

Task 1


1. Tomcat is installed on host1 VM

192.168.56.11:8080

Home Documentation Configuration Examples Wiki Mailing

Apache Tomcat/7.0.69

If you're seeing this, you've successfully



Recommended Reading:
[Security Considerations HOW-TO](#)
[Manager Application HOW-TO](#)
[Clustering/Session Replication HOW-TO](#)

Developer Quick Start

Tomcat Setup	Realms & AAA	Exam
First Web Application	JDBC DataSources	

Managing Tomcat

For security, access to the [manager webapp](#) is restricted. Users are defined in:

```
$CATALINA_HOME/conf/tomcat-users.xml
```

Documentation

[Tomcat 7.0 Documenta](#)
[Tomcat 7.0 Configuratio](#)

2. Downloaded jmx-remote and placed in /usr/share/tomcat/lib

```
_agentd: active checks #1 [idle 1 sec]
usr/share/tomcat/lib
ool.jar      tomcat-api.jar
             tomcat-catalina-jmx-remote-7.0.4.jar
.jar        tomcat-coyote.jar
r           tomcat-el-2.2-api.jar
t.jar       tomcat-i18n-es.jar
            tomcat-i18n-fr.jar
ebsocet.jar tomcat-i18n-ja.jar
```

3. JmxRemoteLifecycleListener to server.xml

```
<!-- Initialize Jasper prior to webapps and related documentation at /docs/jasper-howto.html -->
<Listener className="org.apache.catalina.core.JasperListener" />
<!-- Prevent memory leaks due to use of particular java/javax APIs-->
<Listener className="org.apache.catalina.core.JreMemoryLeakPreventionListener" />
<Listener className="org.apache.catalina.mbeans.GlobalResourcesLifecycleListener" />
<Listener className="org.apache.catalina.core.ThreadLocalLeakPreventionListener" />
<Listener className="org.apache.catalina.mbeans.JmxRemoteLifecycleListener" rmiRegistryPortPlatform="8097" rmiServerPortPlatform="8098" />
<!-- Global JNDI resources
      Documentation at /docs/jndi-resources-howto.html
-->
<GlobalNamingResources>
```

4. added JAVA_OPTS in /etc/tomcat/tomcat.conf

```
# Time to wait in seconds, before killing process
# TODO(stingray): does nothing, fix.
# SHUTDOWN_WAIT="30"

# If you wish to further customize your tomcat environment,
# put your own definitions here
# (i.e. LD_LIBRARY_PATH for some jdbc drivers)
JAVA_OPTS="-Dcom.sun.management.jmxremote -Djava.rmi.server.
only=false -Dcom.sun.management.jmxremote.port=12345 -Dcom.s
jmxremote.authenticate=false -Dcom.sun.management.jmxremote.
```

5. zabbix-java-gateway installed and started on zabbix-server VM

```
[vagrant@server ~]$ systemctl status zabbix-java-gateway
● zabbix-java-gateway.service - Zabbix Java Gateway
   Loaded: loaded (/usr/lib/systemd/system/zabbix-java-gateway.service; enabled;
   vendor preset: disabled)
   Active: active (running) since Tue 2017-07-25 12:58:18 BST; 1h 34min ago
   Main PID: 12912 (java)
   CGroup: /system.slice/zabbix-java-gateway.service
           └─12912 java -server -Dlogback.configurationFile=/etc/zabbix/zabbi...
[vagrant@server ~]$
```

6. jmx interfaces are configured

Enabled ZBX SNMP JMX IPMI Applications 10 Items 33 Triggers 16 Graphs 5 Discovery rules 2 Web scenarios

Macros Host inventory Encryption

Host name192.168.56.11

Visible name

Groups

In groups

Discovered hosts
Linux servers

Other groups

Hypervisors
Templates
Virtual machines
Zabbix servers

New group

Agent interfaces

IP address	DNS name	Connect to	Port
192.168.56.11		IP DNS	10050
Add			

SNMP interfaces

[Add](#)

JMX interfaces

192.168.56.11		IP DNS	8097
192.168.56.11		IP DNS	12345
Add			

7. trigger for Java Heap Memory Used is added

Name

Severity ☐ Not classified ☐ Information ☐ Warning ☐ Average ☒ High ☐ D

Expression

[Expression constructor](#)

Generation ☒ Expression ☐ Recovery expression ☐ None

Operation mode ☒ Single ☐ Multiple

What closes ☒ All problems ☐ All problems if tag values match

Tags

<input type="text" value="tag"/>	<input type="text" value="value"/>
----------------------------------	------------------------------------

[Add](#)

System status							...	^
Host group	Disaster	High	Average	Warning	Information	Not classified		
Discovered hosts	0	1	0	0	0	0		
Linux servers	0	1	0	0	0	0		
							Updated: 16:34:54	

Host status				...	^
Host group	Without problems	With problems	Total		
Discovered hosts	1	1	2		
Linux servers	1	1	2		
				Updated: 16:34:54	

Last 20 issues							...	^
Host	Issue	Last change	Age	Info	Ack	Actions		
192.168.56.11	java_mem_trigger	2017-07-25 16:03:36	31m 18s		No			
							1 of 1 issue is shown Updated: 16:34:54	