

Task. Java Monitoring with Java

Task:

You should install and configure Zabbix server and agents.

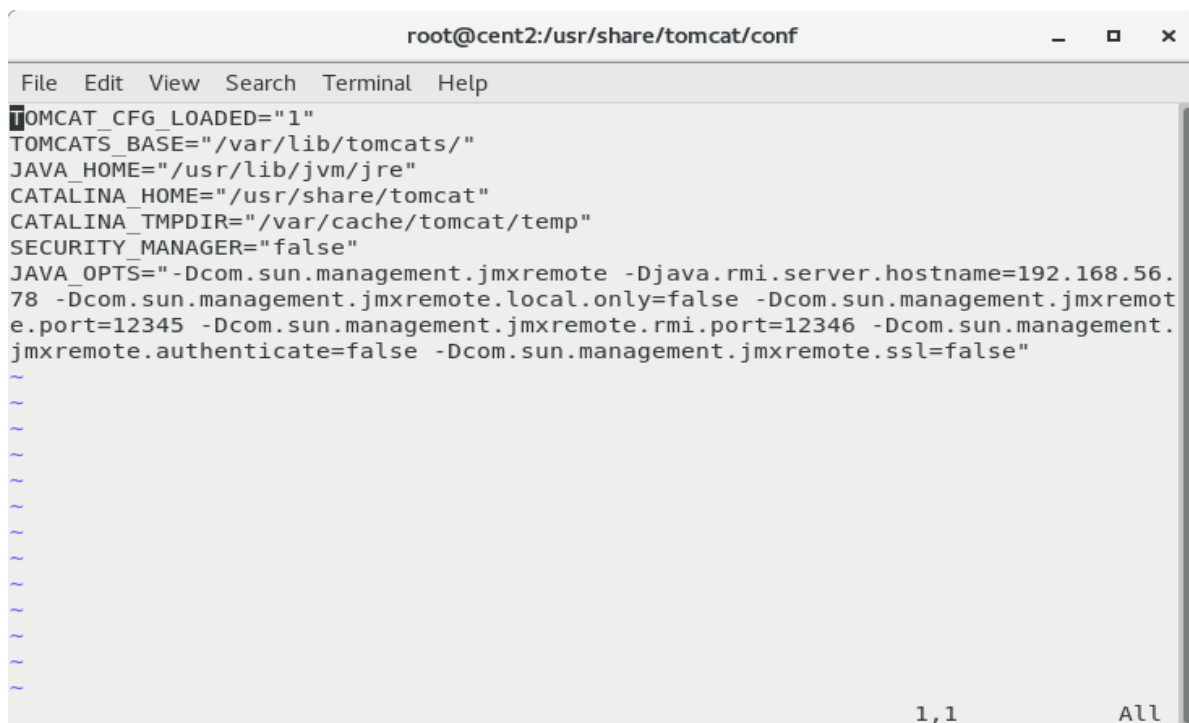
Testing Infrastructure:

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>)

A screenshot of a terminal window titled 'root@cent2:/usr/share/tomcat/conf'. The window displays the contents of the 'tomcat.conf' file. The configuration includes environment variables for TOMCATS_BASE, JAVA_HOME, CATALINA_HOME, and CATALINA_TMPDIR. It also sets SECURITY_MANAGER to false and JAVA_OPTS to include JMX remote settings for hostname (192.168.56.78), local.only (false), jmxremote.port (12345), jmxremote.rmi.port (12346), jmxremote.authenticate (false), and jmxremote.ssl (false). The terminal shows a cursor at the end of the first line of configuration. The status bar at the bottom indicates '1,1' and 'All'.

Skype x Mail - Aliak x EPAM Clo x Zabbix_JV x Zabbix_ser x Hello Wor x 2.1.1.Zabbix x zabbix key x linux out fi x How to Vi x shell scrip x + - 100 x

Not secure 192.168.56.77/zabbix/items.php?form=update&hostid=10263&itemid=28640

ZABBIX Monitoring Inventory Reports Configuration Administration

Host groups Templates **Hosts** Maintenance Actions Event correlation Discovery Services Zabbix_server

Items

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

Item Preprocessing

* Name

Type JMX agent

* Key Select

* Host interface

* JMX endpoint

User name

Password

Type of information Numeric (unsigned)

Units

* Update interval

Type	Interval	Period	Action
Flexible	Scheduling	50s	1-7,00:00-24:00

Add Remove

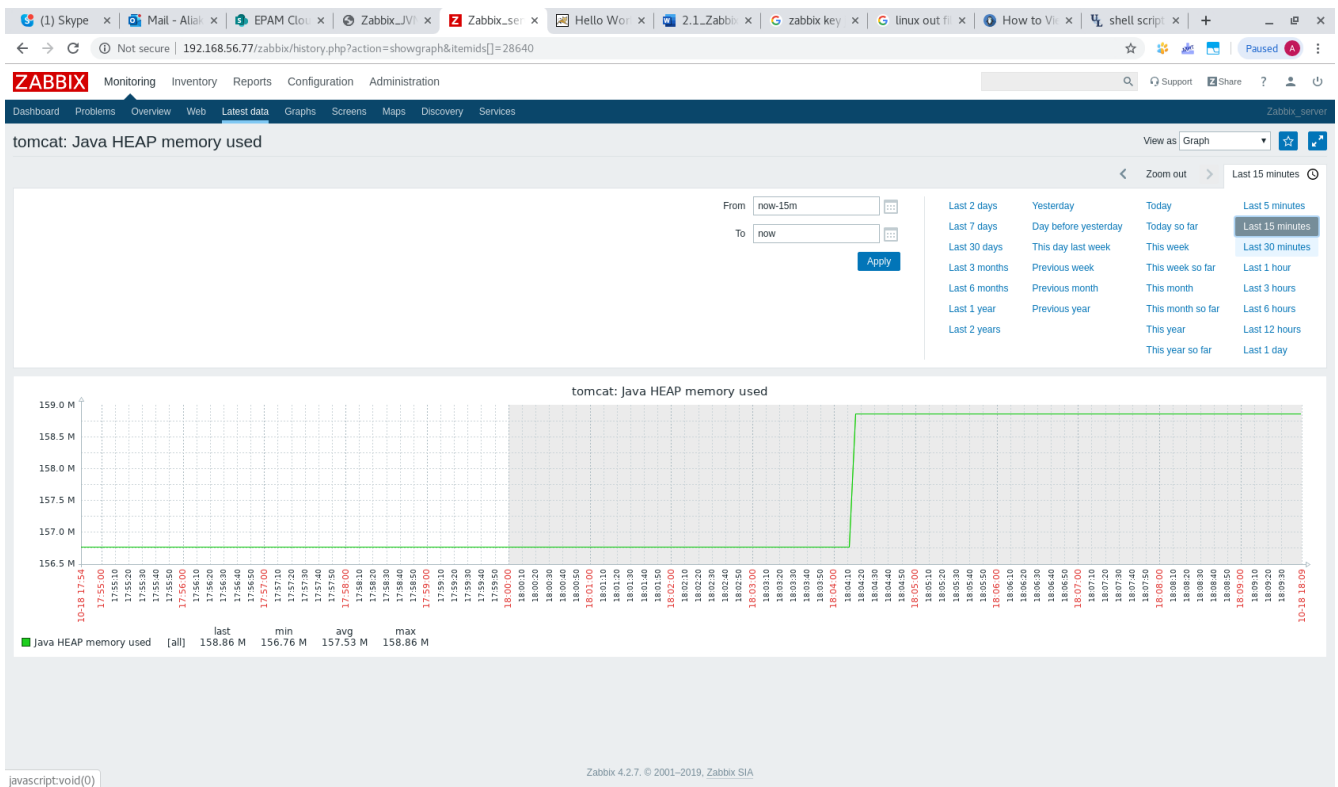
* History storage period Do not keep history Storage period 90d

* Trend storage period Do not keep trends Storage period 365d

Show value As is show value mappings

New application

Applications



2. Configure triggers to alert once these parameters changed.

The screenshot shows the Zabbix 4.2.7 web interface in a browser. The page title is "Triggers" and the breadcrumb navigation is "All hosts / tomcat / Enabled / Zabbix_4.2.7 / Applications 10 / Items 35 / Triggers 16 / Graphs 5 / Discovery rules 2 / Web scenarios". The "Trigger" tab is selected. The configuration form for a trigger named "change_HEAP" is displayed. The severity is set to "High". The expression is "{tomcat.jmx[*].java.lang.type=Memory*.HeapMemoryUsage.committed}.delta(60s)>". The "OK event generation" is set to "Expression", "PROBLEM event generation mode" is "Single", and "OK event closes" is "All problems". The "Allow manual close" checkbox is unchecked. The "URL" field is empty, and the "Description" field is also empty. The "Enabled" checkbox is checked. At the bottom, there are buttons for "Update", "Clone", "Delete", and "Cancel".

Name

Severity

Expression

[Expression constructor](#)

OK event generation

PROBLEM event generation mode

OK event closes

Allow manual close ☐

URL

Description

Enabled ☒

Zabbix 4.2.7. © 2001–2019, Zabbix SIA

Browser tabs: (1) Skype, Mail - Allai, EPAM Clou, Zabbix_JV, Zabbix_ser, Hello Wor, 2.1.Zabbix, zabbix key, linux out fi, How to Vi, shell scrip, +

Address bar: Not secure | 192.168.56.77/zabbix/zabbix.php?action=dashboard.view&ddreset=1

ZABBIX Monitoring Inventory Reports Configuration Administration

Dashboard Problems Overview Web Latest data Graphs Screens Maps Discovery Services

Global view

All dashboards / Global view

System information

Parameter	Value	Details
Zabbix server is running	Yes	localhost:10051
Number of hosts (enabled/disabled/templates)	85	2 / 0 / 83
Number of items (enabled/disabled/not supported)	128	123 / 0 / 5
Number of triggers (enabled/disabled [problem/vok])	68	68 / 0 / 68
Number of users (online)	2	1
Required server performance, new values per second	1.91	

Problems by severity

Host group	Disaster	High	Average	Warning	Information	Not classified
Linux servers		1				

Local

Problems

Time	Info	Host	Problem • Severity	Duration	Ack	Actions	Tags
18:40:42		tomcat	change_HEAP	1s	No		

Favourite maps

No maps added.

Favourite graphs

No graphs added.

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