



Monitoring Your FileMaker Server

Maintaining Your Zabbix Server and Agents

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July 29, 2019

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This document is one in a series of guides that walk you through installing, configuring, and using Zabbix to monitor your FileMaker servers. The full set of guides is available at <https://www.soliantconsulting.com/filemaker-zabbix>.

Zabbix Server

As with any server, we recommend you keep an eye on available updates, especially the security ones for both the operating system and Zabbix.

And for Zabbix itself, since it is under active development, there are worthwhile upgrades that deliver powerful new functionality. For instance, we decided to be early adopters of Zabbix 4.2 because it offers the ability to process item data in JavaScript.

Before running a system update or Zabbix update, make sure to stop Zabbix server itself.

For both our CentOS Zabbix server and for the Ubuntu Zabbix server appliance that command is:

```
sudo systemctl stop zabbix-server
```

One reason that we favor virtual machines for servers like this is we can very easily take a full machine snapshot at this point; we have that to fall back on if any of the updates below produces an undesired result. We highly recommend you do this before running any updates.

At the end of the update process, you can use **systemctl** to start Zabbix server again or consider rebooting the machine with

```
sudo reboot now
```

Operating System

On Linux, system and software updates are typically delivered through the native package manager for the flavor of Linux. That package manager is **yum** for CentOS (the Zabbix server operating system we used in these guides) and its big brother Red Hat Enterprise Linux as well as for Oracle Linux. Some of the other supported Linux

versions such as Debian, Ubuntu and Raspbian have **apt-get** as their native package manager. SUSE Linux uses **zypper**.

If you have been following our guides, then you either have a Zabbix server running CentOS or a Zabbix server appliance running Ubuntu. If you chose another Linux version, then we are assuming you are familiar enough with its package manager to have it check for updates.

On our CentOS machine we can check for available updates by running:

```
yum check-update
```

Yum will check the various software repositories.

```
[centos@ ~]$ yum check-update
Loaded plugins: fastestmirror
Determining fastest mirrors
 * base: repos-va.psychz.net
 * extras: repos-va.psychz.net
 * updates: repos-va.psychz.net
base | 3.6 kB 00:00:00
extras | 3.4 kB 00:00:00
mysql-connectors-community | 2.5 kB 00:00:00
mysql-tools-community | 2.5 kB 00:00:00
mysql80-community | 2.5 kB 00:00:00
updates | 3.4 kB 00:00:00
zabbix | 2.9 kB 00:00:00
zabbix-non-supported | 951 B 00:00:00
(1/4): mysql-tools-community/x86_64/primary_db | 61 kB 00:00:00
(2/4): mysql-connectors-community/x86_64/primary_db | 44 kB 00:00:00
(3/4): mysql80-community/x86_64/primary_db | 79 kB 00:00:00
(4/4): updates/7/x86_64/primary_db | 6.5 MB 00:00:00
zabbix-non-supported 4/4

bind-libs-lite.x86_64 32:9.9.4-74.el7_6.1 updates
bind-license.noarch 32:9.9.4-74.el7_6.1 updates
cloud-init.x86_64 18.2-1.el7.centos.2 updates
dbus.x86_64 1:1.10.24-13.el7_6 updates
dbus-libs.x86_64 1:1.10.24-13.el7_6 updates
device-mapper.x86_64 7:1.02.149-10.el7_6.8 updates
device-mapper-libs.x86_64 7:1.02.149-10.el7_6.8 updates
freetype.x86_64 2.8-12.el7_6.1 updates
glib2.x86_64 2.56.1-4.el7_6 updates
glibc.x86_64 2.17-260.el7_6.6 updates
glibc-common.x86_64 2.17-260.el7_6.6 updates
grub2.x86_64 1:2.02-0.76.el7.centos.1 updates
grub2-common.noarch 1:2.02-0.76.el7.centos.1 updates
```

Figure 1. Yum checks the various software repositories

Linux updates are very much unlike updates to either Windows or macOS: they come in the shape of a great number of updates to individual components, not in one update that bundles all of these into convenient overall operating system versions and sub-versions.

It is unlikely that you have the time or energy to check what each of the listed updates means or assess its impact on your deployment. This is why we recommend using a virtual machine and make liberal use of its snapshotting capabilities.

While it is interesting to run the check-update command first just to get a sense of the updates, most typically you would just run

sudo yum update

This command will also show you the list of updates that are about to be installed and their combined total download size and will ask for your confirmation to proceed:

```

selinux-policy                noarch                3.13.1-229.el7_6.12
selinux-policy-targeted      noarch                3.13.1-229.el7_6.12
shadow-utils                  x86_64                2:4.1.5.1-25.el7_6.1
systemd                       x86_64                219-62.el7_6.7
systemd-libs                  x86_64                219-62.el7_6.7
systemd-sysv                  x86_64                219-62.el7_6.7
teamd                         x86_64                1.27-6.el7_6.1
tuned                         noarch                2.10.0-6.el7_6.3
tzdata                        noarch                2019b-1.el7
util-linux                    x86_64                2.23.2-59.el7_6.1
vim-minimal                   x86_64                2:7.4.160-6.el7_6
xfsprogs                      x86_64                4.5.0-19.el7_6
Installing for dependencies:
linux-firmware                noarch                20180911-69.git85c5d90.el7

Transaction Summary
=====
Install  1 Package (+1 Dependent package)
Upgrade 67 Packages

Total download size: 631 M
Is this ok [y/d/N]: █

```

Figure 2. Type 'Y' to proceed with the update

If you scroll through the list and see Zabbix items or MySQL items (when that is your chosen database for Zabbix), and you have not run the snapshot backup, consider backing out at this point and running the snapshot.

On the Ubuntu Zabbix appliance, here are two commands to run:

sudo apt-get update

To update the list of software packages and

sudo apt-get upgrade

To update the actual software installed on your server.

Zabbix software

Updates to Zabbix server within the same major version are also done through the native package manager.

For CentOS that would look like this:

sudo yum update 'zabbix-*'

And for the Ubuntu Zabbix server appliance:

```
sudo apt-get upgrade 'zabbix-*
```

To upgrade Zabbix server between major versions, follow the procedure as outlined here:

<https://www.zabbix.com/documentation/4.2/manual/installation/upgrade>

Note that when you land on the Zabbix documentation web site, you can pick the version of the documentation that is relevant to you in the header of the page. At the time of writing this, this page would show the instructions of upgrading to Zabbix 4.2.

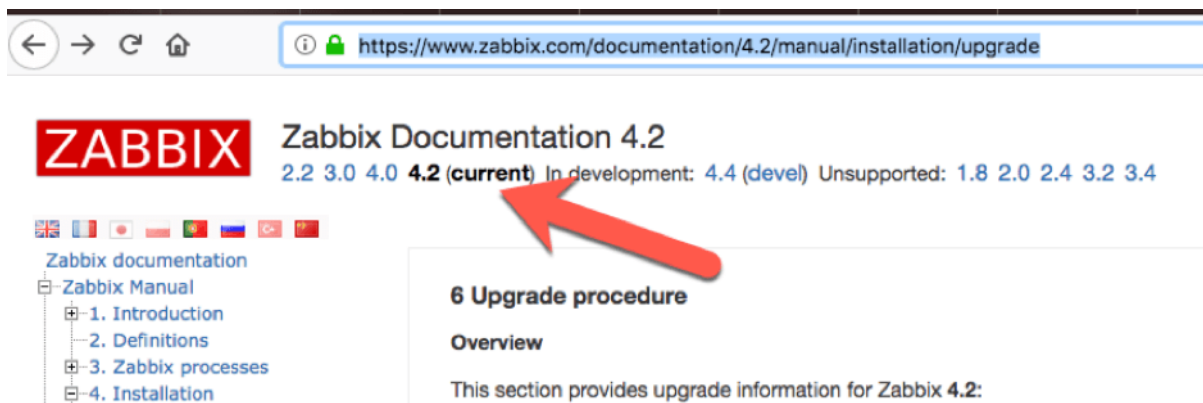


Figure 3. Zabbix Documentation version shown as 4.2

Zabbix Agents

Zabbix agents do not need to be on the same exact version number as the Zabbix server that they interact with. However, we still recommended you keep an eye on the agent releases to determine if you need or want that particular update.

Windows

Updating the Zabbix agent on Windows is as easy as downloading the new installer from the Zabbix download page. Before you run the installer though, make sure to stop the Zabbix agent service in the Windows Services Control Panel. Running the installer will not overwrite the changes made earlier to the agent configuration file.

When the installer is finished, check back in the Services Control Panel to make sure the agent is running again. If not, start it from there.

macOS

Here too the updater comes in the form of a new installer. First, though, you want to stop the agent from the Terminal:

```
sudo launchctl stop com.zabbix.zabbix_agentd
```

If the installer does not start the agent again when it is done, use the same command but with **start** instead of **stop** to launch it.

You can check whether the Zabbix agent is running with the **Activity Monitor**. Set View to show all processes and filter the list by entering part of the Zabbix name:

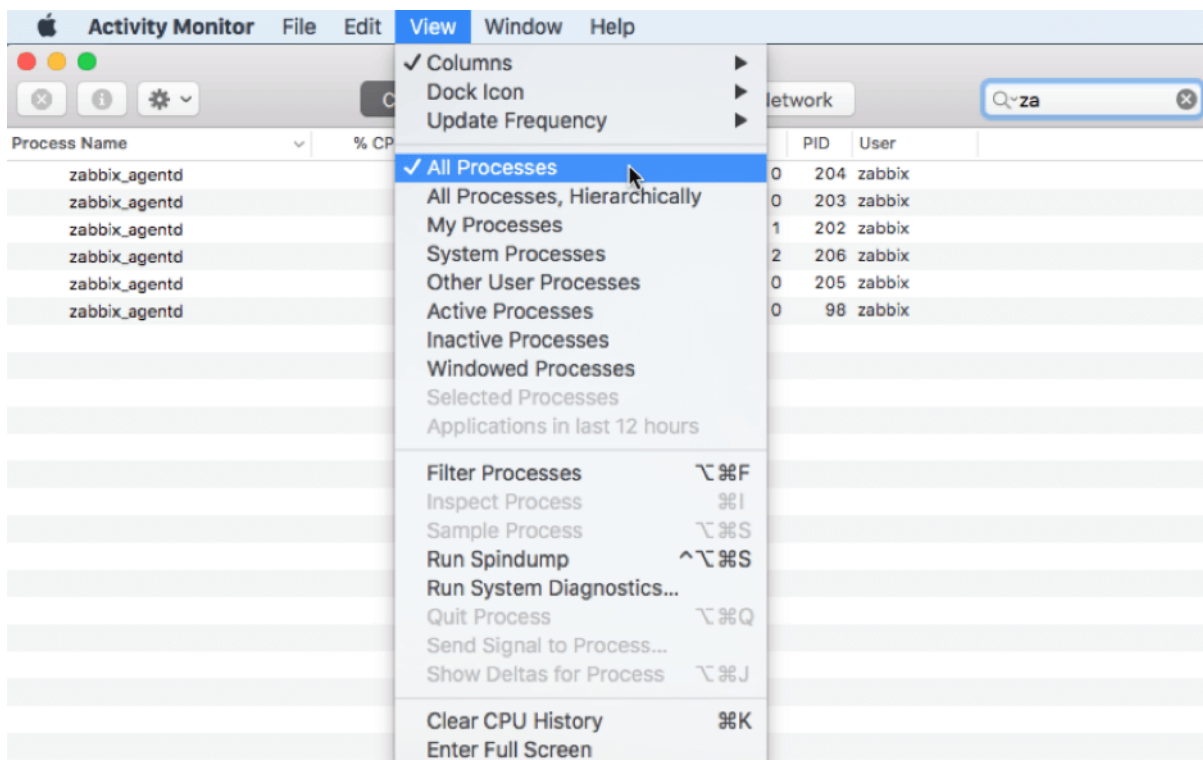


Figure 4. Use the Activity Monitor to check if the Zabbix agent is running

FileMaker Cloud (CentOS)

Given that FileMaker Inc. is in control of the operating system part of your FileMaker Cloud installation, you do **NOT** want to run any operating system updates, as that could render FileMaker Cloud inoperable.

If you want to upgrade the Zabbix agent, then run these three commands:

```
sudo systemctl stop zabbix-agent
```

```
sudo yum update 'zabbix-agent-*
```

```
sudo systemctl start zabbix-agent
```

You can check whether the Zabbix agent is running by using this command:

```
sudo ps -u zabbix -o state,comm
```

A terminal window screenshot showing the execution of the command 'sudo ps -u zabbix -o state,comm'. The output shows eight lines, each starting with 'S' followed by 'zabbix_agentd'. The terminal prompt is '[centos@ip-... ~]\$' and the cursor is at the end of the last line.

Figure 5. Check whether the Zabbix agent is running by entering the sudo command shown above

This asks Linux to list all the processes (ps) that are owned by user Zabbix and return its state and what the command or executable is that created the process (comm). If the lines start with R, D or S, then all is well.

In our Zabbix template we use this type of command to check on all the running processes that make up FileMaker Server.