

Zabbix Server Installation and Configuration on AlmaLinux

Overview

This guide walks through installing and configuring a Zabbix server using Docker on AlmaLinux, adding a Windows host, and setting up monitoring with graphical data representation.

Prerequisites

1. **System Setup:**
 - AlmaLinux 8+.
 - Docker and Docker Compose installed.
 - Internet access.
 2. **Zabbix Components:**
 - Zabbix Server
 - Zabbix Web Interface
 - Zabbix Agent
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Process Overview

1. Prepare the AlmaLinux System

- Update the system using `dnf update`.
- Install Docker and enable it.

2. Set Up the Zabbix Environment

- Create a directory for Zabbix.
- Use Docker Compose to configure Zabbix Server, Web Interface, and Database services.

3. Deploy the Containers

- Start the Zabbix setup using Docker Compose (`docker-compose up -d`).
- Verify containers are running with `docker ps`.

4. Access the Zabbix Dashboard

- Open the Zabbix web interface at `http://<server_ip>/`.
- Log in with default credentials and verify the server is working.

5. Add a Windows Host

- Install the Zabbix Agent on a Windows machine.
- Configure the host in Zabbix with appropriate templates.

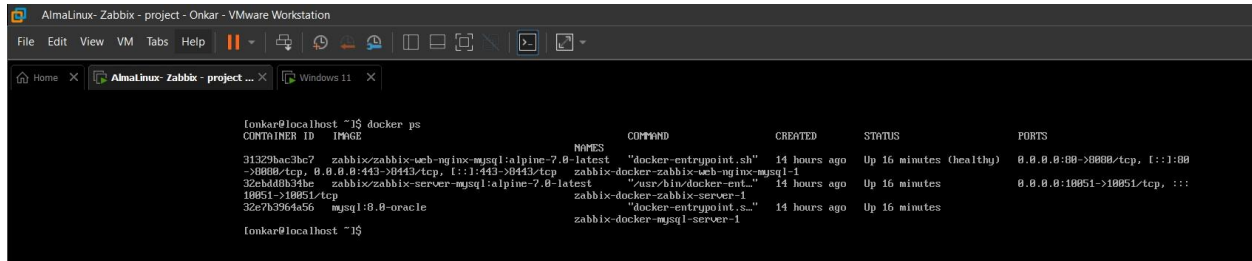
6. Monitor Data and View Graphs

- Use **Monitoring > Latest Data** to view metrics.
 - Access **Monitoring > Graphs** for graphical representations of the collected data.
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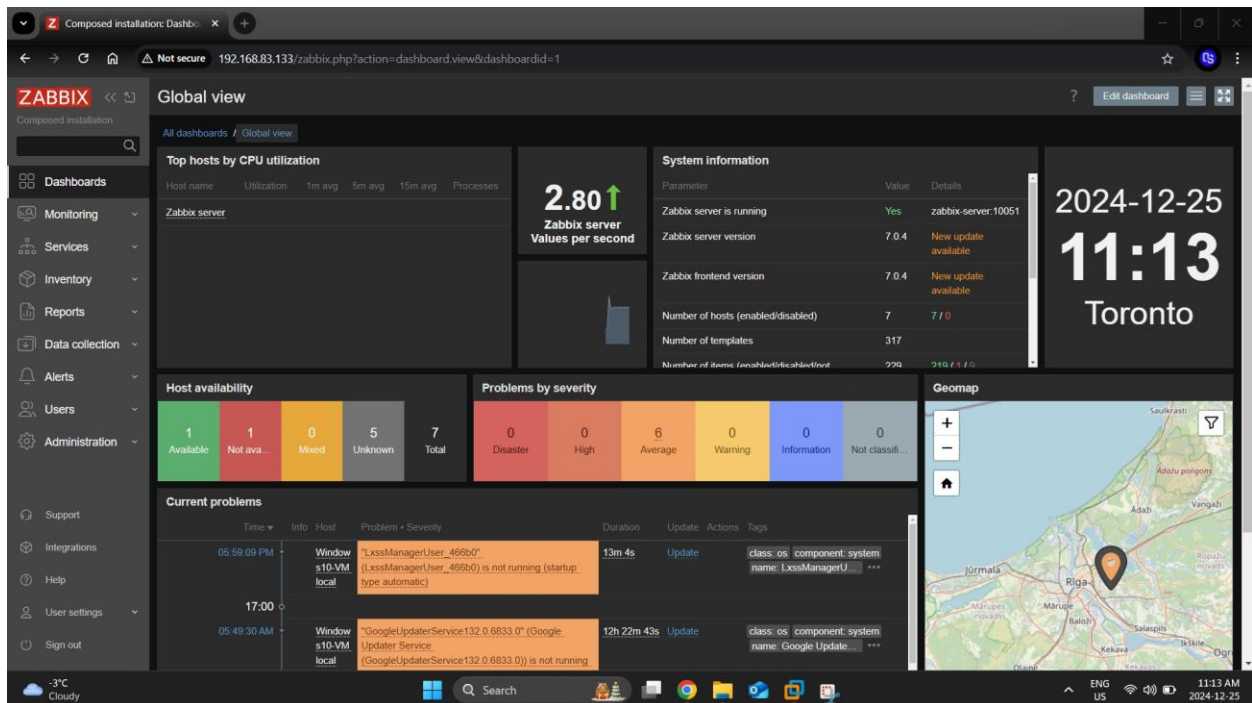
Skills Learned

1. **System Administration:**
 - Setting up Docker and Docker Compose on AlmaLinux.
 - Managing containerized services.
2. **Zabbix Configuration:**
 - Deploying Zabbix using Docker.
 - Configuring hosts and assigning monitoring templates.
3. **Monitoring and Troubleshooting:**
 - Analyzing metrics and creating graphical data views.
 - Troubleshooting agent connections and data collection issues.
4. **Networking:**
 - Managing network communication between Zabbix Server and Agents.
 - Setting up IP-based host configurations.
5. **Cross-Platform Monitoring:**
 - Integrating a Linux-based Zabbix server with a Windows-based host.

Docker containers running Zabbix server



Zabbix Dashboard



ZABBIX

Composed installation

Dashboards

Monitoring

Services

Inventory

Reports

Data collection

Alerts

Users

Administration

Support

Hosts

Create hostImportFilter

Host groups type here to searchSelect

StatusAnyEnabledDisabled

Templates type here to searchSelect

Monitored byAnyServerProxyProxy group

Name

DNS

IP

Port

TagsAndOrOrtagContainsvalueRemoveAdd

ApplyReset

Template groups	Name	Items	Triggers	Graphs	Discovery	Web	Interface	Proxy	Templates	Status	Availability	Agent encryption	Info	Tags
Host groups	192.168.83.1	Items	Triggers	Graphs	Discovery	Web	192.168.83.1.10050			Enabled	ZBX	None		
Templates	192.168.83.2	Items	Triggers	Graphs	Discovery	Web	192.168.83.2.10050			Enabled	ZBX	None		
Hosts	192.168.83.129	Items	Triggers	Graphs	Discovery	Web	192.168.83.129.10050			Enabled	ZBX	None		
Maintenance	192.168.83.133	Items	Triggers	Graphs	Discovery	Web	192.168.83.133.10050			Enabled	ZBX	None		
Event correlation	192.168.83.147	Items	Triggers	Graphs	Discovery	Web	192.168.83.147.10050			Enabled	ZBX	None		
Discovery	Windows 10-VM local	Items 115	Triggers 81	Graphs 12	Discovery 4	Web	192.168.83.148.10050	Windows by Zabbix agent		Enabled	ZBX	None		
	Zabbix server	Items 115	Triggers 67	Graphs 8	Discovery 6	Web	127.0.0.1.10050	Linux by Zabbix agent, Zabbix server health		Enabled	ZBX	None		

0 selectedEnableDisableExportMass updateDelete

Displaying 7 of 7 found

The screenshot displays the Zabbix Monitoring interface, specifically the 'Latest data' view. The left sidebar contains navigation links for Dashboards, Monitoring, Problems, Hosts, Latest data (selected), Maps, Discovery, Services, Inventory, Reports, Data collection, Alerts, Users, Administration, Support, and Integrations. The main content area shows a table of monitoring data for the host 'Windows 10-VM local'. The table columns include Item name, Value, Unit, Trend, Change, and Links. The data is organized into sections: Disk utilization, Disk write rate, Disk write request avg waiting time, Cache bytes, Context switches per second, CPU DPC time, CPU interrupt time, CPU privileged time, CPU queue length, CPU user time, CPU utilization, Free swap space, Free swap space in %, Free system page table entries, FS [(C:): Get data], FS [(C:): Space: Available], FS [(C:): Space: Total], FS [(C:): Space: Used], FS [(C:): Space: Used, in %], Get filesystems, Host name of Zabbix agent running, and Interface Intel(R) PRO/1000 MT Network Connection(E...).

Item name	Value	Unit	Trend	Change	Links
Windows 10-VM local	0 C: - Disk utilization by idle time	49s	1.6873 %	+0.598 %	component: storage disk: 0 C:
Windows 10-VM local	0 C: - Disk write rate	42s	11.6043 w/s	+4.9861 w/s	component: storage disk: 0 C:
Windows 10-VM local	0 C: - Disk write request avg waiting time	45s	2.01ms	+0.047ms	component: storage disk: 0 C:
Windows 10-VM local	Cache bytes	1s	114.02 MB	-1.26 MB	component: memory
Windows 10-VM local	Context switches per second	51s	557.827	+90.9326	component: cpu
Windows 10-VM local	CPU DPC time	55s	3.03 %	+3.03 %	component: cpu
Windows 10-VM local	CPU interrupt time	54s	0 %		component: cpu
Windows 10-VM local	CPU privileged time	53s	9.1682 %	-14.1686 %	component: cpu
Windows 10-VM local	CPU queue length	50s	0		component: cpu
Windows 10-VM local	CPU user time	52s	71.3269 %	-3.5251 %	component: cpu
Windows 10-VM local	CPU utilization	47s	52.9422 %	-7.4818 %	component: cpu
Windows 10-VM local	Free swap space	42s	1.34 GB	-34.85 MB	component: memory component: storage
Windows 10-VM local	Free swap space in %	56s	97.4537 %	-2.4753 %	component: memory component: storage
Windows 10-VM local	Free system page table entries	0	12555216	+27	component: memory
Windows 10-VM local	FS [(C:): Get data	38s	["name":"C:", "fs...		component: raw component: storage filesystem: C: ...
Windows 10-VM local	FS [(C:): Space: Available	38s	80.04 GB	-31.91 MB	component: storage filesystem: C: fstype: NTFS
Windows 10-VM local	FS [(C:): Space: Total	38s	126.43 GB		component: storage filesystem: C: fstype: NTFS
Windows 10-VM local	FS [(C:): Space: Used	38s	46.39 GB	+31.91 MB	component: storage filesystem: C: fstype: NTFS
Windows 10-VM local	FS [(C:): Space: Used, in %	38s	36.6909 %	+0.02465 %	component: storage filesystem: C: fstype: NTFS
Windows 10-VM local	Get filesystems				component: raw
Windows 10-VM local	Host name of Zabbix agent running	7m 4s	Windows10-VM		component: system
Windows 10-VM local	Interface Intel(R) PRO/1000 MT Network Connection(E...	2m 56s	4.65 Mbps	+24.2 Kbps	component: network description: Ethernet0 interface: Intel(R) PR...
Windows 10-VM local	Interface Intel(R) PRO/1000 MT Network Connection(E...	2m 53s	23.21 Kbps	-11.82 Kbps	component: network description: Ethernet0

Graphical representation of collected data (CPU utilization)

