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HOW TO DEPLOY ZABBIX ON POSTGRESQL WITH TIMESCALEDB PLUGIN



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WHY ZABBIX

- ✓ True Open Source Monitoring Solution
- ✓ Enterprise ready (Scalable, Remote monitoring, Granular permission system)
- ✓ 100% Free Software (No paid addons or Per-Host payments)
- ✓ Continuely growing list of Out of the box Templates
- ✓ Flexible and rady to adopt to your needs

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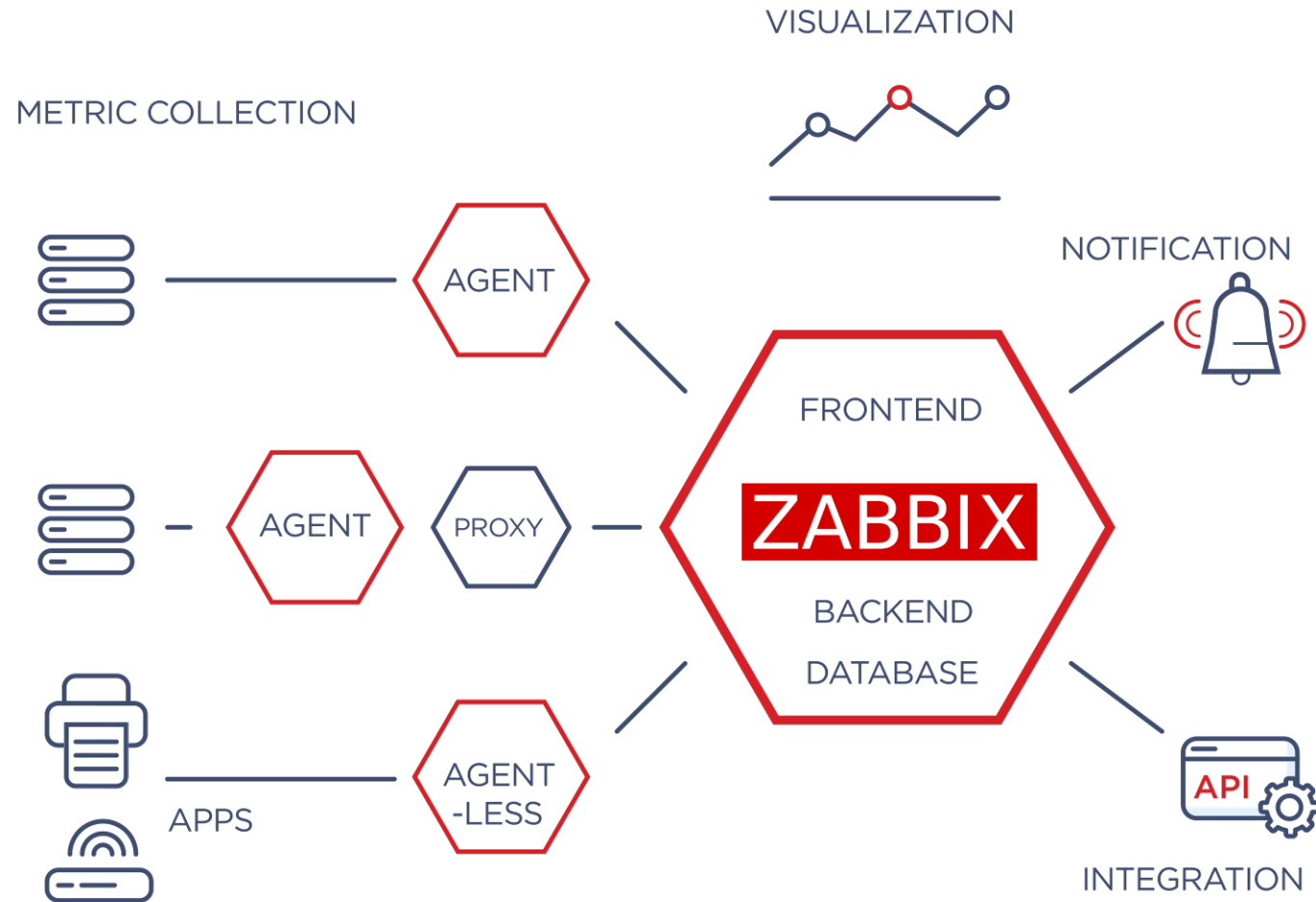
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ARCHITECTURE



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ARCHITECTURE

- ✓ Zabbix Frontend (Visualization and Configuration)
- ✓ Zabbix Server (Gather, Process and Execute)
- ✓ Zabbix Database (Heart of Zabbix)



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DATABASE

- ✓ Storage of Configuration
- ✓ Storage of History Data
- ✓ Communication with Zabbix Server
- ✓ Communication with Zabbix Frontend

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SUPPORTED DATABASES

- ✓ MySQL (5.5.62 – 8.0.x)
- ✓ Oracle (11.2 or later)
- ✓ PostgreSQL (9.2.24 or later)
- ✓ TimescaleDB (3.3.5 or later)

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GETTING STARTED WITH **POSTGRES**SQL

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Choose what platform and components you need

ZABBIX VERSION	OS DISTRIBUTION	OS VERSION	DATABASE [?]	WEB SERVER
5.2	Red Hat Enterprise Linux	8	MySQL	Apache
5.0 LTS	CentOS	7	PostgreSQL	NGINX
4.0 LTS	Oracle Linux	6		
3.0 LTS	Ubuntu			
	Debian			
	SUSE Linux Enterprise Server			
	Raspbian			

b. Install Zabbix server, frontend, agent

```
# dnf install zabbix-server-pgsql zabbix-web-pgsql zabbix-nginx-conf zabbix-agent
```



POST INSTALLATION

- ④ Create Database and User for Zabbix

```
# sudo -u postgres createuser --pwprompt zabbix  
# sudo -u postgres createdb -O zabbix zabbix
```

- ④ Import schema and default data

```
# zcat /usr/share/doc/zabbix-server-pgsql*/create.sql.gz | sudo -u zabbix psql zabbix
```

- ④ Configure Database Password in Zabbix

```
DBPassword=password
```



FRONTEND CONFIGURATION

Simple configuration Wizard

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Welcome

Check of pre-requisites

Configure DB connection

Zabbix server details

GUI settings

Pre-installation summary

Install

Configure DB connection

Please create database manually, and set the configuration parameters for connection to this database. Press "Next step" button when done.

Database type

Database host

Database port 0 - use default port

Database name

Database schema

Store credentials in Plain text HashiCorp Vault

User

Password

Database TLS encryption

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NATIVE POSTGRESQL ENCRYPTION

Simple configuration Wizard

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Configure DB connection

Welcome

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Pre-installation summary

Install

Database schema

Store credentials in Plain text HashiCorp Vault

User

Password

Database TLS encryption

Verify database certificate

* Database TLS CA file

Database TLS key file

Database TLS certificate file

Database host verification

Cancel Back Next step

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PRE-REQUISITIES

Prepare *postgresql.conf*

```
...  
ssl = on  
ssl_ca_file = 'root.crt'  
ssl_cert_file = 'server.crt'  
ssl_key_file = 'server.key'  
ssl_ciphers = 'HIGH:MEDIUM:+3DES:!aNULL'  
ssl_prefer_server_ciphers = on  
ssl_min_protocol_version = 'TLSv1.3'  
...
```

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PRE-REQUISITIES

Prepare *pg_hba.conf*

```
...  
### require  
hostssl all all 0.0.0.0/0 md5  
  
### verify CA  
hostssl all all 0.0.0.0/0 md5 clientcert=verify-ca  
  
### verify full  
hostssl all all 0.0.0.0/0 md5 clientcert=verify-full  
...
```

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TIMESCALEDB

- ✔ Free Extension for PostgreSQL Database
- ✔ Created for Time-series Data
- ✔ Requires PostgreSQL 11 or 12
- ✔ Provides Native Partitioning In Zabbix
- ✔ Allows to compress heaviest Tables

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NATIVE PARTITIONING

- ✓ Configuration from Zabbix frontend
- ✓ No third-party scripts
- ✓ History retention in a second
- ✓ No need to use Housekeeper on History

History

Enable internal housekeeping

Override item history period

* Data storage period

Trends

Enable internal housekeeping

Override item trend period

* Data storage period

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NATIVE COMPRESSION

- Configuration from Zabbix frontend
- Save 90% Disk Space
- Compressed chunk modifications (inserts, deletes, updates) are not allowed
- Schema changes for compressed tables are not allowed.

Workload	Uncompressed	Compressed	Storage Savings
IT metrics (from Telco beta tester)	1396 GB	77.0 GB	94% savings
Industrial IoT monitoring data (from beta tester)	1.445 GB	0.077 GB	95% savings
IT metrics (DevOps dataset from TSBS)	125 GB	5.5 GB	96% savings
IoT monitoring data (IoT dataset from TSBS)	251 GB	23.8 GB	91% savings

History and trends compression

Enable compression

* Compress records older than

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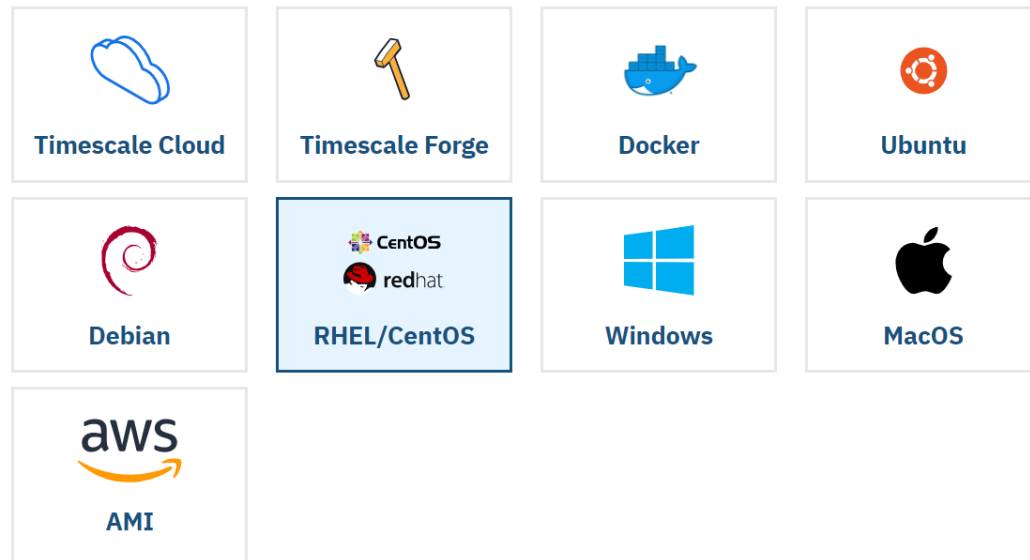


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TIMESCALEDB INSTALLATION

✓ <https://docs.timescale.com/> - It's that easy!



Install method



PostgreSQL version



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TIMESCALEDB CONFIGURATION

- ☑ Enable TimescaleDB for Zabbix Database

```
echo "CREATE EXTENSION IF NOT EXISTS timescaledb CASCADE;" | sudo -u postgres psql zabbix
```

- ☑ Then run the timescaledb.sql script located in database/postgresql

```
cat timescaledb.sql | sudo -u zabbix psql zabbix
```

- ☑ Enjoy your installation!

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THANK YOU!



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