stored in Elasticsearch.

```
$HISTORY['types'] = ['uint', 'text'];
```



Q&A

Thank you!