

EPAM Systems, RD Dep., RD Dep.

MTN.NIX.05.Zabbix.Java

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. Java Monitoring with Java

Task:

You should install and configure Zabbix server and agents.

Testing Infrastructure:

Vagrantfile to spin up 2 VMs (virtualbox):

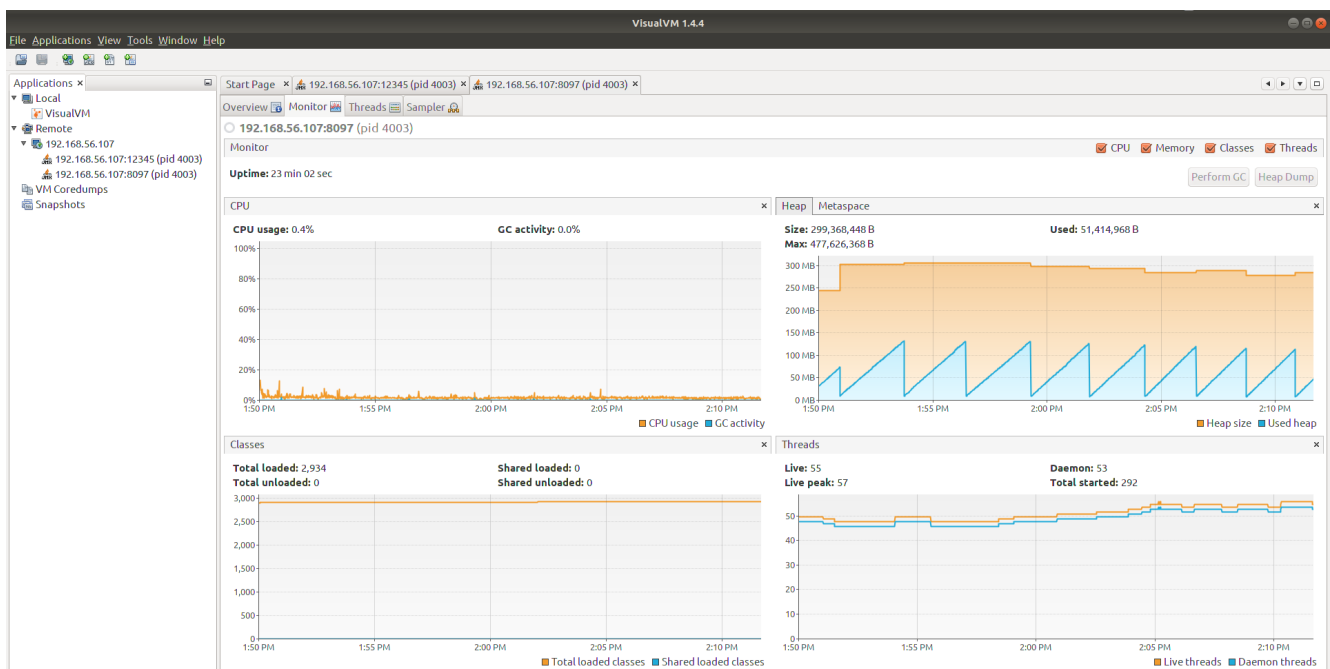
- zabbix server, provisioned by Vagrant provisioner
- Zabbix agents on both VMs, provisioned by Vagrant provisioner
- Install Tomcat 7 on 2nd VM

Tasks:

1. Configure Zabbix to examine Java parameters via Java Gateway (<http://jmxmonitor.sourceforge.net/jmx.html>)
2. Configure triggers to alert once these parameters changed.

For both VMs use vagrant box “sbeliakou/centos-7.3-x86_64-minimal”

Firstly, I checked connection with VirtualVM.



Configuration of GW is in script.

192.168.56.106/hosts.php?form=update&hostid=10305&groupid=0

ZABBIX

MonitoringInventoryReportsConfigurationAdministration

Host groupsTemplatesHostsMaintenanceActionsEvent correlationDiscoveryServices

Hosts

All hosts / Zabbix zagentEnabledZBXSNMPJMXIPMIApplicationsItemsTriggersGraphsDiscovery rulesWeb scenarios

HostTemplatesIPMITagsMacrosInventoryEncryption

* Host name

Zabbix zagent

Visible name

* Groups

Linux servers X

Select

type here to search

* At least one interface must exist.

Agent interfaces

IP addressDNS nameConnect toPortDefault

Add

SNMP interfaces

Add

JMX interfaces

192.168.56.107

IPDNS12345

Remove

192.168.56.107

IPDNS8097

Remove

Add

192.168.56.106/latest.php?ddreset=1

ZABBIX

MonitoringInventoryReportsConfigurationAdministration

DashboardProblemsOverviewWebLatest dataGraphsScreensMapsDiscoveryServices

Latest data

Filter

Host groups

Linux servers X

Select

Name

type here to search

Show items without data

☒

Hosts

type here to search

Select

Show details

☐

Application

Select

Apply

Reset

Host	Name	Last check	Last value	Change
<input checked="" type="checkbox"/>	Zabbix zagent	- other - (2 items)		
<input type="checkbox"/>	Java Heap Memory Used	2019-10-20 14:04:48	37045896	+4792864Graph
<input type="checkbox"/>	Java Tomcat Uptime	2019-10-20 14:04:52	973524	+4998Graph

0 selectedDisplay stacked graphDisplay graph

192.168.56.106/triggers.php

ZABBIX

MonitoringInventoryReportsConfigurationAdministration

Host groupsTemplatesHostsMaintenanceActionsEvent correlationDiscoveryServices

Triggers

All hosts / Zabbix zagentEnabledZBXSNMPJMXIPMIApplicationsItems2TriggersGraphsDiscovery rulesWeb scenarios

TriggerTagsDependencies

* Name

Tomcat panic

Operational data

Severity

Not classifiedInformationWarningAverageHighDisaster

* Expression

{Zabbix zagent:}jmx["java.lang:type=Memory",HeapMemoryUsage.used].prev()

Insert expression

Add

Target

Test

Expression

Action

Info

Close expression constructor

OK event generation

ExpressionRecovery expressionNone

PROBLEM event generation mode

SingleMultiple

OK event closes

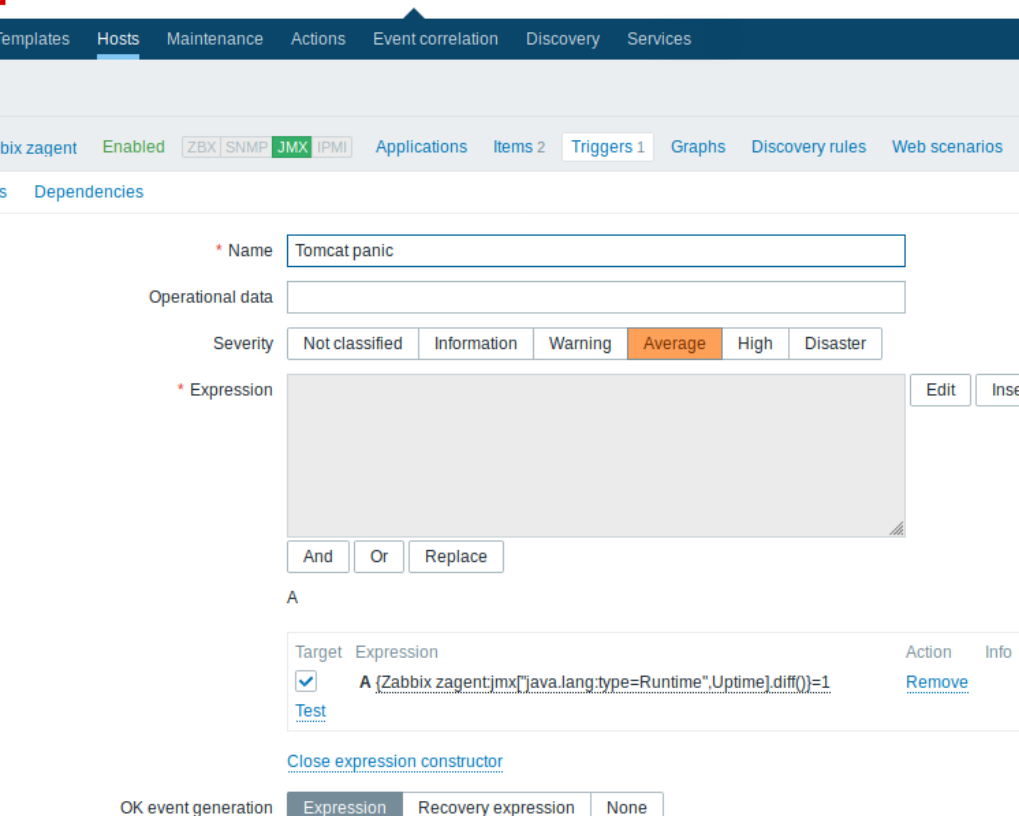
All problemsAll problems if tag values match

Allow manual close

☐

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The screenshot displays the Zabbix web interface for configuring triggers. The top navigation bar includes links for Monitoring, Inventory, Reports, Configuration, and Administration. The left sidebar shows the hierarchy: Host groups, Templates, Hosts, Maintenance, Actions, Event correlation, Discovery, and Services. The main content area is titled 'Triggers' and shows the configuration for a specific trigger named 'Tomcat panic'. The trigger is enabled and has a severity of 'Average'. The expression is '{Zabbix.zagent.jmx[\"java.lang:type=Runtime\"].Uptime}.diff()=1'. The trigger is associated with the 'Zabbix.zagent.jmx' item. The page also shows the 'Close expression constructor' button and the 'OK event generation' section.

ZABBIX Monitoring Inventory Reports Configuration Administration

Host groups Templates Hosts Maintenance Actions Event correlation Discovery Services

Triggers

All hosts / Zabbix zagent Enabled ZBX SNMP JMX PMI Applications Items 2 Triggers 1 Graphs Discovery rules Web scenarios

Trigger Tags Dependencies

* Name Tomcat panic

Operational data

Severity Not classified Information Warning Average High Disaster

* Expression

Edit Insert expression

And Or Replace

A

Target	Expression	Action	Info
<input checked="" type="checkbox"/>	A {Zabbix.zagent.jmx[\"java.lang:type=Runtime\"].Uptime}.diff()=1	Remove	

[Close 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