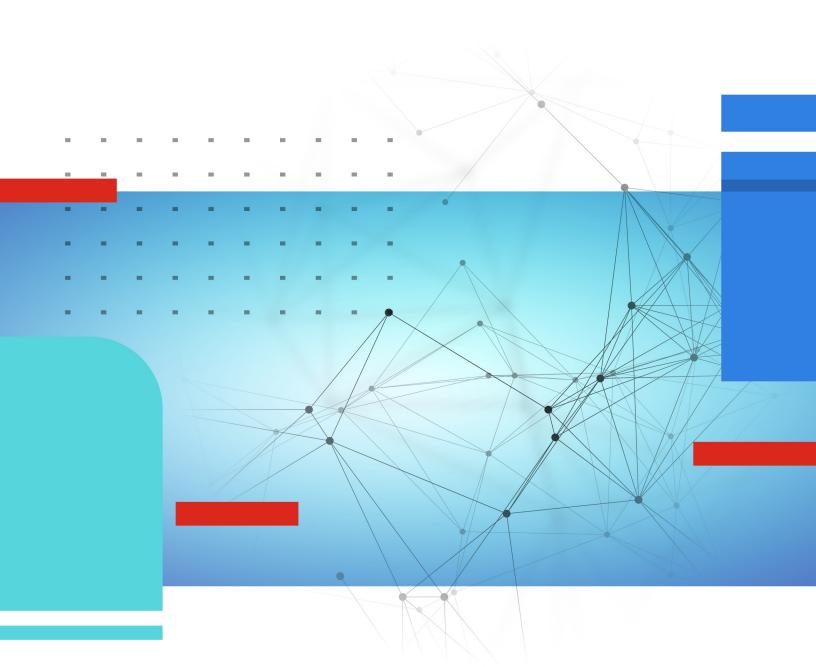


# **Release Notes**

FortiWeb 7.6.2



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# Introduction

This document provides information about new and enhanced features, installation instructions, resolved issues, and known issues for FortiWeb 7.6.2, build 1017.

FortiWeb is a web application firewall (WAF) that protects hosted web applications from attacks that target known and unknown exploits. Using multi-layered and correlated detection methods, FortiWeb defends applications from known vulnerabilities and zero-day threats. The Web Application Security Service from FortiGuard Labs uses information based on the latest application vulnerabilities, bots, suspicious URL and data patterns, and specialized heuristic detection engines to keep your applications safe.

FortiWeb also offers a machine-learning function that enables it to automatically detect malicious web traffic. In addition to detecting known attacks, the feature can detect potential unknown zero-day attacks to provide real-time protection for web servers.

FortiWeb allows you to configure these features:

- · Vulnerability scanning and patching
- IP reputation, web application attack signatures, credential stuffing defense, anti-virus, and Fortinet Sandbox powered by FortiGuard.
- Real-time attack insights and reporting with advanced visual analytics tools
- Integration with FortiGate and FortiSandbox for ATP detection
- · Behavioral attack detection
- Advanced false positive and negative detection avoidance

FortiWeb hardware and virtual machine platforms are available for medium and large enterprises, as well as for service providers.

For additional documentation, please visit the FortiWeb documentation:

http://docs.fortinet.com/fortiweb/

# What's New

In version 7.6.2, we have introduced the disk expansion feature.

## **Disk Expansion**

The current free space in the data partition is insufficient to support certain new features. To resolve this, the partition size has been expanded in version 7.6.2.

## **Upgrade Notes**

· No user action is required

The system will automatically perform disk expansion during the upgrade to version 7.6.2.

Additional reboot required

During the upgrade to version 7.6.2, the system will reboot twice:

- Once for the image upgrade.
- · Once for disk repartitioning.
- · Upgrade path for future versions

All future 7.6.x and higher version upgrades require an initial upgrade to version 7.6.2 before proceeding with subsequent upgrades.

Using console window

It is recommended to open the console window to monitor the upgrade process and avoid rebooting or powering off during the process.

· Configuration and log backup

We strongly advise backing up both configurations and logs prior to performing the upgrade.

## FortiWeb-VM Specific Notes

· Minimum free disk space

Ensure that the remaining free space on the FortiWeb-VM log disk is more than 1.5 GB.

Upgrade time

The upgrade duration on the affected platforms may vary:

- Typical Duration: Around 10 minutes.
- Longer Durations: If the standard 32 GB log disk size was expanded to a larger capacity, such as 2 TB, during the initial deployment of the FortiWeb-VM instance, the upgrade process could take up to an hour, depending on the disk's usage level.

#### **Affected Platforms:**

- KVM
- VMware ESXi
- Hyper-V
- Citrix XenServer

**Note:** Upgrade times are not impacted on other virtual platforms.

#### FortiWeb-VM HA

In an HA cluster, the primary and secondary nodes upgrade separately, with a 15-minute interval between them to ensure that one node remains active to handle traffic.

## Important consideration:

For the platforms listed above, if the log disk size exceeds 32 GB, the upgrade process may take longer than 15 minutes. This could result in a temporary period where neither the primary nor secondary node is operational.

#### Recommendation:

Evaluate the potential impact on your environment and notify customers in advance with a maintenance notice, if necessary.

## FortiWeb-VM Troubleshooting

#### · Handling insufficient disk space

If the system cannot expand disk due to insufficient disk space, the upgrade will proceed, skipping the disk expanding step.

To address this:

- a. Manually delete files on the log disk to free up space, or format the log disk.
- b. Once sufficient space is available, the system will perform the disk expansion during the next reboot.

## · Starting a new deployment for persistent issues

If certain issues persist during the upgrade, consider deploying a new FortiWeb-VM:

- a. Deploy a new FortiWeb-VM instance with the version 7.6.2 image.
- b. Use a trial license on the new instance to handle traffic temporarily.
- **c.** Download and manually upload the necessary database files from the support site to the new instance to ensure valid services without a standard license.
- **d.** After the old FortiWeb-VM has been offline for 90 minutes, import its license into the new instance.

#### · Error Message to Ignore

During the upgrade, the following error message may appear in the console. This is expected and does not require

## any action.

# **Product Integration and Support**

## **Supported Hardware:**

- FortiWeb 100E
- FortiWeb 100F
- FortiWeb 400D
- FortiWeb 400E
- FortiWeb 400F
- FortiWeb 600D
- FortiWeb 600E
- FortiWeb 600F
- FortiWeb 1000D
- FortiWeb 1000E
- FortiWeb 2000E
- FortiWeb 3000E
- FortiWeb 3010E
- FortiWeb 4000E
- FortiWeb 1000F
- FortiWeb 2000F
- FortiWeb 3000F
- FortiWeb 4000F

## Supported hypervisor versions:

- VMware vSphere Hypervisor ESX/ESXi 4.0/4.1/5.0/5.1/5.5/6.0/6.5/6.7/7.0/8.0.2
- Citrix XenServer 6.2/6.5/7.1
- Open source Xen Project (Hypervisor) 4.9 and higher versions
- Microsoft Hyper-V (version 6.2 or higher, running on Windows 8 or higher, or Windows Server 2012/2016/2019/2022)
- KVM (Linux kernel 2.6, 3.0, or 3.1)
- OpenStack Wallaby
- Docker Engine CE 18.09.1 or higher versions, and the equivalent Docker Engine EE versions; Ubuntu18.04.1 LTS or higher versions
- Nutanix AHV

FortiWeb is tested and proved to function well on the hypervisor versions listed above. Later hypervisor releases may work but have not been tested yet.

To ensure high performance, it's recommended to deploy FortiWeb-VM on the machine types with minimum 2 vCPUs, and memory size larger than 8 GB.

## Supported cloud platforms:

- AWS (Amazon Web Services)
- Microsoft Azure
- Google Cloud

- OCI (Oracle Cloud Infrastructure)
- Alibaba Cloud

## Supported web browsers:

- Microsoft Edge 41
- Mozilla Firefox version 59
- Google Chrome version 65

Other web browsers may function correctly, but are not supported by Fortinet.

Build-in AV engine version: 6.00290

# **Upgrade instructions**

## Image checksums

To verify the integrity of the firmware file, use a checksum tool to compute the firmware file's MD5 checksum. Compare it with the checksum indicated by Fortinet. If the checksums match, the file is intact.

MD5 checksums for software releases are available from Fortinet Customer Service & Support:

#### https://support.fortinet.com

VM Image integrity is also verified when the FortiWeb is booting up. the running OS will generate signatures and compare them with the signatures attached to the image. If the signatures do not match, the running OS will be shutdown.

#### To download the Customer Service & Support image checksum tool

After logging in to the website, in the menus at the top of the page, click **Download**, and then click **Firmware Image Checksums**.

Alternatively, near the bottom of the page, click the **Firmware Image Checksums** button. This button appears only if one or more of your devices has a current support contract. In the **File Name** field, enter the firmware image file name including its extension, then click **Get Checksum Code**.

## **Upgrading from previous releases**



In version 7.6.2, we have expanded the partition size. In the future, to upgrade to any version higher than 7.6.2, you must first update to version 7.6.2 before proceeding with subsequent updates.

Ensure that the log disk has at least 1.5 GB of free space before initiating the upgrade process.

On versions earlier than 7.6.1, a non-prof\_admin user changing any global settings — such as executing the commands <code>config</code> system <code>global</code> and <code>config</code> system <code>admin</code> or modifying equivalent settings in the GUI — can result in the loss of the prof\_admin user's configurations after a system reboot.



To prevent this configuration loss, we recommend the following workaround before upgrading:

- **1.** Log in with a "prof\_admin" account.
- 2. Make a change to a global setting (e.g., config the hostname).
- 3. Reboot the system.

In summary, ensure that the last change to any global setting is made by a "prof\_admin user" before rebooting the system.

This issue has been resolved in versions 7.2.10, 7.4.5, 7.6.1, and later. If you are upgrading from these versions, the recommended workaround is unnecessary.



After upgrading FortiWeb to a new version, you may occasionally encounter issues where the browser continues to use a cached version of the GUI instead of fetching the updated resources from the server.

**Recommendation:** To ensure all resources are refreshed and the GUI functions correctly, we recommend clearing the browser cache after completing the upgrade.



DO NOT update to 7.6.x for FortiWeb 100D.



VLAN Interfaces/Interfaces with overlapping IP addresses and the VIP/Server Policy bound to them cannot be imported (while loading the config file) after upgrading to 7.2.3 and later because we have implemented IP overlap check in this release.

**Workaround:** Downgrade to an earlier version through booting from the alternate partition (See "Booting from the alternate partition". The old configuration can be restored through this way), edit IP addresses to eliminate overlapping, then upgrade to VERSION 76.2.



- For FortiWeb-VM with a license purchased earlier than February 2019, you must upgrade to 6.3.4 or higher. Do not use a lower patch.
- The VLAN, 802.3ad Aggregate, and Redundant interfaces are not supported anymore on FortiWeb-VMs deployed on public cloud platforms since 6.3.6. If you upgrade from versions earlier than that, these configurations will be removed.



We don't provide maintenance for 6.4.x releases unless major errors, so we recommend you to upgrade 6.4.x to later versions.



In several hours or days (depends on number of existing logs) after upgrading from earlier versions, there might be delay (30-60 mins) to display new logs on GUI. This is caused by log version upgrade in 6.4.x & 7.0. It takes time to scan and process all existing logs.



The admin user password hash is changed from sha1 to sha256 since 7.2.0.

If you upgrade FortiWeb from versions earlier than 7.2.0, the hash will keep the same as before, but if admin user changes its password or there is new admin users added, the password hash will be SHA256.



Port 995 will be switched to disabled state if you upgrade from versions earlier than 7.2.0. Remember to enable it (in **System > Admin > Settings**) if you need to use it for config sync.



When upgrading from releases prior to version 6.0, the "Retain Packet Payload" settings in Log&Report > Log Config > Other Log Settings will be reset to new defaults. This means that the following features—JSON Protection, Syntax-Based Detection, Malicious Bots, Known Good Bots, Mobile API Protection, and API Management—will be changed to a disabled state. If you had these options enabled prior to the upgrade, please remember to reenable them if they are still required.

## To upgrade from FortiWeb 7.6.x

Upgrade directly.

## To upgrade from FortiWeb 7.4.x

Upgrade directly.

## To upgrade from FortiWeb 7.2.x

Upgrade directly.



If you had enabled Threat Analytics in previous releases but did not have a valid license, the 14-day eval license will be automatically applied after upgrading to version 7.2.2 and later. In this case, if you don't want to start the 14-day eval immediately after upgrade, it's recommended to disable the Threat Analytics first, then execute upgrade.

## To upgrade from FortiWeb 7.0.x

Upgrade directly.

#### To upgrade from FortiWeb 6.4.x

Upgrade directly.

#### To upgrade from FortiWeb 6.3.x

Upgrade directly.



The "Bad Robot" and "SQL Injection (Syntax Based Detection)" signatures had been integrated into WAF modules "Bot Mitigation > Known Bots" and "SQL/XSS Syntax Based Detection" since 6.3.3. If you upgrade from a version earlier than 6.3.3, all settings of these two signatures will be merged to corresponding modules except the exception list.

Make sure to **add the exception list manually** after the upgrade, otherwise certain traffic will be blocked unexpectedly because of the missing of the exception list.

## To upgrade from FortiWeb 6.1.x and 6.2.x

Upgrade directly.

The machine learning data will be lost after the upgrade as the database format is enhanced in 6.3.0. Machine Learning will automatically start collecting data again after the upgrade.



For FortiWeb-VM on docker platform, it's not supported to upgrade to 7.6.2 from versions earlier than 6.3.0. You need to install FortiWeb-VM 7.6.2 instead of upgrading to 7.6.2. For how to install, see FortiWeb-VM on docker.



The "Bad Robot" and "SQL Injection (Syntax Based Detection)" signatures had been integrated into WAF modules "Bot Mitigation > Known Bots" and "SQL/XSS Syntax Based Detection" since 6.3.3. If you upgrade from a version earlier than 6.3.3, all settings of these two signatures will be merged to corresponding modules except the exception list.

Make sure to **add the exception list manually** after the upgrade, otherwise certain traffic will be blocked unexpectedly because of the missing of the exception list.

## To upgrade from FortiWeb 6.0 or 6.0.x

Upgrade directly.

After the upgrade:

- If you upgrade from 6.0, there might be database compatibility issue after the upgrade, because the MarisDB database version is upgraded to 10.3.8 since FortiWeb 6.0.2.
  - Run get system status to check the Database Status.
  - If it shows Available, it means the database works well. If it shows Not Available, you need to run execute db rebuild to solve the database compatibility issue. Please note in HA mode running execute db rebuild on primary appliance will take effect on all secondary appliances simultaneously.
- If you upgrade from 6.0.1, it's not necessary to run execute db rebuild because the database format has already been enhanced in 6.0.1, so that it's compatible with the new database.



The machine learning data will be lost after the upgrade as the database format is enhanced in 6.3.0. Machine Learning will automatically start collecting data again after the upgrade.



For FortiWeb-VM on docker platform, it's not supported to upgrade to 7.6.2 from versions earlier than 6.3.0. You need to install FortiWeb-VM 7.6.2 instead of upgrading to 7.6.2. For how to install, see FortiWeb-VM on docker.



The "Bad Robot" and "SQL Injection (Syntax Based Detection)" signatures had been integrated into WAF modules "Bot Mitigation > Known Bots" and "SQL/XSS Syntax Based Detection" since 6.3.3. If you upgrade from a version earlier than 6.3.3, all settings of these two signatures will be merged to corresponding modules except the exception list.

Make sure to **add the exception list manually** after the upgrade, otherwise certain traffic will be blocked unexpectedly because of the missing of the exception list.

#### To upgrade from FortiWeb 5.5.x, 5.6.x, 5.7.x, 5.8.x, or 5.9.x

#### Before the upgrade:

• If you upgrade from a version of FortiWeb previous to 5.9.0 on Azure platform, first change the addressing mode to DHCP in **Network > Interface**, then upgrade to FortiWeb 6.1.1, because FortiWeb on Azure platform has enforced the DHCP addressing mode since release 5.9.0.

#### After the upgrade:

- There might be database compatibility issue after the upgrade, because the MarisDB database version is upgraded to 10.3.8 since FortiWeb 6.0.2.
  - Run get system status to check the Database Status.
  - If it shows Available, it means the database works well. If it shows Not Available, you need to run execute db rebuild to solve the database compatibility issue. Please note in HA mode, running execute db rebuild on primary appliance will take effect on all secondary appliances simultaneously.



If you upgrade from a version of FortiWeb previous to 5.5.4, the upgrade process deletes any HTTP content routing policies that match X509 certificate content. You can re-create these policies using the new, enhanced X509 certificate settings.



The "Bad Robot" and "SQL Injection (Syntax Based Detection)" signatures had been integrated into WAF modules "Bot Mitigation > Known Bots" and "SQL/XSS Syntax Based Detection" since 6.3.3. If you upgrade from a version earlier than 6.3.3, all settings of these two signatures will be merged to corresponding modules except the exception list.

Make sure to **add the exception list manually** after the upgrade, otherwise certain traffic will be blocked unexpectedly because of the missing of the exception list.

#### To upgrade from FortiWeb 5.4.x

#### Before the upgrade:

• Resize your FortiWeb hard disk partitions. See Repartitioning the hard disk.

#### After the upgrade:

- There might be database compatibility issue after the upgrade, because the MarisDB database version is upgraded to 10.3.8 since FortiWeb 6.0.2.
  - Run get system status to check the Database Status.
  - If it shows Available, it means the database works well. If it shows Not Available, you need to run execute db rebuild to solve the database compatibility issue. Please note in HA mode, running execute db rebuild on primary appliance will take effect on all secondary appliances simultaneously.



The upgrade process deletes any HTTP content routing policies that match X509 certificate content. You can re-create these policies using the new, enhanced X509 certificate settings.



The "Bad Robot" and "SQL Injection (Syntax Based Detection)" signatures had been integrated into WAF modules "Bot Mitigation > Known Bots" and "SQL/XSS Syntax Based Detection" since 6.3.3. If you upgrade from a version earlier than 6.3.3, all settings of these two signatures will be merged to corresponding modules except the exception list.

Make sure to **add the exception list manually** after the upgrade, otherwise certain traffic will be blocked unexpectedly because of the missing of the exception list.

## To upgrade from FortiWeb 5.3.x

#### Before the upgrade:

Resize your FortiWeb hard disk partitions. See Repartitioning the hard disk.

## After the upgrade:

- There might be database compatibility issue after the upgrade, because the MarisDB database version is upgraded to 10.3.8 since FortiWeb 6.0.2.
  - Run get system status to check the Database Status.
  - If it shows Available, it means the database works well. If it shows Not Available, you need to run execute db rebuild to solve the database compatibility issue. Please note in HA mode, running execute db rebuild on primary appliance will take effect on all secondary appliances simultaneously.
    - If you are upgrading FortiWeb-VM on a hypervisor other than VMware vSphere, see FortiWeb-VM license validation after upgrade from pre-5.4 version.
    - The upgrade process deletes any HTTP content routing policies that match X509 certificate content. You can re-create these policies using the new, enhanced X509 certificate settings.



- If you upgrade from a version of FortiWeb previous to 5.3.4 and your server policy
  configuration includes settings that customize an attack blocking or server unavailable
  error page, the upgrade deletes these server-based settings. The functionality is replaced
  by the global, default FortiWeb pages.
- If you upgrade from a version of FortiWeb previous to 5.3.6, the upgrade process deletes
  any V-zone IP addresses, which are no longer required. This operation has no impact on
  routing or connectivity after the upgrade.



The "Bad Robot" and "SQL Injection (Syntax Based Detection)" signatures had been integrated into WAF modules "Bot Mitigation > Known Bots" and "SQL/XSS Syntax Based Detection" since 6.3.3. If you upgrade from a version earlier than 6.3.3, all settings of these two signatures will be merged to corresponding modules except the exception list.

Make sure to **add the exception list manually** after the upgrade, otherwise certain traffic will be blocked unexpectedly because of the missing of the exception list.

## To upgrade from a version previous to FortiWeb 5.3

FortiWeb5.3.exe is a Microsoft Windows executable script that automatically migrates your FortiWeb 5.2.x configuration settings to a 5.3.x configuration.

- 1. If your version is 5.0.x or 5.1.x, upgrade to FortiWeb 5.2.x.
- 2. Use **System > Maintenance > Backup & Restore** to back up your FortiWeb configuration. Fortinet recommends that you use the **Backup entire** configuration option.
- **3.** To obtain the upgrade script, log in to the Fortinet Customer Service & Support website: https://support.fortinet.com

In the menus at the top of the page, click **Download**, and then click **Firmware Images**.

- **4.** For product, select **FortiWeb**. Then, on the Download tab, navigate to the following folder: /FortiWeb/v5.00/5.3/Upgrade script/
- **5.** Download the .zip compressed archive (for example, FortiWeb5.3Upgrade\_v1.9.zip) to a location you can access from your Windows PC.
- **6.** In Windows, extract the .zip archive's contents, and then use a command line interface to execute the upgrade script.

For example, in the directory where the file FortiWeb5.3Upgrade.exe and your backup configuration file are located, execute the following command:

```
FortiWeb5.3Upgrade.exe -i YOUR CONFIG NAME.conf -o 5.3 new.conf
```

The script removes the Domain Server, Physical Server, Server Farm, Content Routing policy configurations and generates a new configuration file named 5.3 new.conf.

- 7. Resize your FortiWeb hard disk partitions. See Repartitioning the hard disk.
- 8. Upgrade to 6.3.9 first, then upgrade to 7.6.2.
- 9. Use System > Maintenance > Backup & Restore to restore the configuration file you created using the script (for example, 5.3 new.conf).
- **10.** There might be database compatibility issue after the upgrade, because the MarisDB database version is upgraded to 10.3.8 since FortiWeb 6.0.2:
  - Run get system status to check the Database Status.
  - If it shows Available, it means the database works well. If it shows Not Available, you need to run execute db rebuild to solve the database compatibility issue. Please note in HA mode, running execute db rebuild on primary appliance will take effect on all secondary appliances simultaneously.
    - If you are upgrading FortiWeb-VM on a hypervisor other than VMware vSphere, see FortiWeb-VM license validation after upgrade from pre-5.4 version.



- The upgrade process deletes any HTTP content routing policies that match X509 certificate content. You can re-create these policies using the new, enhanced X509 certificate settings.
- If your server policy configuration includes settings that customize an attack blocking or server unavailable error page, the upgrade deletes these server-based settings. The functionality is replaced by the global, default FortiWeb pages.
- The upgrade process deletes any V-zone IP addresses, which are no longer required. This operation has no impact on routing or connectivity after the upgrade.



The "Bad Robot" and "SQL Injection (Syntax Based Detection)" signatures had been integrated into WAF modules "Bot Mitigation > Known Bots" and "SQL/XSS Syntax Based Detection" since 6.3.3. If you upgrade from a version earlier than 6.3.3, all settings of these two signatures will be merged to corresponding modules except the exception list.

Make sure to **add the exception list manually** after the upgrade, otherwise certain traffic will be blocked unexpectedly because of the missing of the exception list.

Note: To upgrade from 4.0 MR4, Patch x or earlier, please contact Fortinet Technical Support.

# Repartitioning the hard disk

To upgrade from a version of FortiWeb previous to 5.5, you must first resize your FortiWeb operating system's disk.

In most cases, you'll have to install a special firmware image to repartition the disk. For details, see To use the special firmware image to repartition the operating system's disk on page 17.

For the following FortiWeb-VM tools, you cannot install the special firmware image to repartition the hard disk:

- Citrix XenServer
- · Open-source Xen Project
- · Microsoft Hyper-V
- K\/I/

For these platforms, to repartition the disk you must deploy a new virtual machine and restore the configuration and log data you backed up earlier. See To repartition the operating system's disk without the special firmware image on page 18.



Repartitioning affects the operating system's disk (USB/flash disk), not the hard disk. Existing data such as reports and event, traffic, and attack logs, which are on the hard disk, are not affected.

You can use this image to upgrade an HA cluster by following the same procedure you use for a regular firmware upgrade. For details, see "Updating firmware on an HA pair" in the *FortiWeb Administration Guide*:

http://docs.fortinet.com/fortiweb/admin-quides

## To use the special firmware image to repartition the operating system's disk

- Perform a complete backup of your FortiWeb configuration.
   Although the repartitioning firmware image automatically saves your FortiWeb configuration, Fortinet recommends that you also manually back it up. For details, see the FortiWeb Administration Guide:
   http://docs.fortinet.com/fortiweb/admin-guides
- 2. Contact Fortinet Technical Support to obtain the special repartitioning firmware image: special build 5.4.1, build 6066.
- 3. Follow one of the same procedures that you use to install or upgrade firmware using a standard image:

- In the Web UI, go to System > Status > Status. Locate the System Information widget. Beside Firmware Version, click [Update].
- In the Web UI, go to System > Maintenance > Backup & Restore. Select the Restore option in System Configuration.
- In the CLI, enter the execute restore config command.

FortiWeb backs up the current configuration, resizes the hard drive partitions, and boots the system.

Continue with the instructions in Upgrading from previous releases on page 10.

## To repartition the operating system's disk without the special firmware image

- 1. Perform a complete backup of your FortiWeb configuration. For details, see the *FortiWeb Administration Guide*: http://docs.fortinet.com/fortiweb/admin-guides
- 2. Use the instructions for your hypervisor platform to detach the log disk from the VM:
  - To detach the log disk from a Citrix XenServer VM on page 18
  - To detach the log disk from a Microsoft Hyper-V VM on page 18
  - To detach the log disk from a KVM VM on page 18
- 3. Deploy a new FortiWeb 5.5 or later virtual machine on the same platform.
- 4. Use the instructions for your hypervisor platform to attach the log disk you detached earlier to the new VM:
  - To attach the log disk to a Citrix XenServer VM on page 19
  - To attach the log disk to a Microsoft Hyper-V VM on page 19
  - . To attach the log disk to a KVM VM on page 19
- 5. Restore the configuration you backed up earlier to the new VM.
- **6.** When you are sure that the new VM is working properly with the required configuration and log data, delete the old VM.

## To detach the log disk from a Citrix XenServer VM

- 1. In Citrix XenCenter, connect to the VM.
- 2. In the settings for the VM, on the Storage tab, select Hard disk 2, and then click Properties.
- 3. For **Description**, enter a new description, and then click **OK**.
- 4. Select Hard disk 2 again, and then click Detach.
- 5. Click Yes to confirm the detach task.

#### To detach the log disk from a Microsoft Hyper-V VM

- 1. In the Hyper-V Manager, select the FortiWeb-VM in the list of machines, and then, under Actions, click Settings.
- 2. Select Hard Drive (data.vhd), and then click Remove.
- 3. Click Apply.

#### To detach the log disk from a KVM VM

- 1. In Virtual Machine Manager, double-click the FortiWeb-VM in the list of machines.
- 2. Click Show virtual hardware details (the "i" button).
- 3. Click VirtIO Disk 2, and then click Remove.

## To attach the log disk to a Citrix XenServer VM

- 1. In Citrix XenCenter, connect to the VM.
- 2. In the settings for the new, FortiWeb 5.5 or later VM, on the Storage tab, select Hard disk 2, and then click Delete.
- 3. Click Yes to confirm the deletion.
- 4. On the Storage tab, click Attach Disk.
- 5. Navigate to the hard disk you detached from the old VM to attach it.
- 6. Start your new virtual machine.

## To attach the log disk to a Microsoft Hyper-V VM

- 1. In the Hyper-V Manager, select the new, FortiWeb 5.5 or later virtual machine in the list of machines, and then, under Actions, click **Settings**.
- 2. Select Hard Drive (log.vhd), and then click Browse.
- 3. Browse to the hard drive you detached from the old virtual machine to select it.
- 4. Click Apply.
- 5. Start the new virtual machine.

#### To attach the log disk to a KVM VM

For KVM deployments, you remove an existing virtual disk from the new VM before you attach the disk detached from the original VM.

- 1. In Virtual Machine Manager, double-click the new, FortiWeb 5.5 or later VM in the list of machines.
- 2. Click Show virtual hardware details (the "i" button).
- 3. Click VirtlO Disk 2, and then click Remove.
- 4. Click Add Hardware.
- 5. Click Storage, select Select managed or other existing storage, and then click Browse.
- 6. Click Browse Local.
- 7. Navigate to the log disk file for the original machine to select it, and then click Open.
- 8. For Device type, select Virtio disk, for Storage format, select qcow2, and then click Finish.
- 9. Start the new virtual machine.

## **Upgrading an HA cluster**

If the HA cluster is running FortiWeb 4.0 MR4 or later, the HA cluster upgrade is streamlined. When you upgrade the active appliance, it automatically upgrades any standby appliance(s), too; no manual intervention is required to upgrade the other appliance(s). This includes upgrading using the special hard disk repartitioning firmware image for upgrading to 5.5 or later from earlier releases.

If the HA cluster is running FortiWeb 4.0 MR3 Patch x or earlier, contact Fortinet Technical Support for assistance.

## Downgrading to a previous release



We don't recommend performing a downgrade because unexpected results may occur. If you insist on a downgrade, please first contact FortiWeb Technical Support team.

Please be aware that both uploading and switching to a lower version image are considered a downgrade operation.

#### ML based modules data loss

The machine learning data will be lost if you downgrade to versions lower than 6.2.0. It cannot be recovered because the database architecture is changed since 6.2.0.

#### Log compatibility issue

There might be log compatibility issue between different FortiWeb versions. If logs are not available on GUI after downgrading to an earlier version, please run execute database rebuild.

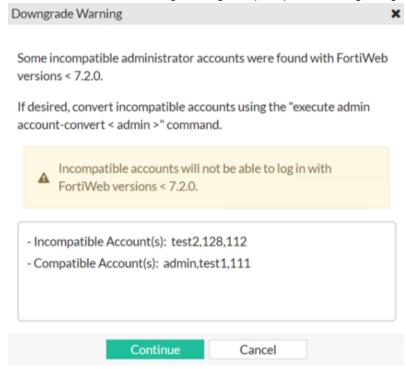
#### Basic configuration preserved if downgrading to 5.1 or 5.0

When you downgrade to version 5.1 or 5.0, the basic configuration for your appliance's connections to the network (e.g., IP address and route configuration) is preserved.

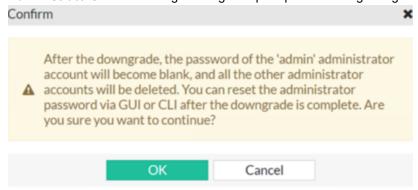
#### Admin user password hash change

The admin user password hash is changed from sha1 to sha256 since 7.2.0. System > Admin > Administrators

If you downgrade to 7.0.x and 7.1.x, you may need to convert password hash otherwise the admin users can't log in with their credentials. The following message will prompt after downgrading:



If you downgrade to versions earlier than 7.0, you need to recreate the lost accounts **System > Admin > Administrators**. The following message will prompt after downgrading:



# FortiWeb-VM license validation after upgrade from pre-5.4 version

On some virtual machine deployments, upgrading FortiWeb-VM from a version previous to 5.4 changes the virtual machine's universal unique identifier (UUID). Because of this change, the first time you upload your existing FortiWeb-VM license, the FortiGuard Distribution Network (FDN) server reports that it is invalid.

To solve this problem, after you have uploaded the license, wait 90 minutes, and then upload the license again.

This issue does not affect FortiWeb-VM deployed on a VMware vSphere hypervisor.

# Resolved issues

This section lists issues that have been fixed in version 7.6.2. For inquires about a particular bug, please contact Fortinet Customer Service & Support: https://support.fortinet.com

Bug ID	Description
1105663	AV Engine is corrupted during an FDS upgrade, causing the proxyd process to crash.
1096899	An HA cluster operating in Active-Active high-volume mode encounters persistent traffic outages on the secondary node. This is caused by continuous full configuration synchronization on the secondary node.
1092079	Some file types are mistakenly blocked due to incorrect filename parsing in chunked transfer-encoding requests.

# **Known issues**

The following issues have been identified in version 7.6.2. To inquire about a particular bug or report a bug, please contact Fortinet Customer Service & Support: https://support.fortinet.com.

Bug ID	Description
1090009/1080832/1029538	HEAD requests in HTTP/3 traffic are currently not supported.
1085229	When the CRL group contains an empty CRL, the HTTPS connection will fail, even if other CRLs in the group successfully verify that the certificate is not revoked.
	Removing the empty CRL doesn't solve the issue.
	Restarting $\texttt{proxyd}$ is considered a workaround. It ensures the system reloads the CRL group correctly and eliminates the impact of the empty CRL.
1025388	Certificate Verification doesn't work with HTTP3 traffic from the Firefox/Chrome/Edge browsers.
1026187	HTTP3 and "noparse" in config server-policy policy is not compatible.
1009411	The system doesn't allow to delete the predefined custom pages or security rules. However, the Delete button remains active (not grayed out), and when the delete operation fails, the error message displayed is irrelevant to the actual cause of the failure.



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