Installing `zabbix-java-gateway` on Centos 6.5

Zabbix 2.0 adds native support for monitoring JMX applications by introducing a new Zabbix daemon called `Zabbix Java gateway`. `Zabbix Java gateway` is a daemon written in Java. When Zabbix server wants to know the value of a particular JMX counter on a host, it asks `Zabbix Java gateway`, which uses the `JMX` management API to query the application of interest remotely. The application does not need any additional software installed, it just has to be started with `-Dcom.sun.management.jmxremote` option on the command line.

How does `zabbix-java-gateway` work?

1. First we configure system which needs to be monitored using the `JAVA_OPTS`.
2. Next we add a `JMX Interface` in Zabbix server UI under `hosts`.
3. `zabbix-server` will communicate with `zabbix-java-gateway` which intern communicates to the system/server where we need to get all the JMX data.
4. JMX is set using the `JAVA_OPTS`.

```
[Zabbix-Server]
            |
            +--(port:10053)-->
                          [zabbix-java-gateway]
                                      |
                                      +--(port:12345)-->
                                                [JMX enabled server, Example:Tomcat/WebServer]
```

Step 1 : Install `zabbix-java-gateway` on `zabbix-server`

```
[ahmed@ahmed-server ~]$ sudo yum install zabbix-java-gateway
```

Step 2 : Configure the `host` with `JMX` which needs to be monitored.

Setting Tomcat/JMX Options. Add the below lines to `setenv.sh` and save it under `apache-tomcat-7/bin/` So when the `start.sh` is started then these `JMX` options will be added to `tomcat` server.

NOTE: To make the monitoring secure use ssl and authentication options. You can find more information in the links at the end of this post.

IMPORTANT Lines are below. We will be getting data from port `12345`.

```
-Dcom.sun.management.jmxremote\
-Dcom.sun.management.jmxremote.port=12345\
-Dcom.sun.management.jmxremote.authenticate=false\
-Dcom.sun.management.jmxremote.ssl=false"
```

But here are the complete `JAVA_OPTS`. you can ignore the first few lines which sets the Heap Memory size.

```
export JAVA_OPTS="$JAVA_OPTS\
 -server\
 -Xms1024m\
 -Xmx2048m\
 -XX:MaxPermSize=256m\
 -XX:MaxNewSize=256m\
 -XX:NewSize=256m\
 -XX:SurvivorRatio=12\
 -Dcom.sun.management.jmxremote\
 -Dcom.sun.management.jmxremote.port=12345\
 -Dcom.sun.management.jmxremote.authenticate=false\
 -Dcom.sun.management.jmxremote.ssl=false"
```

Step 3 : Configuring `zabbix-server`.

1. Here we configure the zabbix server to let it know where the `zabbix-java-gateway` is running.
2. Since we are running the `zabbix-java-gateway` in the same server as `zabbix-server`, so we will be using the same `ip` for both.
3. Only difference is that `zabbix-java-gateway` will be running on port `10053`

Configuration in `zabbix-server.conf`. Add the below line. Rather un-comment them and add the IP/ports

```
### Option: JavaGateway
#       IP address (or hostname) of Zabbix Java gateway.
#       Only required if Java pollers are started.
#
# Mandatory: no
# Default:
JavaGateway=10.10.18.27

### Option: JavaGatewayPort
#       Port that Zabbix Java gateway listens on.
#
# Mandatory: no
# Range: 1024-32767
# Default:
JavaGatewayPort=10053

### Option: StartJavaPollers
#       Number of pre-forked instances of Java pollers.
#
# Mandatory: no
# Range: 0-1000
# Default:
StartJavaPollers=5
```

Step 4 : Configuring `zabbix-java-gateway`.

1. We now set where the `zabbix-java-gateway` will be running and which port it will be listing on.
2. Configuration in `zabbix-java-gateway`, here same `ip` as the `zabbix-server` and port `10053`.

```
### Option: zabbix.listenIP
#       IP address to listen on.
#
# Mandatory: no
# Default:
LISTEN_IP="10.10.18.27"

### Option: zabbix.listenPort
#       Port to listen on.
#
# Mandatory: no
# Range: 1024-32767
# Default:
LISTEN_PORT=10053

### Option: zabbix.pidFile
#       Name of PID file.
#       If omitted, Zabbix Java Gateway is started as a console application.
#
# Mandatory: no
# Default:
# PID_FILE=

PID_FILE="/var/run/zabbix/zabbix_java.pid"

### Option: zabbix.startPollers
#       Number of worker threads to start.
#
# Mandatory: no
# Range: 1-1000
# Default:
START_POLLERS=5
```

Useful Links:

https://www.zabbix.com/documentation/2.4/manual/concepts/java
https://www.zabbix.com/documentation/2.4/manual/config/items/itemtypes/jmx_monitoring