# Zabbix Setup/Config

This document contains instructions for setting up Zabbix after the install has been done. It is assumed that the Zabbix install for the Server and Clients were done using the installation scripts. If they have not been done in that manner, then this document will be of limited usefulness (none of the templates discussed will even exist in default install).

This document also assumes that the monitored hosts are Linux servers. In the future I will provide a document for Windows Zabbix installation. Also, this document was written using Zabbix 2.0.0.

It is highly suggested to get familiar with Zabbix terminology. Descriptions of various terms can be found in the Zabbix documentation [here](http://www.zabbix.com/documentation/2.0/manual/concepts). The rest of the Zabbix documentation can be found [here](http://www.zabbix.com/documentation/2.0/manual/). Another good location to be familiar with is the Zabbix website at <http://www.zabbix.com/>.

# Adding Clients to Templates

The first thing to do after the install is complete is to enable monitoring of various items to each individual client:

1. Login to the Zabbix web interface.
   1. Going to the web interface through HTTP will automatically forward you to an HTTPS connection.
   2. This is typically on the same server as the Zabbix Server component.
   3. The default username is “admin”. The default password is “zabbix”.
2. Once logged in, click on “Configuration”->”Hosts”.
3. In the “Group” combo box on the right, select “Discovered Hosts”.
   1. If the “Discovered Hosts” group does NOT show up in the combo box then something went wrong during the Zabbix Agent install. You’ll need to login to each client and make sure that the following variables are set correctly in <zabbix\_path>/etc/zabbix\_agentd.conf.
      1. Server=<fqdn/ip of the Zabbix server>
      2. ServerActive=<fqdn/ip of the Zabbix server>:<server\_port>
   2. Restart the zabbix agent “<init\_path>/zabbix-agentd restart”.
   3. If the host still does not show up in the Zabbix web interface after refreshing the host list, then something else is going wrong and will require more intense debugging (firewall ports are a good thing to check too).
4. Click on the link listed under the “Name” column of the server you want to add monitoring to.
5. If you will be adding Tomcat/Tigase/OSGI monitoring to this host, then you need to add a JMX interface. If not, skip to #7.
   1. Click on the “Add” link next to “JMX interfaces”.
   2. Put the IP address for the host in the “IP address” textbox. You can also add the FQDN into the “DNS Name” textbox if wanted. Change the “Port” textbox to the port that JMX is listening on for the host (usually 9192).
   3. JMX checks will not actually be added at this point in the documentation, but doing this step here will save time later on.
6. Double check that the “Port” textbox in the “Agent interfaces” row is correct. If it is not, then you MUST change it to be the port number that the Zabbix Agent is listening on for this host.
7. Click the “Templates” tab.
8. Click the “Add” link.
   1. The new window that pops up will almost always display “No templates defined” when it first comes up. Ignore that. In the “Group” combo box select “Templates: OS”.
   2. Click the checkbox for “OS: Linux”.
   3. Click the “Select” button. The window for Template selection will now close.
9. Now click the “Save” button to save all changes to the host (including the JMX interface if step #5 was needed).
   1. Zabbix might take a few seconds to finish saving the changes. In the background it is adding all the necessary items/triggers to the host that was just modified.
   2. **NOTE:** If a host does NOT have a JMX interface added (as explained in step #5), any attempt to add that host to a template that includes JMX checks will result in an error. A host **MUST** have a JMX interface to include JMX checks.
10. The host that was just modified should now have numbers in the “Applications”, “Items”, “Triggers”, and “Graphs” columns. That lets you know that items have been added for monitoring to that host.
11. Follow steps #1-#8 for all additional hosts.
    1. There is a shortcut to adding templates to multiple hosts at once. That is explained in the steps below (ignore it if only one or two hosts are being changed).
    2. Make sure that the “Configuration”->”Hosts” page is loaded.
    3. Click the checkbox for every host that will be modified.
    4. In the combo box at the bottom left of the page (next to the “Go” button) select the “Mass update” option.
    5. Click “Go”.
    6. This brought up a new page with several options. Click the checkbox for “Link additional templates”.
       1. This will bring up a couple of new buttons. Click the “Add” button.
       2. Add the “OS: Linux” template as described in step #7.
    7. Now click the “Save” button.
    8. The host(s) you selected will all be added to the template(s) you selected. This is a much faster way of doing step #7 for multiple hosts.

# Viewing Monitored Data

After hosts have been added to templates, you can see data that has been collected. This is done using the following steps:

1. Click on “Monitoring”->”Latest Data”.
2. In the “Group” combo box select “Discovered Hosts”.
3. Select the appropriate host in the “Host” combo box (if necessary).
4. Any collected data will show up in the list. If nothing shows up then no data has been collected. Sometimes it takes a few minutes for Zabbix to start collecting data. Be patient! Feel free to refresh the page to check periodically for new data (by default the page will refresh automatically every 60 seconds).
5. If no data shows up a few minutes AFTER adding the host to a template (as explained above) then something is probably wrong with the Zabbix Agent install.
   1. A good place to begin checking is the Zabbix Server log (stuff will show up in the log if checks are having problems going to the Agent). That is located in “<zabbix\_path>/var/log/zabbix\_server.log”.

# Viewing Graphs

You can look at data in Zabbix visually as well using graphs. You can view graphs in one of two ways:

1. Using simple graphs. How to view these is explained in the Zabbix documentation at <http://www.zabbix.com/documentation/2.0/manual/config/visualisation/graphs/simple>.
   1. All that is necessary to do is to click on the “graph” link next to any item seen using the instructions in the “Viewing Monitored Data” of this documentation.
2. Using custom graphs. Many graphs are already a part of the templates that have been created as a part of the Zabbix installation.
   1. Go to “Monitoring”->”Graphs”
   2. Select the “Discovered Hosts” group in the “Group” combo box.
   3. Select a host in the “Host” combo box.
   4. Select any graph from the “Graph” combo box.

# Viewing Screens

Screens in Zabbix are a method of viewing multiple graphs/other information at once. The “OS: Linux” template that a host was added to earlier in “Adding Clients to Templates” contains a host screen called “Server Stats”. This screen shows many useful graphs for a given host all at once. There are two methods to get to a single host’s screens. Only one of them will be described here:

1. Type the hostname as it appears in Zabbix (under the “name” column on the hosts configuration page) in the “Search” box in the upper right corner of the Zabbix UI and click the “Search” button.
   1. If no host shows up in the results, then the incorrect name was typed into the “Search” box. Try to search again using the correct name.
2. Click the “Screens” link for the host that you wish to see the screens for.

There are also screens in Zabbix that are accessible by going to “Monitoring”->”Screens”. No screens are defined after a new Zabbix installation. These will be custom to every single Zabbix instance that is installed.

1. To create a screen, go to “Configuration”->”Screens”.
2. Click the “Create screen” button.
3. In the “CONFIGURATION OF SCREENS” section, give the screen a Name.
4. Go ahead and put “2” in the Columns and Rows textboxes.
5. Click “Save”.
6. Now that the screen has been created, click the link for the screen name.
   1. DO NOT click the “Edit” link. That will simply load the page that appeared when creating a new screen.
7. When adding content to a screen, simply click on the “Change” link for the corresponding position on the screen that you want to add content.
8. For the purposes of this documentation make sure that the “Resource” combo box is set to graph.
   1. It is possible to put all different kinds of information on a screen. Simply look through the options in the combo box to see what is available.
9. Click on the “Select” box next to the “Graph name” line.
   1. Choose the “Discovered Hosts” group in the “Group” combo box.
   2. Choose the desired host in the “Host” combo box.
   3. Click on the “CPU Utilization” link to add that graph to the screen.
   4. Click the “Save” button.
   5. Notice that the “CPU Utilization” graph for the host that was selected shows up on the screen.
      1. Note: There is no “Save” button for the screen itself. Adding content to it through the method just discussed auto-saves the screen.
10. Go to “Monitoring”->”Screens” to view the screen that was just created.
11. If necessary, select the screen name in the “Screens” combo box in the upper right corner of the UI.

# Host Groups

Hosts can be grouped into Host Groups to allow for easier monitoring and to make it easier to navigate through hosts in the UI. There are multiple ways to add hosts to a host group, but only one method will be shown here:

1. Click on “Configuration”->”Host groups”.
2. All groups will be listed here (possibly paginated depending on the number of groups). To add a host to a group, click on the link for the group that you wish to add hosts to.
3. On the configuration page for the host group there will be two columns shown titled “Hosts in” and “Other hosts”.
   1. Hosts in = Hosts that are a member of the group
   2. Other hosts = Hosts that are NOT a member of the group
4. Hosts are added to a host group by using the  button after selecting a single host or multiple hosts from the “Other hosts” column.
   1. The list of hosts in the “Other hosts” column depends on the group that has been selected in the “Group” combo box.
   2. NOTE: Adding a host to a host group does NOT remove it from any other groups.
5. Click the “Save” button when all desired hosts have been added to the host group.

Any host group that contains hosts will be listed anywhere on the UI that a “Group” combo box exists.

# Dashboard

A quick overview of the system as a whole can be viewed by looking at the dashboard. This is found under “Monitoring”->”Dashboard”. By default, data for all host groups is displayed on this page.

The Dashboard can be customized to only show certain data by clicking the  icon in the upper right corner of the UI. Feel free to experiment as the customization is per user. Also note that the customization is stored in a cookie (not in the Zabbix database). As a result logging in with the same user on a different computer will not show the customized UI. The default dashboard UI will be shown.

# Changing User Preferences

The password and preferences for the currently logged on user can be changed by clicking the “Profile” link in the upper right corner of the UI.

The password and preferences for all users can be configured by going to “Administration”->”Users”.

1. Select the “Users” option in the combo box next to the “Create group” button.
2. Be sure that the “User group” combo box has “All” as the selected option.
3. Click the link under the “Alias” column for the user that needs to have changes made.