FortiWeb Release Notes

VERSION 6.0.8

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March 04, 2022

FortiWeb 6.0.8 Release Notes

1st Edition

Change log

March 04, 2022	Initial release.

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Introduction

This document provides information about installation instructions, resolved issues, and known issues for FortiWeb 6.0.8, build 0113.

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 provides the following capabilities, among others:

- Vulnerability scanning and patching
- IP reputation, web application attack signatures, credential stuffing defense, anti-virus, and FortiSandbox Cloud 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

Chunk Decoding option

A new chunk-decoding option is added at the server policy level.

```
config vdom
   edit <vdom-name>
      config server-policy policy
         edit <server-policy-name>
            set chunk-decoding disable
         next
      end
   next
end
```

Upgrade instructions

Hardware, VM, and cloud platforms support

Supported Hardware:

- FortiWeb 100D
- FortiWeb 400C
- FortiWeb 400D
- FortiWeb 600D
- FortiWeb 1000D
- FortiWeb 1000E
- FortiWeb 2000E
- FortiWeb 3000C/3000CFsx
- FortiWeb 3000D/3000DFsx
- FortiWeb 3000E
- FortiWeb 3010E
- FortiWeb 4000C
- FortiWeb 4000D
- FortiWeb 4000E

Supported hypervisor versions:

- VMware vSphere Hypervisor ESX/ESXi 4.0/4.1/5.0/5.1/5.5/6.0
- Citrix XenServer 6.2/6.5/7.1
- Open source Xen Project (Hypervisor) 4.0.1, 4.1, 4.2, 4.4
- Microsoft Hyper-V (version 6.2 or higher, running on Windows 8 or higher, or Windows Server 2012/2016)
- KVM (Linux kernel 2.6, 3.0, or 3.1)
- OpenStack Liberty 12.0.0
- Docker Engine CE 18.03.1 or higher versions, and the equivalent Docker Engine EE versions

Supported cloud platforms:

- AWS (Amazon Web Services)
- Microsoft Azure
- GCP (Google Cloud Platform)
- OCI (Oracle Cloud Infrastructure)

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

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

To upgrade from FortiWeb 6.0 or 6.0.x

After the upgrade:

- If you upgrade from 6.0, there might be database compatibility issue after the upgrade, because the MariaDB 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.
- 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 it's compatible with the newest version of the MariaDB database.

If you upgrade from 6.0, or downgrade from 6.0.8 to 6.0, the machine learning data will be cleared.

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 **System > Network > Interface**, then upgrade to FortiWeb 6.0.8, 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 MariaDB 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.

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.

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 MariaDB 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.

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.

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 MariaDB 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.

- 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.

To upgrade from a version previous to FortiWeb 5.3

FWB5.3.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.

   Note: If you forget to back up the configuration before you upgrade to FortiWeb 5.3, you can use the **Boot into alternate firmware** option to downgrade to the previous version, and then backup its configuration. For details, see the *FortiWeb Administration Guide*:

   http://docs.fortinet.com/fortiweb/admin-guides
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, `FWB5.3Upgrade_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 `FWB5.3Upgrade.exe` and your backup configuration file are located, execute the following command:

   ```
   FWB5.3Upgrade.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 FortiWeb 6.0.8.
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 MariaDB 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.

- 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.

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 11.

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
- KVM

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 12.

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-guides

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

1. 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.
4. Continue with the instructions in "Upgrading from previous releases" on page 8.

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 12
   - "To detach the log disk from a Microsoft Hyper-V VM" on page 12
   - "To detach the log disk from a KVM VM" on page 13
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 13
   - "To attach the log disk to a Microsoft Hyper-V VM" on page 13
   - "To attach the log disk to a KVM VM" on page 13
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 **VirtIO 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

When you downgrade your FortiWeb 6.0.8 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.

If you downgrade from 6.0.8 to 6.0, the machine learning database will be cleared.

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 6.0.8. For inquires about a particular bug, please contact Fortinet Customer Service & Support: https://support.fortinet.com

Bug ID	CVE reference
0733124	Chunk-decoding is disabled by default. It should be enabled.

Common Vulnerabilities and Exposures

For more information, visit https://www.fortiguard.com/psirt.

Bug ID	CVE reference
0764512/0757476/ 0754964/0754309/ 0753920/0746027	FortiWeb6.0.8 is no longer vulnerable to the following CWE-Reference: CWE-121.
0759713	FortiWeb6.0.8 is no longer vulnerable to the following CWE-Reference: CWE-384.
0753293/0753292	FortiWeb6.0.8 is no longer vulnerable to the following CWE-Reference: CWE-78.
0744638	FortiWeb6.0.8 is no longer vulnerable to the following CWE-Reference: CWE-22.

Known issues

This section lists known issues in version 6.0.8, but may not be a complete list. For inquires about a particular bug, please contact Fortinet Customer Service & Support:

https://support.fortinet.com

Bug ID	Description
0502506	The confd crashes when the waf configuration is being saved.
0483785	SFP Transreciever on Fortiweb Finisar FTLF8519P3BNL does not come up on Fortiweb 600D.

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