



Monitoring Your FileMaker Server

Zabbix as an Appliance

By Wim Decorte, Senior Technical Solution Architect and
Mislav Kos, Senior Technical Project Lead
Soliant Consulting, Inc.

July 29, 2019

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 Appliance

We're assuming that you have read part 1, Getting Started with Zabbix to Monitor Your FileMaker Server.

The Zabbix Appliance is a pre-installed Linux server plus Zabbix server. Its purpose is to remove all hurdles for those not inclined to do the initial installation themselves. It allows you to get up and running with Zabbix with almost no effort at all.

The Zabbix website mentions that it should be used for testing rather than production, but we believe it is production-ready for the purpose of monitoring FileMaker Servers.

There are, of course, some trade-offs, but they are minimal. Mainly you do not get to choose the type of back-end database that Zabbix will use (it will be MySQL version 8 as per Zabbix 4.2.3) nor the flavor of Linux for the underlying operating system (it is Ubuntu 16.0.4 as per July 2019). Chances are that you are not interested very much in this anyway.

The first step is to download the Appliance in your preferred format from the Zabbix downloads page. For this demo we will use the image that works with both VirtualBox and VMware.

Home / Product /

Download and install Zabbix

FOR PRODUCTION USE FOR CONTAINERS **FOR QUICK DEPLOYMENT** FOR DEEP CUSTOMIZATION FOR AGENT DEPLOYMENT

Install from Packages Zabbix Docker images **Zabbix Appliance** Zabbix Sources Zabbix Agents

Install Zabbix Appliance

Zabbix 4.2 Zabbix 4.0 LTS Zabbix 3.0 LTS Zabbix 2.2 LTS

Version	Release	Date	Platform	Release Notes	Zabbix Manual	Download
Zabbix 4.2	4.2.3	Jun 6, 2019	Installation CD/DVD (.iso)	Download	Download	Download
Zabbix 4.2	4.2.3	Jun 6, 2019	VirtualBox, VMWare (.vmdk)	Download	Download	Download
Zabbix 4.2	4.2.3	Jun 6, 2019	Microsoft Hyper-V 2012	Download	Download	Download
Zabbix 4.2	4.2.3	Jun 6, 2019	Microsoft Hyper-V 2008	Download	Download	Download

Figure 1. Download the Appliance

The download expands into a set of files, that can be opened directly in VMware Fusion (or VMware Workstation on Windows or hosted in your VMware environment).

Name	Date Modified	Size	Kind	Date Added
zabbix_appliance_4.2.3_x86_64.vmdk	Today at 5:29 PM	--	Folder	Today at 5:29 PM
zabbix_appliance_4.2.3.vmx	Jun 7, 2019 at 10:50 AM	277 bytes	VMwar...ta-data	Today at 5:29 PM
zabbix_appliance_4.2.3.vmsd	Jun 7, 2019 at 10:50 AM	Zero bytes	Document	Today at 5:29 PM
zabbix_appliance_4.2.3.vmx	Jun 7, 2019 at 11:10 AM	3 KB	VMConfig	Today at 5:29 PM
zabbix_appliance_4.2.3.nvram				
disk.vmdk				
zabbix_appliance_4.2.3_x86_64.vmdk				

Figure 2. Open the Appliance directly in VMware Fusion

When the virtual machine starts, it shows a command prompt:

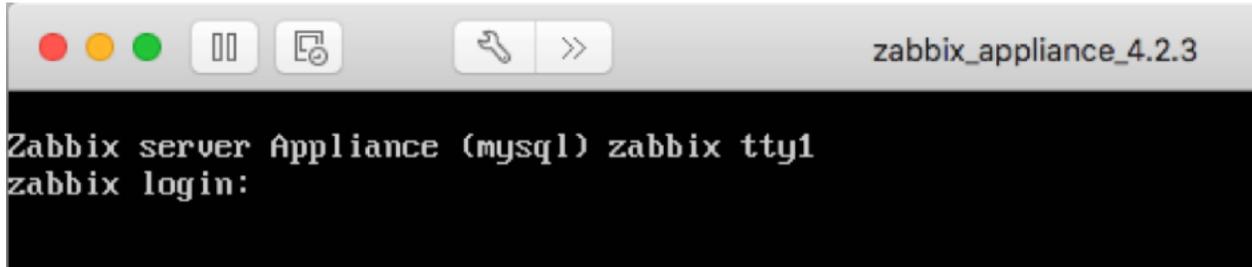


Figure 3. Command prompt

For now, we're mainly interested in logging into Zabbix itself, so we do not need to do anything in that command prompt window.

I configured the VMware settings so that the virtual machine shows up as a separate machine on my network:

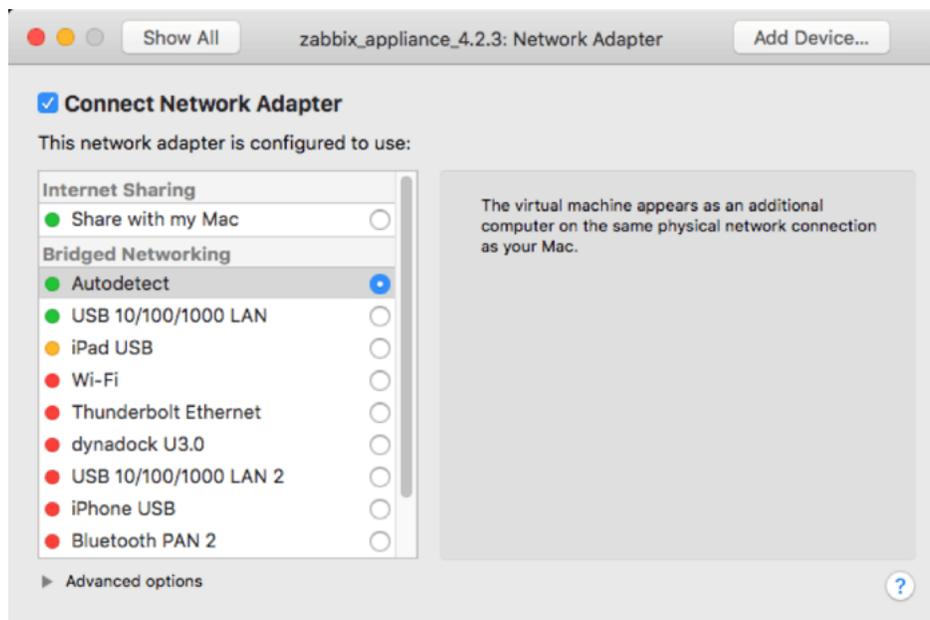


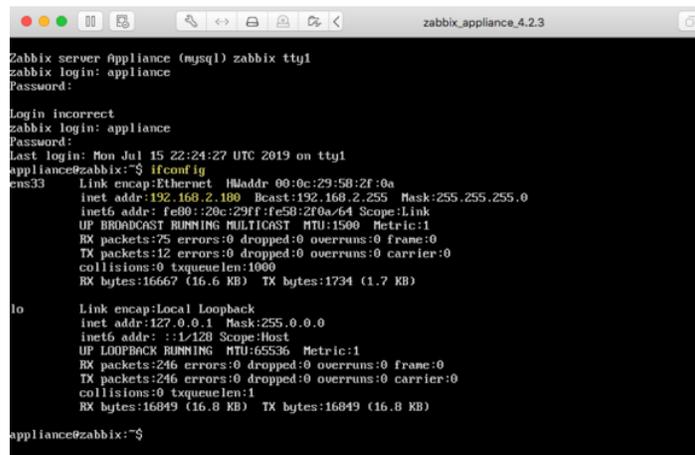
Figure 4. Configuring the VMware settings

At this point, the virtual machine picked up a dynamic IP address through DHCP. All I need to do is figure out what the IP address is (I use IP Scanner Pro for this, but your DHCP server's console would also provide you this information¹) so that I can point my browser to it and log in:

http://<ip_address>/zabbix

The default credentials for the Zabbix frontend are username Admin (capital A!) and password zabbix:

¹ Or if you are not averse to a little bit of command line use, in VMware Fusion's window, log into Linux with the default credentials for the operating system (username: appliance, password: Zabbix) and use the "ifconfig" command to show the network card configuration. See the yellow highlighted command the IP address listed:



```
Zabbix server Appliance (mysql) zabbix tty1
zabbix login: appliance
Password:
Login incorrect
zabbix login: appliance
Password:
Last login: Mon Jul 15 22:24:27 UTC 2019 on tty1
appliance@zabbix:~$ ifconfig
ens33:  Link encap:Ethernet  HWaddr 00:0c:29:50:2f:0a
        inet addr:192.168.2.180  Bcast:192.168.2.255  Mask:255.255.255.0
        inet6 addr: fe80::20c:29ff:fe50:2f0a/64 Scope:Link
        UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
        RX packets:75 errors:0 dropped:0 overruns:0 frame:0
        TX packets:12 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:16667 (16.6 KB)  TX bytes:1734 (1.7 KB)

lo:     Link encap:Local Loopback
        inet addr:127.0.0.1  Mask:255.0.0.0
        inet6 addr: ::1/128 Scope:Host
        UP LOOPBACK RUNNING  MTU:65536  Metric:1
        RX packets:246 errors:0 dropped:0 overruns:0 frame:0
        TX packets:246 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1
        RX bytes:16849 (16.8 KB)  TX bytes:16849 (16.8 KB)

appliance@zabbix:~$
```

Figure 6. inet6 addr:192.168.2.180

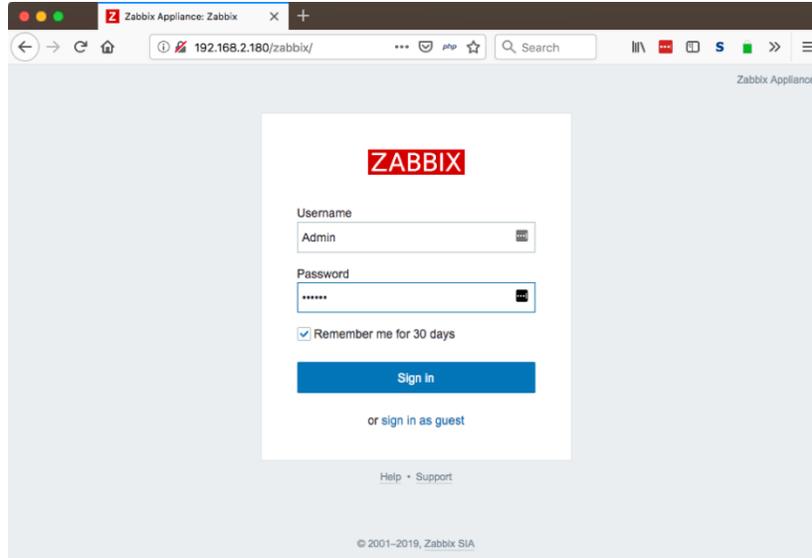


Figure 5. Use default credentials to log into Zabbix.

And with that we are in the Zabbix admin console. From this point on, it is just a matter of importing the templates that monitor various items of a FileMaker Server and adding your FileMaker Server as a host to monitor. Those steps are explained in one of the next guides in this series.

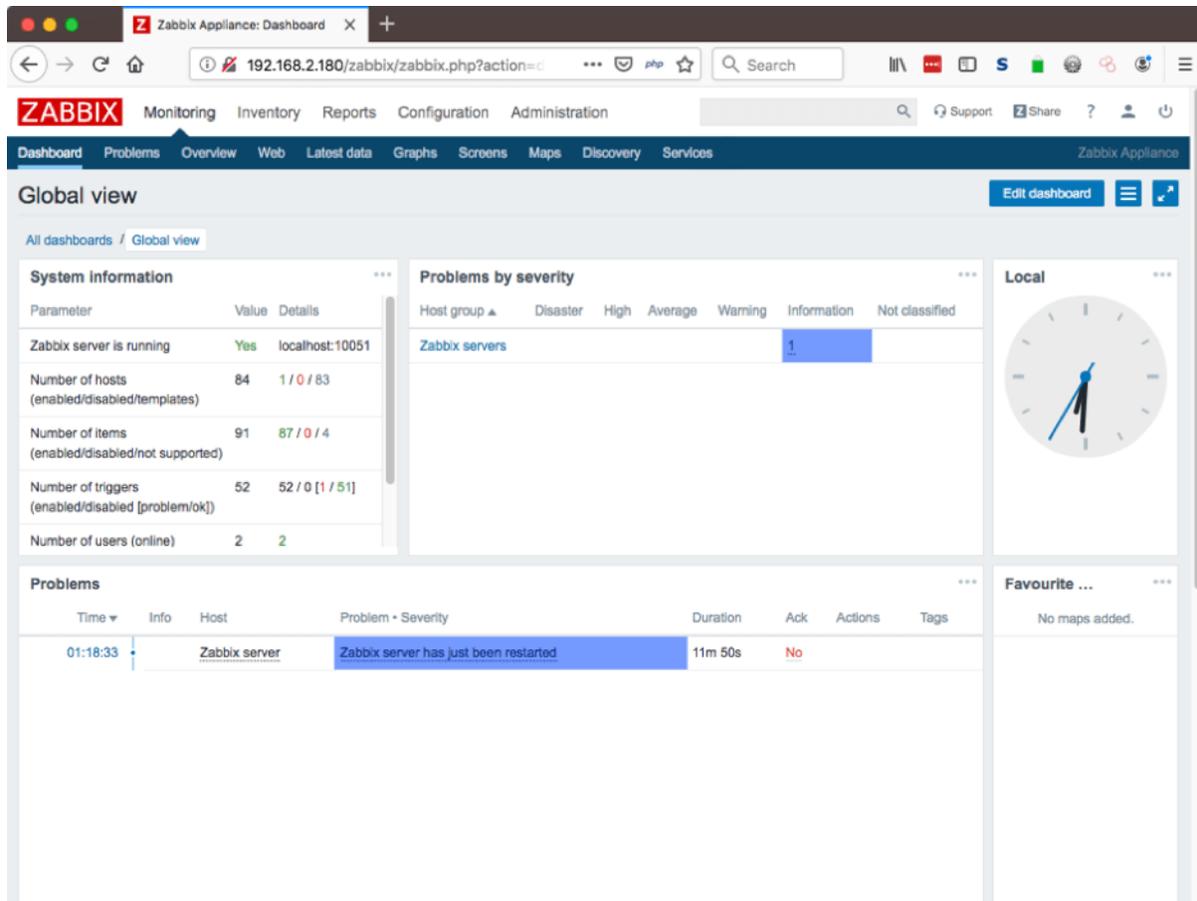


Figure 7. Zabbix admin console

The Zabbix Appliance manual

(<https://www.zabbix.com/documentation/4.2/manual/appliance>) covers some useful details, such as which ports are open on the Linux firewall in case you need to tweak those.

There is one important OS configuration change you'll need sooner rather than later, and that is to switch your virtual machine from a dynamic to a static IP address. Your FileMaker Server will need to be able to reach it at all times so a dynamically changing IP address will not work well.

In the VMware Fusion window, log into the OS with user 'appliance' and password 'zabbix' and run the following command to install the nano text editor, one of the easiest to use:

```
sudo apt-get install nano
```

With nano in place we will update Ubuntu's network configuration and tell nano to open the configuration file with this command:

sudo nano /etc/network/interfaces



Figure 8. Command line – telling nano to open the configuration file

The default settings will look like this:

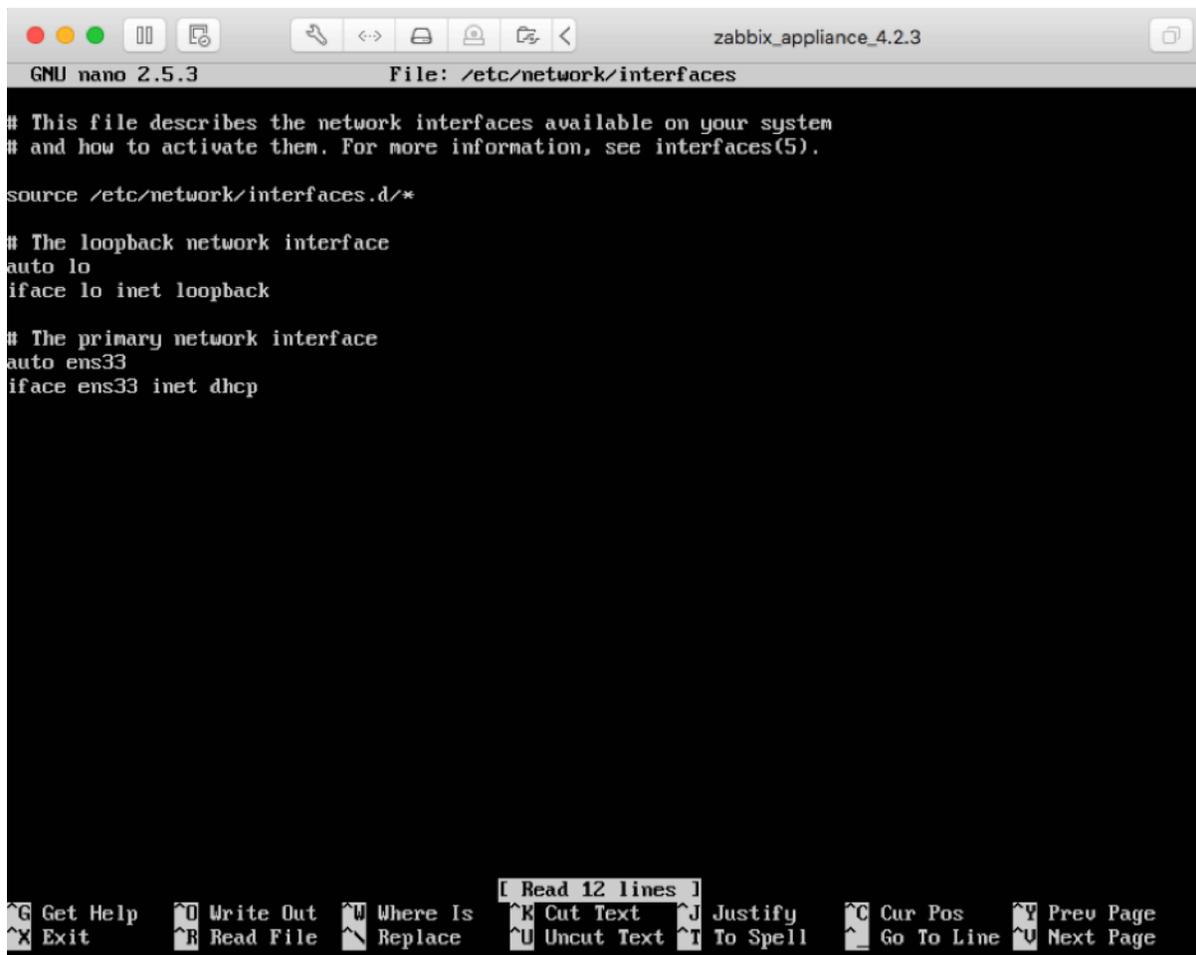


Figure 9. Default settings

We are interested in the last line as it sets the network card to use DHCP.

Change the word “dhcp” to “static”:

```

GNU nano 2.5.3                               File: /etc/network/interfaces
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto ens33
iface ens33 inet static_

```

Figure 10. Change “dhcp” to “static”

And add 3 lines below it but with a static IP address, netmask and gateway that fits your network:

```

GNU nano 2.5.3                               File: /etc/network/interfaces
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto ens33
iface ens33 inet static
address 192.168.2.82
netmask_255.255.255.0
gateway 192.168.2.31

```

Figure 11. Add the static IP address, netmask, and gateway

Then hit control-o (oh, not zero) to be asked to save the file:

```

File Name to Write: /etc/network/interfaces
^G Get Help          ^M-D DOS Format      ^M-A Append          ^M-B Backup File
^C Cancel            ^M-M Mac Format      ^M-P Prepend        ^M-T To Files

```

Figure 12. Save the file

Hit enter and then control-x to quit the text editor. This should drop you back to the command line prompt. As a final command, reboot your instance to have the settings take effect:

```
sudo reboot now
```

Now you can use that new static IP address in your browser to work with the Zabbix admin console:

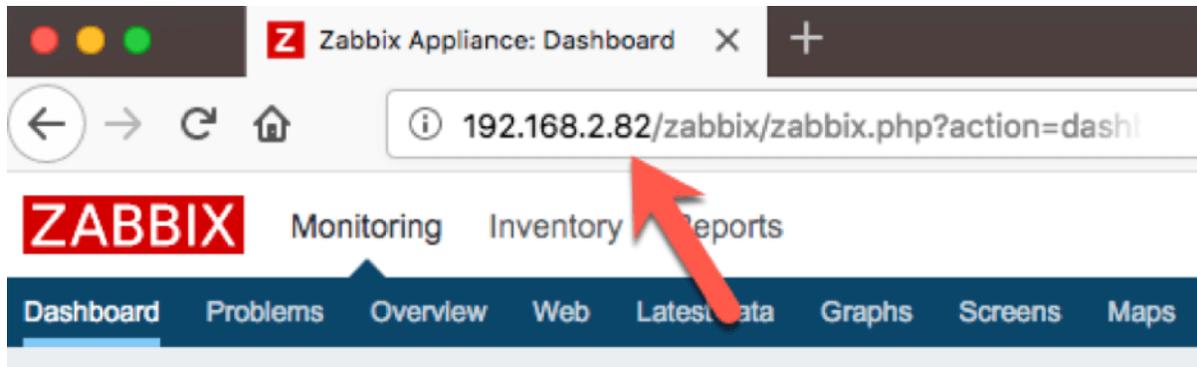


Figure 13. Use the new static IP address

The virtual machine is pre-configured to use 4 cores and 4GB of memory. Depending on the number of FileMaker Servers you want to monitor (or other servers / devices you intend to monitor), you can scale that down significantly. For my purposes I have it set to use 2 cores and 1GB of RAM, since I will only need to work with two to four FileMaker Servers. To adjust the resources for the virtual machine, stop the instance and use the VMware preferences to choose the number of processors and memory you want to assign to the machine.

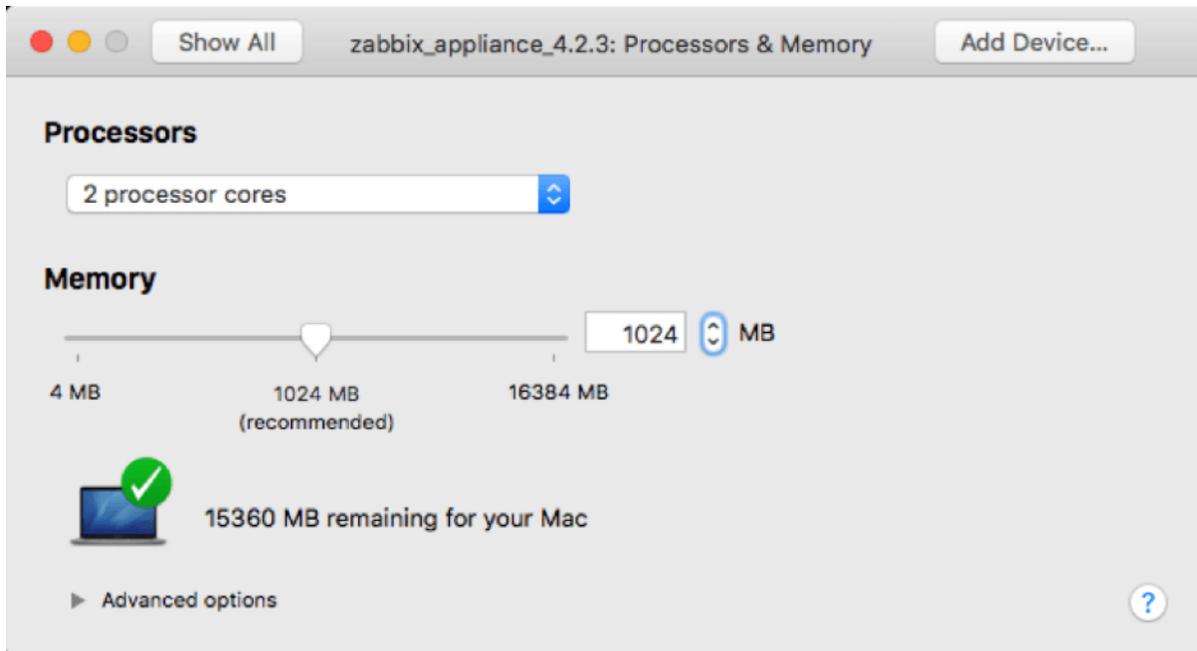


Figure 14. Set the number of cores and memory.