

EPAM Systems, RD Dep., RD Dep.

MTN.NIX.05.Zabbix.Items

| REVISION HISTORY | | | | | |
|------------------|-----------------------|------------------|-------------|----------|----------------|
| Ver. | Description of Change | Author | Date | Approved | |
| | | | | Name | Effective Date |
| 1.0 | Initial Version | Siarhei Beliakou | 23/May/2017 | | |

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Task. Items

Task:

Assuming we have 2 servers (VMs) – ZabbixServer and Tomcat,
Configure:

zabbix-ag: TOMCAT AppServer LOG MONITORING

From: now-1h To: now Apply

Last 2 days Yesterday
Last 7 days Day before yesterday
Last 30 days This day last week
Last 3 months Previous week
Last 6 months Previous month
Last 1 year Previous year
Last 2 years

| Timestamp | Local time | Value |
|---------------------|-------------------------|--|
| 2019-10-21 19:49:17 | | INFO: Server startup in 51 ms |
| 2019-10-21 19:49:17 | Oct 21, 2019 4:49:05 PM | org.apache.catalina.startup.Catalina start |
| 2019-10-21 19:49:17 | | INFO: Starting ProtocolHandler ["ajp-bio-8009"] |
| 2019-10-21 19:49:17 | Oct 21, 2019 4:49:05 PM | org.apache.coyote.AbstractProtocol start |
| 2019-10-21 19:49:17 | | INFO: Starting ProtocolHandler ["http-bio-8080"] |
| 2019-10-21 19:49:17 | Oct 21, 2019 4:49:05 PM | org.apache.coyote.AbstractProtocol start |
| 2019-10-21 19:49:17 | | INFO: Starting Servlet Engine: Apache Tomcat/7.0.76 |
| 2019-10-21 19:49:17 | Oct 21, 2019 4:49:05 PM | org.apache.catalina.core.StandardEngine startInternal |
| 2019-10-21 19:49:17 | | INFO: Starting service Catalina |
| 2019-10-21 19:49:17 | Oct 21, 2019 4:49:05 PM | org.apache.catalina.core.StandardService startInternal |
| 2019-10-21 19:49:17 | | INFO: Initialization processed in 464 ms |
| 2019-10-21 19:49:17 | Oct 21, 2019 4:49:05 PM | org.apache.catalina.startup.Catalina load |
| 2019-10-21 19:49:17 | | INFO: Initializing ProtocolHandler ["ajp-bio-8009"] |
| 2019-10-21 19:49:17 | Oct 21, 2019 4:49:05 PM | org.apache.coyote.AbstractProtocol init |
| 2019-10-21 19:49:17 | | INFO: Initializing ProtocolHandler ["http-bio-8080"] |
| 2019-10-21 19:49:17 | Oct 21, 2019 4:49:05 PM | org.apache.coyote.AbstractProtocol init |

Triggers

All hosts / zabbix-ag Enabled ZBX SNMP JMX IPMI Applications 12 Items 52 Triggers 16 Graphs 11 Discovery rules 3 Web scenarios

Trigger Tags Dependencies

Name: TOMCAT LOG TRIGGER

Operational data:

Severity: Not classified Information Warning Average High Disaster

Expression: {zabbix-ag:log[/var/log/tomcat/catalina.2019-10-21.log].regexp(Starting)}=1 Add

Expression constructor

OK event generation: Expression Recovery expression None

PROBLEM event generation mode: Single Multiple

OK event closes: All problems All problems if tag values match

| Time | Severity | Recovery time | Status | Info | Host | Problem |
|----------|----------|---------------|----------|------|-----------|--------------------|
| 20:00:17 | High | 20:00:17 | RESOLVED | | zabbix-ag | TOMCAT LOG TRIGGER |

1. Simple checks:

- Zabbix Server WEB availability (80)
- Zabbix DB is available (3306)

Items

All hosts / Zabbix server Enabled **ZBX** SNMP JMX IPMI Applications 17 Items 120 Triggers 63 Graphs 21 Discovery rules 3 Web scenarios

Item Preprocessing

* Name


Type

* Key

* Host interface

User name

Password



Database error

Error connecting to database.

| Time | Severity | Recovery time | Status | Info | Host | Problem |
|----------|-----------------------------------|---------------|----------|------|---------------|---------------------|
| 20:46:51 | <input type="checkbox"/> Disaster | 20:47:49 | RESOLVED | | Zabbix server | DB port Unavailable |
| 20:00 | | | | | | |

- Tomcat availability (80, 8080)

Items

All hosts / zabbix-ag Enabled **ZBX** SNMP JMX IPMI Applications 16 Items 82 Triggers 30 Graphs 15 Discovery rules 3 Web scenarios

Item Preprocessing

* Name

Type

* Key

* Host interface

Type of information

Units

* Update interval

Custom intervals

| Type | Interval | Period | Action |
|--|----------------------------------|--|---------------------------------------|
| <input checked="" type="checkbox"/> Flexible <input type="checkbox"/> Scheduling | <input type="text" value="50s"/> | <input type="text" value="1-7,00:00-24:00"/> | <input type="button" value="Remove"/> |

[Add](#)

| | | |
|----------------------|-------------------------|----|
| CPU load average 1m | system.cpu.load[,avg1] | 1s |
| CPU load average 5m | system.cpu.load[,avg5] | 1s |
| CPU load average 15m | system.cpu.load[,avg15] | 1s |

Items

All hosts / zabbix-ag Enabled ZBX SNMP JMX IPMI Applications 16 Items 82 Triggers 30 Graphs 15 Discovery rules

Item Preprocessing

* Name

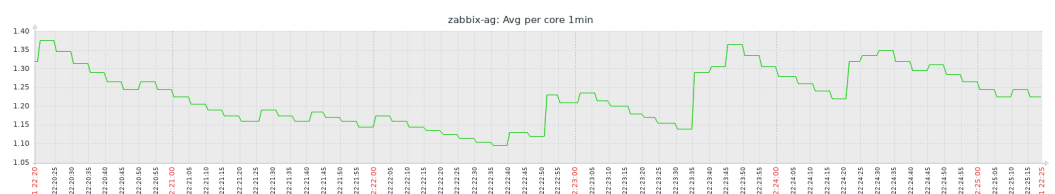
Type

* Key

* Formula

Type of information

| Item | Value | Time |
|--------------------|-------|---------------------|
| Avg per core 1min | 1.19 | 2019-10-21 22:26:05 |
| Avg per core 5min | 1 | 2019-10-21 22:26:05 |
| Avg per core 15min | 0.84 | 2019-10-21 22:26:05 |



- Tomcat Server is available by ssh (22)
- Calculated Checks:
 - CPU Load per Core (1, 5, 15min)
 - Internal Checks:
 - How many items are enabled

Items

All hosts / Zabbix server Enabled ZBX SNMP JMX IPMI Applications 17 Items 121 Triggers 64 Graphs 21 Discovery rules 3 Web sc

Item Preprocessing

* Name

Type

* Key

Type of information

Units

* Update interval

| Custom intervals | Type | Interval | Period | Action |
|------------------|------|----------|--------|--------|
| • | | | | |

Items

All hosts / Zabbix server Enabled **ZBX** SNMP JMX IPMI Applications 17 Items 123 Triggers 65 Graphs 21 Discovery rules 3 Web scenarios

Item Preprocessing

* Name

Type

* Key

Type of information

Units

* Update interval

Custom intervals

| Type | Interval | Period | Action |
|--|----------------------------------|--|------------------------|
| <input checked="" type="checkbox"/> Flexible <input type="checkbox"/> Scheduling | <input type="text" value="50s"/> | <input type="text" value="1-7,00:00-24:00"/> | Remove |

[Add](#)

Triggers

All hosts / Zabbix server Enabled **ZBX** SNMP JMX IPMI Applications 17 Items 123 Triggers 66 Graphs 21 Discovery rules 3 Web scenarios

Trigger Tags Dependencies

* Name

Operational data

Severity

* Expression

[Expression constructor](#)

OK event generation

| | | | | |
|--------------------------|---------|---------|--------------------------------|---|
| <input type="checkbox"/> | Warning | PROBLEM | ZABBIX Number of Hosts Trigger | {Zabbix server:zabbix[hosts].last()}<5 |
| Zabbix server | | | | |
| - other - (3 items) | | | | |
| | | | DB port Available | 2019-10-21 22:29:55 1 Graph |
| | | | ZABBIX Amount of Items | 2019-10-21 22:29:55 123 Graph |
| | | | ZABBIX Number of Hosts | 2019-10-21 22:29:55 4 Graph |

- How many Servers are being monitored

Create triggers for every check