

How to Apply Patches against the Vulnerability CVE-2019-0708 (“BlueKeep”)

V1.3 2019-07-11

This document describes the procedure how to apply the Microsoft patches to R&S devices running Windows XP or Win7 operating systems in order to harden against CVE-2019-0708 exploits.

Please be aware, that only Windows XP (Embedded) and Windows 7 instruments are affected. Windows 10 instruments are not affected.

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1 Download Patches to USB Memory Stick

| Operating System | Download Link |
|---------------------------|---|
| Windows XP (Embedded) SP3 | http://download.windowsupdate.com/c/csa/csa/secu/2019/04/windowsxp-kb4500331-x86-custom-enu_d7206aca53552fececf72a3dee93eb2da0421188.exe |
| Windows Embedded 7 32-bit | http://download.windowsupdate.com/d/msdownload/update/software/secu/2019/05/windows6.1-kb4499175-x86_6f1319c32d5bc4caf2058ae8ff40789ab10bf41b.msu |
| Windows Embedded 7 64-bit | http://download.windowsupdate.com/d/msdownload/update/software/secu/2019/05/windows6.1-kb4499175-x64_3704acff45ddf163d8049683d5a3b75e49b58cb.msu |

2 Check Applicable Instruments

2.1 Instruments, where the patch has been tested and released

The following table shows an overview of applicable instruments:

| Device | Windows XP (Embedded) SP3 | Windows Embedded 7 32-bit | Windows Embedded 7 64-bit |
|--|---------------------------|---|---|
| SFE, SFC | X | | |
| BTC | | X | |
| UPV, UPP | X | X | |
| AFQ100A, AFQ100B | X | | |
| SMU200A, SMJ100A, SMATE200A, AMU200A | X | | |
| DVMS | X | X (Windows Update Service activation needed) | |
| ETL | X | | |
| ESL, FSL, ZVL families | X | | |
| FPS | | | X (Windows Update Service activation needed) |
| FSW, FSWG, FSWP, ESW, FSWT | | | X (Windows Update Service activation needed) |
| FSV, FSVA, FSVR, ESR, ESRP (FMR9, FMR11) | | X (Windows Update Service activation needed) | |
| FMR | X | | |
| ZVA | X | X | |
| ZVL | X | | |
| ZNB | | X | X |
| ZND, ZNBT | | | X |
| IQR | X | | |
| RTO2000 | | | X (Windows Update Service activation needed) |

| | | | |
|---------------|---|---|---|
| RTE | | | X (Windows Update Service activation needed) |
| RTO1000 | | | X (Windows Update Service activation needed) |
| VTS, VTE, VTC | | X (Windows Update Service activation needed) | |
| DVSG | X | | |

2.2 Instruments, where upgrade kits from Window XP to Windows 7 are recommended

| Device |
|----------------------------------|
| FSVR, RTO1000 with Windows XP |

Please contact the R&S Service Center.

2.3 Instruments, where upgrade kits to Windows 10 are recommended

| Device |
|----------------------|
| FSV, FSVA, ESR, ESRP |
| ZNB, ZND, ZNBT |

Please contact the R&S Service Center.

2.4 Other instruments not listed above

Please contact the R&S Customer Support.

3 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.

Note: The predefined user "instrument" is a suitable administrator account.

4 Determine the operating system

Some instruments are available with two different operating system variants. During startup of the instrument, it shows "Windows XP (Embedded)" or "Windows Embedded Standard 7". For Windows 7 it is necessary to check if a 32 or 64 Bit version is used. This can be checked under "Control Panel" -> "System and Security" -> "System". The following is an example for Windows 7 with 64-bit.

| System | |
|-------------------------|---|
| Rating: | System rating is not available |
| Processor: | Intel(R) Core(TM)2 Duo CPU T9400 @ 2.53GHz 2.53 GHz |
| Installed memory (RAM): | 7,93 GB |
| System type: | 64-bit Operating System |
| Pen and Touch: | No Pen or Touch Input is available for this Display |

5 Install the Patch

Connect a keyboard and the USB memory stick to the R&S device, start explorer and execute the patch file.

On some instruments, it may be required to enable Windows Update Service first and disable it afterwards. These instruments are marked in chapter 2.1 as “Windows Update Service activation needed”

See chapter 7 for details on activating the Windows Update Service.

After installation of the patch, a reboot is required.

6 Verify the Patch

6.1 Windows 7

After installation of the patch on the R&S Device a final verification is possible via the “Installed Updates” Dialog in Windows 7.

“Control Panel”-> “Programs and features” -> “Installed Updates”

Check if Patch **KB4499175** is installed.

Note: Please be aware that coming rollup patches may lead to the situation, that the KB is no longer listed. The rollup Patch from May which already includes the fix is KB4499164.

6.2 Windows XP

After installation of the patch on the R&S Device a final verification is possible via the “Installed Updates” Dialog in Windows.

“Control Panel”-> “Programs and features” -> “Installed Updates”

or

“Control Panel” -> Add Remove Programs” see Windows- Software Updates

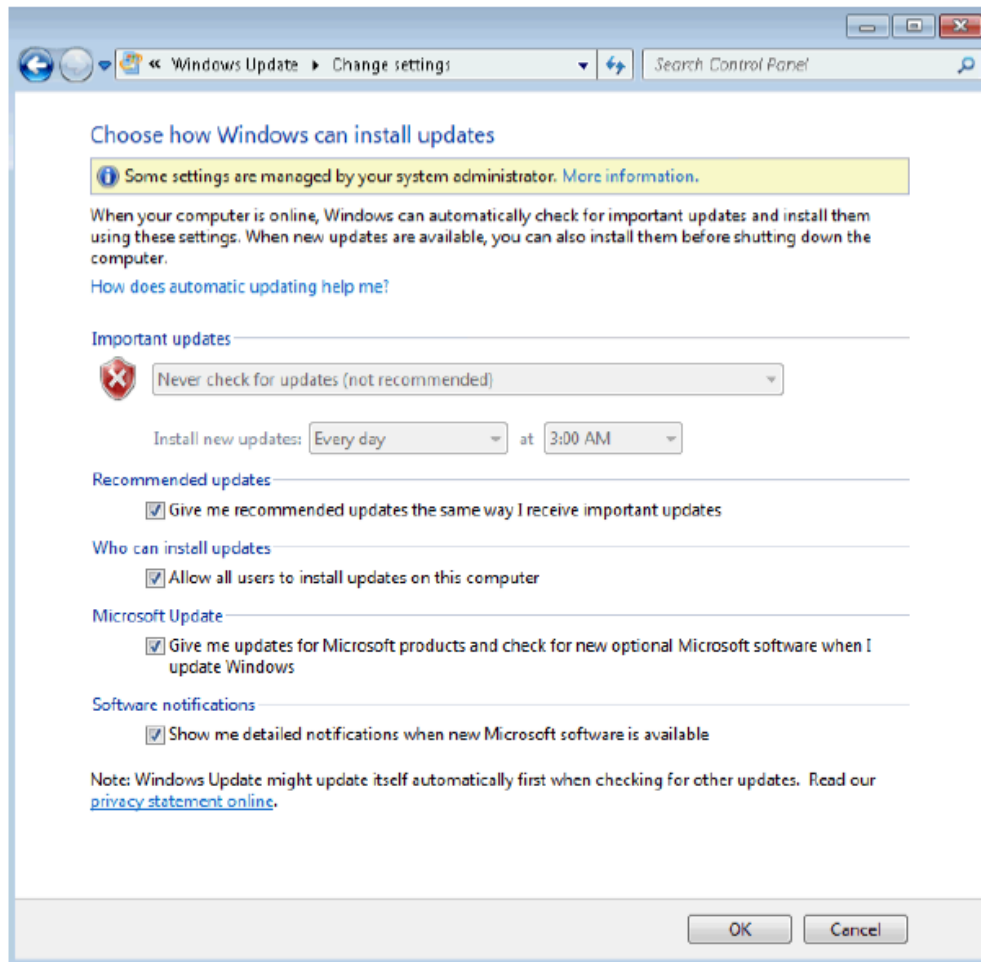
Check if Patch **KB4500331** is installed.

7 Enabling and Disabling of Windows Update Service

Note: This is not needed for all instruments. Please refer to the table given in chapter 2.1.

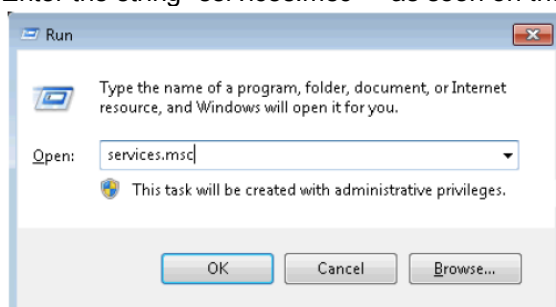
Note: The enabling of the Windows update service does **not yet** install any security updates.

The installation of the patch might be blocked because of the Windows Update settings of the Windows embedded environment of the devices: See the screenshot below: Important updates set to “Never check for updates”.



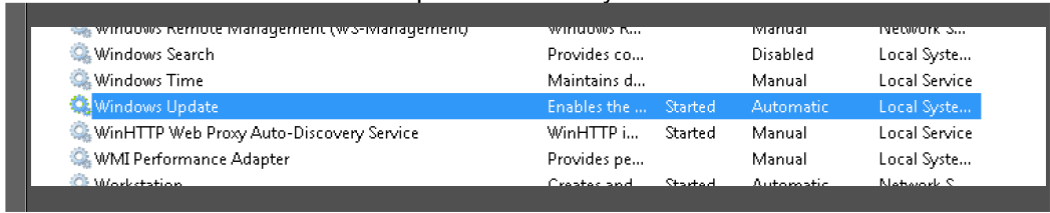
7.1 Enable Windows Update Service

- Activate the “Run” window: enter the keys “WIN” and “R” at the same time
- Enter the string “services.msc” – as seen on the following screenshot



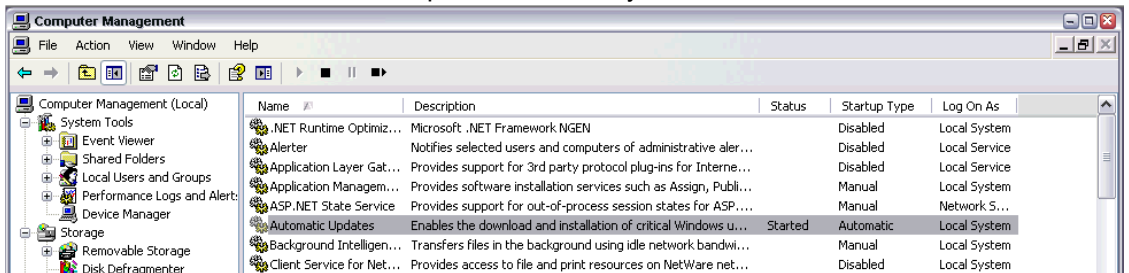
- Press the “OK” button

- For Windows 7
 - Scroll down to the line “Windows Update” and verify that the service is started.



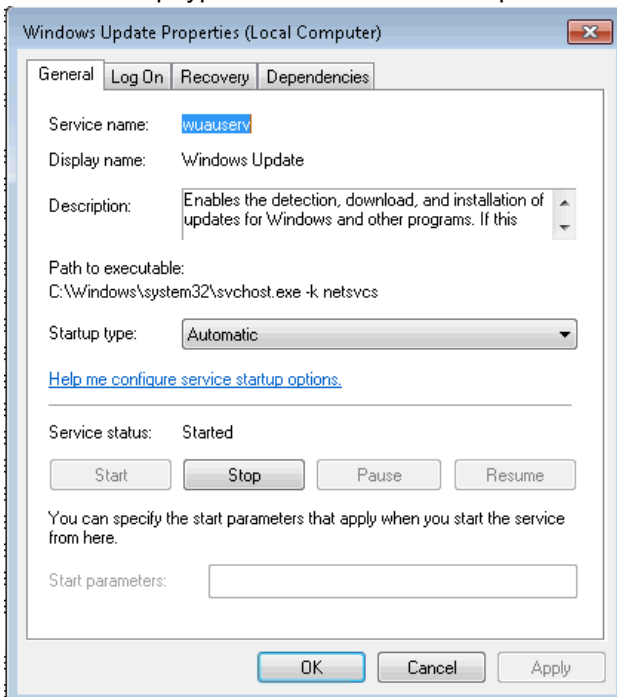
If the service is not started double click on the line “Windows Update”

- For Windows XP
 - Scroll down to the line “Automatic Updates” and verify that the service is started.



If the service is not started double click on “Automatic Updates”

- Select Startup type: “Automatic” and then press the key “Apply”

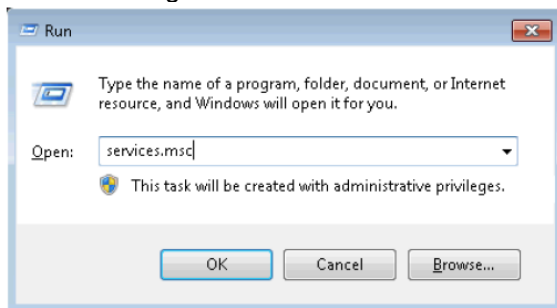


- Start the service by click on the “Start” button

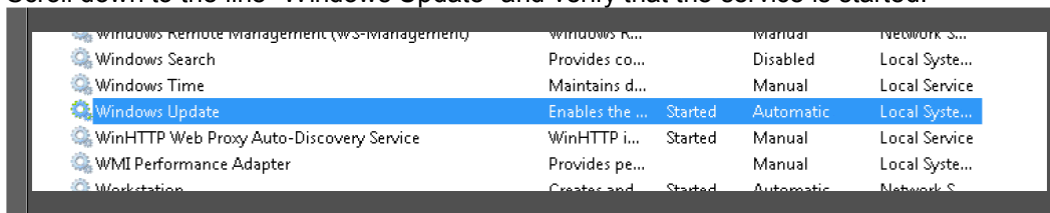
7.2 Disable Windows Update Service

Restore the default setting of the Windows Update Service:

- Activate the “Run” window: enter the keys “WIN” and “R” at the same time
- Enter the string “services.msc” – as seen on the following screenshot

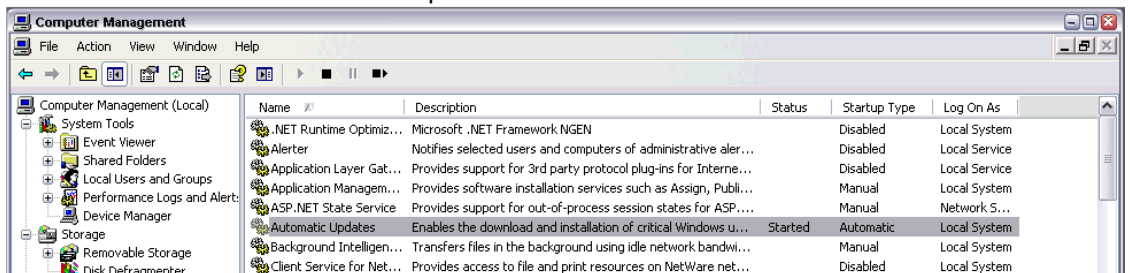


- Press the “OK” button
- For Windows 7
 - Scroll down to the line “Windows Update” and verify that the service is started.



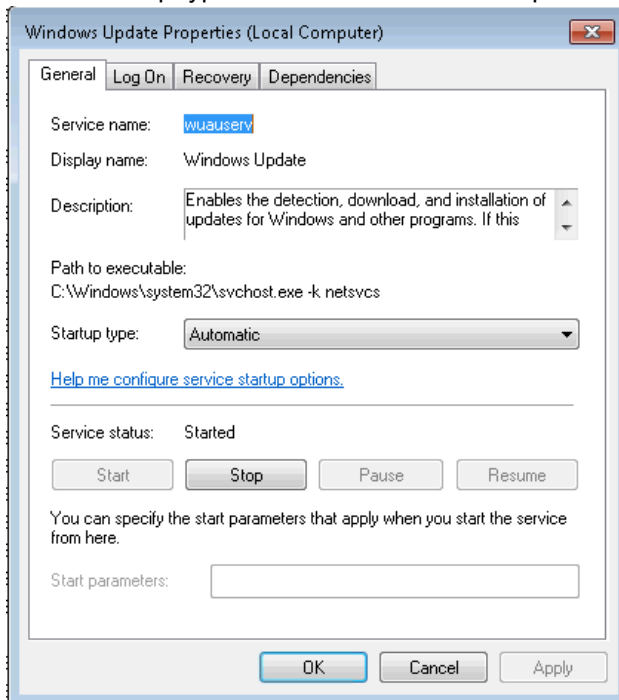
If the service is not started double click on the line “Windows Update”

- For Windows XP
 - Scroll down to the line “Automatic Updates”.



Double click on the “Automatic Updates” service

- Select Startup type: “Deactivated” and then press the key “Apply”



- Stop the service by click on the “Stop” button

8 Customer Support

Technical support – where and when you need it

For quick, expert help with any Rohde & Schwarz equipment, contact one of our Customer Support Centers. A team of highly qualified engineers provides telephone support and will work with you to find a solution to your query on any aspect of the operation, programming or applications of Rohde & Schwarz equipment.

Up-to-date information and upgrades

To keep your instrument up-to-date and to be informed about new application notes related to your instrument, please send an e-mail to the Customer Support Center stating your instrument and your wish. We will take care that you will get the right information.

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