

# *How to Mitigate Vulnerability CVE-2024-38063 on R&S Instruments*

Version 1.1 (2024-09-25)

This document describes the procedures to mitigate the security vulnerability [CVE-2024-38063](#) on Microsoft Windows-based R&S instruments.

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# 1 Affected Instruments

The following table shows an overview of affected instruments, with

- X = Disabling IPv6 is recommended
- U = Update has been tested
- n/a = not applicable

Device	Windows 10 IoT Enterprise 1607 LTSC (2016) 32-bit	Windows 10 IoT Enterprise 1607 LTSC (2016) 64-bit	Windows 10 IoT Enterprise 1809 LTSC (2019) 64-bit	Windows 10 IoT Enterprise 21H2 LTSC (2021) 64-bit
CMA180			X	X
CMW100CTR			U	U
CMW270, CMW280, CMW290, CMW500, CMWC, CMW-CU			U	
FPS		U		
FPL1000		U		U
EPL1000				U
FSW, FSWP, FSPN, ESW, FSWT		U		U
FSMR3000		U		n/a
FSV, FSVA, FSVR, ESR, ESRP (FMR11)	X			
FSV3000, FSVA3000		U		n/a
ZNA		X		U
ZVA			X	
ZNB		X	X	U
ZND, ZNBT		X		U
ZNL, ZNLE		X		U
RTP		U		
RTO6		U		
RTO2000		U		
RTE		U		
QAR50			U	

## 1.1 Other devices not listed above

Please contact the R&S Customer Support.

## 2 Mitigation Measures

Mitigation can be achieved by either disabling IPv6 or applying the security update.

## 3 Disabling/Enabling IPv6

### 3.1 Registry Key

The IPv6 functionality can be configured by modifying the following registry key:

- Location: HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip6\Parameters\
- Name: DisabledComponents
- Type: REG\_DWORD
- Value:
  - o 0x00 (IPv6 enabled)
  - o 0xFF (IPv6 disabled)

### 3.2 Command Prompt Instruction: Disable IPv6

1. Open Command Prompt as administrator
2. Run the following command to disable IPv6:

```
reg add
"HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip6\Parameters
" /v DisabledComponents /t REG_DWORD /d 255 /f
```

3. Reboot the device

### 3.3 Command Prompt Instruction: Enable IPv6

1. Open Command Prompt as administrator
2. Run the following command to enable IPv6:

```
reg add
"HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip6\Parameters
" /v DisabledComponents /t REG_DWORD /d 0 /f
```

3. Reboot the device

## 4 Applying the Security Update

### 4.1 Download Updates to USB Flash Drive

Operating System	Update	Download Link
Windows 10 IoT Enterprise 1607 LTSC (2016) 32-bit	<a href="#">KB5041773</a>	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2024/08/windows10.0-kb5041773-x86_297969a6fe4a2a3f545ef49ed0f004944a5ea5e3.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2024/08/windows10.0-kb5041773-x86_297969a6fe4a2a3f545ef49ed0f004944a5ea5e3.msu</a>
	Prerequisite: <a href="#">KB5041576</a>	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2024/08/windows10.0-kb5041576-x86_68ac33395cfd7e042cf80b21cd131076f25c1572.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2024/08/windows10.0-kb5041576-x86_68ac33395cfd7e042cf80b21cd131076f25c1572.msu</a>
Windows 10 IoT Enterprise 1607 LTSC (2016) 64-bit	<a href="#">KB5041773</a>	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2024/08/windows10.0-kb5041773-x64_9d8edb92e5824ddc53e1621da1e59c6f8f6e8455.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2024/08/windows10.0-kb5041773-x64_9d8edb92e5824ddc53e1621da1e59c6f8f6e8455.msu</a>
	Prerequisite: <a href="#">KB5041576</a>	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2024/08/windows10.0-kb5041576-x64_1a0ef1e10819df75d0cc5503b53caf8c9418f7ca.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2024/08/windows10.0-kb5041576-x64_1a0ef1e10819df75d0cc5503b53caf8c9418f7ca.msu</a>
Windows 10 IoT Enterprise 1809 LTSC (2019) 64-bit	<a href="#">KB5041578</a>	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2024/08/windows10.0-kb5041578-x64_805a87fa976cf1a634ca916575b7896df7a646e3.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2024/08/windows10.0-kb5041578-x64_805a87fa976cf1a634ca916575b7896df7a646e3.msu</a>
	Prerequisite: <a href="#">KB5005112</a>	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2021/08/windows10.0-kb5005112-x64_81d09dc6978520e1a6d44b3b15567667f83eba2c.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2021/08/windows10.0-kb5005112-x64_81d09dc6978520e1a6d44b3b15567667f83eba2c.msu</a>
Windows 10 IoT Enterprise 21H2 LTSC (2021) 64-bit	<a href="#">KB5041580</a>	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2024/08/windows10.0-kb5041580-x64_b3de56748ec2ba6f57af49e58690585ed0c385ec.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2024/08/windows10.0-kb5041580-x64_b3de56748ec2ba6f57af49e58690585ed0c385ec.msu</a>
	Prerequisite: <a href="#">KB5005260</a> (pre-installed by default)	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2021/08/ssu-19041.1161-x64_e7e052f5cbe97d708ee5f56a8b575262d02cfaa4.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2021/08/ssu-19041.1161-x64_e7e052f5cbe97d708ee5f56a8b575262d02cfaa4.msu</a>

## 4.2 Boot your device with administrator privileges

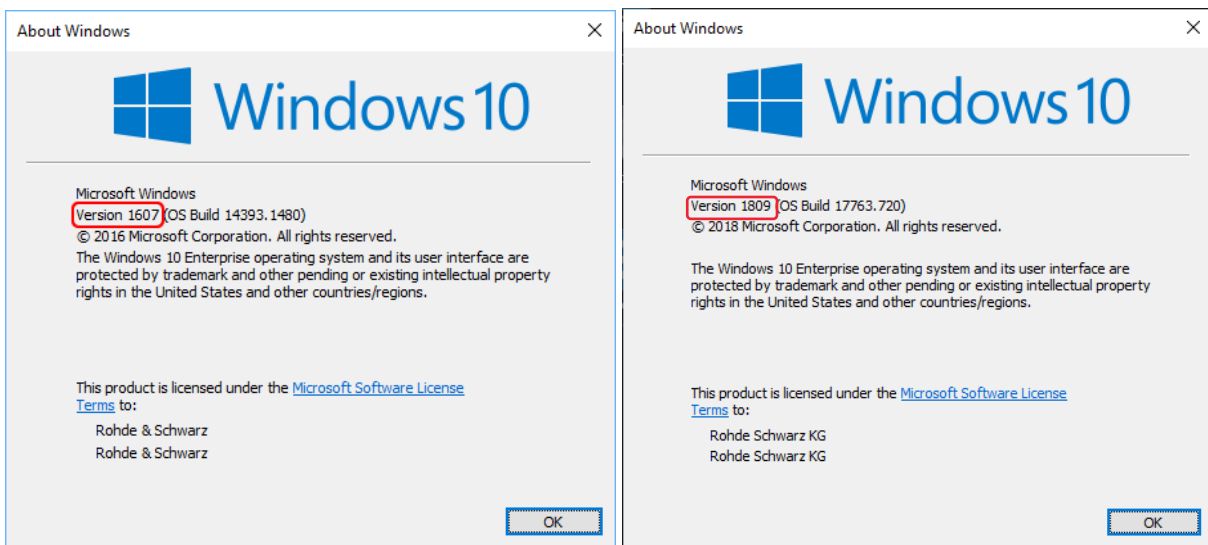
Boot your R&S device in an account with administrator privileges. Please refer to the manual of the device for details.

## 4.3 Determine the operating system

Some instruments are available with different operating system variants.

On Windows 10 devices, determine the specific version of Windows 10 by hitting the Windows-Key (⊞) and "R" at the same time. Type "winver" into the Run dialog and press <ENTER>.

You should see the Windows Version in the About Windows Dialog:



## 4.4 Windows Update

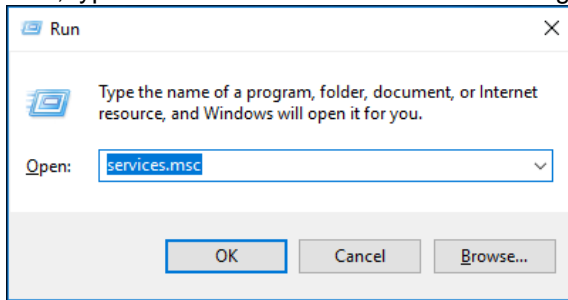
Before installing the update, the Windows Update service needs to be enabled.

Note: This is particularly relevant for Windows 10 IoT Enterprise 1607 LTSB devices, as the Windows Update functionality is often disabled by the service rather than through a policy.

**Windows 10 might try to download all available updates from a WSUS server. Please disconnect the device from the network in order to assure that only the relevant updates listed above are installed.**

## 4.5 Enable Windows Update Service

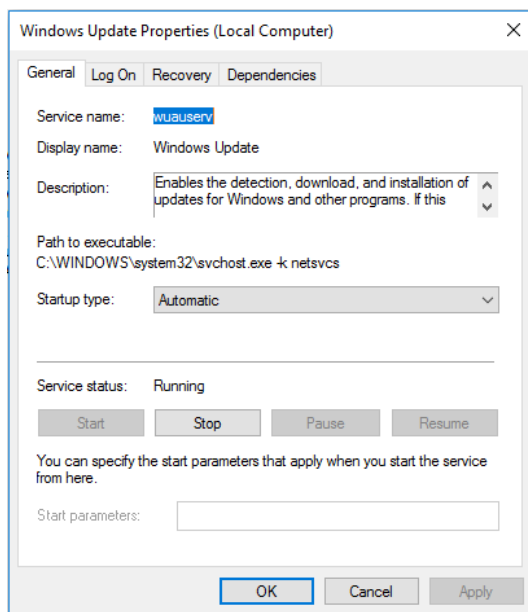
- To open the "Services" Management Console press the Windows-Key (⊞) and "R" at the same time, type "services.msc" into the Run dialog and press <ENTER>.



- Scroll down to the "Windows Update" entry and verify that the service is started.

Windows Search	Provides co...	Running	Automatic (D...	Local System...
Windows Time	Maintains d...		Manual (Trig...	Local Service
Windows Update	Enables the ...	Running	Automatic (T...	Local System...
WinHTTP Web Proxy Auto-...	WinHTTP i...	Running	Manual	Local Service
Wired AutoConfig	The Wired		Manual	Local Syste

- If the service is not started, double-click on the "Windows Update" entry.
- Select Startup type: "Automatic" and then press the "Apply" button.
- Start the service by clicking on the "Start" button.



## 4.6 Install the Update

Connect a keyboard, mouse and the USB flash drive to the R&S device, use Windows Explorer to navigate to the USB Flash Drive and install the update.

## 4.7 Verify the Installation

After installing the update on the R&S device, a final verification is possible via the “View update history” dialog in Windows 10.

Select “Start” > “Settings” > “Update & Security” > “View update history”.

Check if all necessary updates are installed.

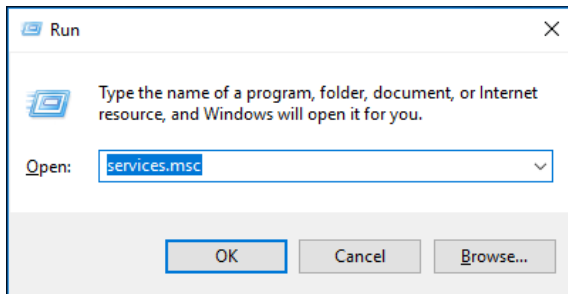
*Note: Please be aware that coming monthly rollups may lead to the situation that the KB is no longer listed. Upcoming monthly rollups may already include previous updates.*



## 4.8 Disable Windows Update Service

### Restore the default setting of the Windows Update Service:

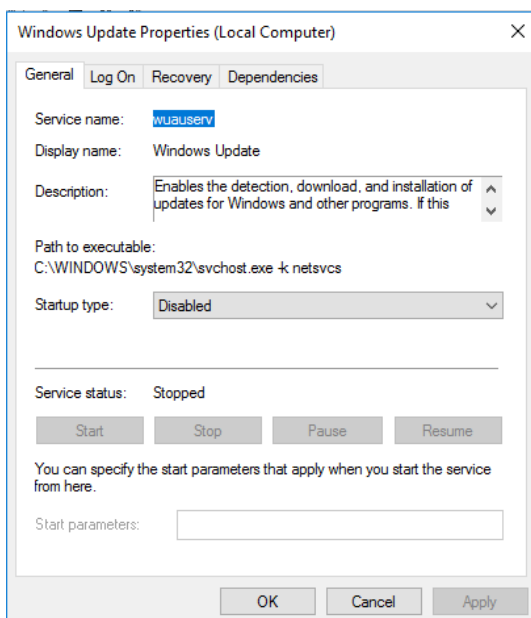
- To open the "Services" Management Console, press the Windows-Key (⊞) and "R" at the same time, type "services.msc" into the Run dialog and press <ENTER>.



- Scroll down to the "Windows Update" entry and double-click on it.

Windows Search	Provides co...	Running	Automatic (D...	Local System...
Windows Time	Maintains d...		Manual (Trig...	Local Service
<b>Windows Update</b>	<b>Enables the ...</b>	<b>Running</b>	<b>Automatic (T...</b>	<b>Local System...</b>
WinHTTP Web Proxy Auto-...	WinHTTP i...	Running	Manual	Local Service
Wired AutoConfig	The Wired		Manual	Local Syste

- Select Startup type: "Deactivated" and then press the "Apply" button.
- Stop the service by clicking on the "Stop" button.



## 5 Customer Support

### Technical support – where and when you need it

For quick, expert help with any Rohde & Schwarz product, contact our customer support center. A team of highly qualified engineers provides support and works with you to find a solution to your query on any aspect of the operation, programming or applications of Rohde & Schwarz products.

### Contact information

Contact our customer support center at [www.rohde-schwarz.com/support](http://www.rohde-schwarz.com/support) or follow this QR code:



Figure 5-1: QR code to the Rohde & Schwarz support page