

2 Active agent auto-registration

Overview

It is possible to allow active Zabbix agent auto-registration, after which the server can start monitoring them. This way new hosts can be added for monitoring without configuring them manually on the server.

Auto registration can happen when a previously unknown active agent asks for checks.

The feature might be very handy for automatic monitoring of new Cloud nodes. As soon as you have a new node in the Cloud Zabbix will automatically start the collection of performance and availability data of the host.

Active agent auto-registration also supports the monitoring of added hosts with passive checks. When the active agent asks for checks, providing it has the 'ListenIP' or 'ListenPort' configuration parameters defined in the configuration file, these are sent along to the server. (If multiple IP addresses are specified, the first one is sent to the server.)

Server, when adding the new auto-registered host, uses the received IP address and port to configure the agent. If no IP address value is received, the one used for the incoming connection is used. If no port value is received, 10050 is used.

Auto-registration is rerun:

- if host [metadata](#) information changes:
 - due to HostMetadata changed and agent restarted
 - due to value returned by HostMetadataItem changed
- for manually created hosts with metadata missing
- if a host is manually changed to be monitored by another Zabbix proxy
- if auto-registration for the same host comes from a new Zabbix proxy

Configuration

Specify server

Make sure you have the Zabbix server identified in the agent [configuration file](#) - zabbix_agentd.conf

```
ServerActive=10.0.0.1
```

Unless you specifically define a *Hostname* in zabbix_agentd.conf, the system hostname of agent location will be used by server for naming the host. The system hostname in Linux can be obtained by running the 'hostname' command.

Restart the agent after making any changes to the configuration file.

Action for active agent auto-registration

When server receives an auto-registration request from an agent it calls an [action](#). An action of event source “Auto registration” must be configured for agent auto-registration.

Setting up [network discovery](#) is not required to have active agents auto-register.

In the Zabbix frontend, go to *Configuration* → *Actions*, select *Auto registration* as the event source and click on *Create action*:

- In the Action tab, give your action a name
- Optionally specify [conditions](#). You can do a substring match or regular expression match in the conditions for host name/host metadata. If you are going to use the “Host metadata” condition, see the next section.
- In the Operations tab, add relevant operations, such as - 'Add host', 'Add to host group' (for example, *Discovered hosts*), 'Link to templates', etc.

If the hosts that will be auto-registering are likely to be supported for active monitoring only (such as hosts that are firewalled from your Zabbix server) then you might want to create a specific template like *Template_Linux-active* to link to.

Created hosts are added to the *Discovered hosts* group (by default, configurable in *Administration* → *General* → [Other](#)). If you wish hosts to be added to another group, add a *Remove from host group* operation (specifying “Discovered hosts”) and also add an *Add to host group* operation (specifying another host group), because a host must belong to a host group.

Using host metadata

When agent is sending an auto-registration request to the server it sends its hostname. In some cases (for example, Amazon cloud nodes) a hostname is not enough for Zabbix server to differentiate discovered hosts. Host metadata can be optionally used to send other information from an agent to the server.

Host metadata is configured in the agent [configuration file](#) - `zabbix_agentd.conf`. There are 2 ways of specifying host metadata in the configuration file:

```
HostMetadata
HostMetadataItem
```

See the description of the options in the link above.

An auto-registration attempt happens every time an active agent sends a request to refresh active checks to the server. The delay between requests is specified in the [RefreshActiveChecks](#) parameter of the agent. The first request is sent immediately after the agent is restarted.

Example 1

Using host metadata to distinguish between Linux and Windows hosts.

Say you would like the hosts to be auto-registered by the Zabbix server. You have active Zabbix agents (see “Configuration” section above) on your network. There are Windows hosts and Linux hosts on your network and you have “Template OS Linux” and “Template OS Windows” templates available in your Zabbix frontend. So at host registration you would like the appropriate Linux/Windows template to be applied to the host being registered. By default only the hostname is sent to the server at auto-registration, which might not be enough. In order to make sure the proper template is applied to the host you should use host metadata.

Frontend configuration

The first thing to do is to configure the frontend. Create 2 actions. The first action:

- Name: Linux host autoregistration
- Conditions: Host metadata contains *Linux*
- Operations: Link to templates: Template OS Linux

You can skip an “Add host” operation in this case. Linking to a template requires adding a host first so the server will do that automatically.

The second action:

- Name: Windows host autoregistration
- Conditions: Host metadata contains *Windows*
- Operations: Link to templates: Template OS Windows

Agent configuration

Now you need to configure the agents. Add the next line to the agent configuration files:

```
HostMetadataItem=system.uname
```

This way you make sure host metadata will contain “Linux” or “Windows” depending on the host an agent is running on. An example of host metadata in this case:

```
Linux: Linux server3 3.2.0-4-686-pae #1 SMP Debian 3.2.41-2 i686 GNU/Linux  
Windows: Windows WIN-0PXGGSTYNH0 6.0.6001 Windows Server 2008 Service Pack 1  
Intel IA-32
```

Do not forget to restart the agent after making any changes to the configuration file.

Example 2

Step 1

Using host metadata to allow some basic protection against unwanted hosts registering.

Frontend configuration

Create an action in the frontend, using some hard-to-guess secret code to disallow unwanted hosts:

- Name: Auto registration action Linux
- Conditions:
 - Type of calculation: AND
 - Condition (A): Host metadata contains *Linux*
 - Condition (B): Host metadata contains `21df83bf21bf0be663090bb8d4128558ab9b95fba66a6dbf834f8b91ae5e08ae`
- Operations:
 - Send message to users: Admin via all media
 - Add to host groups: Linux servers
 - Link to templates: Template OS Linux

Please note that this method alone does not provide strong protection because data is transmitted in plain text. Configuration cache reload is required for changes to have an immediate effect.

Agent configuration

Add the next line to the agent configuration file:

```
HostMetadata=Linux  
21df83bf21bf0be663090bb8d4128558ab9b95fba66a6dbf834f8b91ae5e08ae
```

where "Linux" is a platform, and the rest of the string is the hard-to-guess secret text.

Do not forget to restart the agent after making any changes to the configuration file.

Step 2

It is possible to add additional monitoring for an already registered host.

Frontend configuration

Update the action in the frontend:

- Name: Auto registration action Linux
- Conditions:
 - Type of calculation: AND
 - Condition (A): Host metadata contains Linux
 - Condition (B): Host metadata contains `21df83bf21bf0be663090bb8d4128558ab9b95fba66a6dbf834f8b91ae5e08ae`
- Operations:
 - Send message to users: Admin via all media
 - Add to host groups: Linux servers
 - Link to templates: Template OS Linux
 - Link to templates: Template DB MySQL

Agent configuration

Update the next line in the agent configuration file:

```
HostMetadata=MySQL on Linux  
21df83bf21bf0be663090bb8d4128558ab9b95fba66a6dbf834f8b91ae5e08ae
```

Do not forget to restart the agent after making any changes to the configuration file.

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https://www.zabbix.com/documentation/4.2/manual/discovery/auto_registration

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