

## Security Patches for Mindray Products Running on Windows OS (April, 2022)

**CONTENT**

To Whom It May Concern,

Below content is only for your information.

**Introduction:**

We have reviewed the applicability to Mindray products of the Microsoft Windows security patches released in April, 2022. The following CVEs have been evaluated:

**CVE Identifiers**

- CVE-2022-26920 Windows Graphics Component Information Disclosure Vulnerability
- CVE-2022-26919 Windows LDAP Remote Code Execution Vulnerability
- CVE-2022-26918 Windows Fax Compose Form Remote Code Execution Vulnerability
- CVE-2022-26917 Windows Fax Compose Form Remote Code Execution Vulnerability
- CVE-2022-26916 Windows Fax Compose Form Remote Code Execution Vulnerability
- CVE-2022-26915 Windows Secure Channel Denial of Service Vulnerability
- CVE-2022-26914 Win32k Elevation of Privilege Vulnerability
- CVE-2022-26911 Skype for Business Information Disclosure Vulnerability
- CVE-2022-26904 Windows User Profile Service Elevation of Privilege Vulnerability
- CVE-2022-26903 Windows Graphics Component Remote Code Execution Vulnerability
- CVE-2022-26831 Windows LDAP Denial of Service Vulnerability
- CVE-2022-26829 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26828 Windows Bluetooth Driver Elevation of Privilege Vulnerability
- CVE-2022-26827 Windows File Server Resource Management Service Elevation of Privilege Vulnerability
- CVE-2022-26826 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26825 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26824 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26823 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26822 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26821 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26820 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26819 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26818 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26817 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26816 Windows DNS Server Information Disclosure Vulnerability
- CVE-2022-26815 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26814 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26813 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26812 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26811 Windows DNS Server Remote Code Execution Vulnerability
- CVE-2022-26810 Windows File Server Resource Management Service Elevation of Privilege Vulnerability
- CVE-2022-26809 Remote Procedure Call Runtime Remote Code Execution Vulnerability

● CVE-2022-26808	Windows File Explorer Elevation of Privilege Vulnerability
● CVE-2022-26807	Windows Work Folder Service Elevation of Privilege Vulnerability
● CVE-2022-26803	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26802	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26801	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26798	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26797	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26796	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26795	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26794	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26793	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26792	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26791	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26790	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26789	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26788	PowerShell Elevation of Privilege Vulnerability
● CVE-2022-26787	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26786	Windows Print Spooler Elevation of Privilege Vulnerability
● CVE-2022-26785	Windows Hyper-V Shared Virtual Hard Disks Information Disclosure Vulnerability
● CVE-2022-26784	Windows Cluster Shared Volume (CSV) Denial of Service Vulnerability
● CVE-2022-26783	Windows Hyper-V Shared Virtual Hard Disks Information Disclosure Vulnerability
● CVE-2022-24550	Windows Telephony Server Elevation of Privilege Vulnerability
● CVE-2022-24549	Windows AppX Package Manager Elevation of Privilege Vulnerability
● CVE-2022-24547	Windows Digital Media Receiver Elevation of Privilege Vulnerability
● CVE-2022-24546	Windows DWM Core Library Elevation of Privilege Vulnerability
● CVE-2022-24545	Windows Kerberos Remote Code Execution Vulnerability
● CVE-2022-24544	Windows Kerberos Elevation of Privilege Vulnerability
● CVE-2022-24542	Windows Win32k Elevation of Privilege Vulnerability
● CVE-2022-24541	Windows Server Service Remote Code Execution Vulnerability
● CVE-2022-24540	Windows ALPC Elevation of Privilege Vulnerability
● CVE-2022-24539	Windows Hyper-V Shared Virtual Hard Disks Information Disclosure Vulnerability
● CVE-2022-24538	Windows Cluster Shared Volume (CSV) Denial of Service Vulnerability
● CVE-2022-24537	Windows Hyper-V Remote Code Execution Vulnerability
● CVE-2022-24536	Windows DNS Server Remote Code Execution Vulnerability
● CVE-2022-24534	Win32 Stream Enumeration Remote Code Execution Vulnerability
● CVE-2022-24533	Remote Desktop Protocol Remote Code Execution Vulnerability
● CVE-2022-24530	Windows Installer Elevation of Privilege Vulnerability
● CVE-2022-24528	Remote Procedure Call Runtime Remote Code Execution Vulnerability
● CVE-2022-24527	Windows Endpoint Configuration Manager Elevation of Privilege Vulnerability
● CVE-2022-24521	Windows Common Log File System Driver Elevation of Privilege Vulnerability
● CVE-2022-24513	Visual Studio Elevation of Privilege Vulnerability
● CVE-2022-24500	Windows SMB Remote Code Execution Vulnerability
● CVE-2022-24499	Windows Installer Elevation of Privilege Vulnerability

- CVE-2022-24498 Windows iSCSI Target Service Information Disclosure Vulnerability
- CVE-2022-24496 Local Security Authority (LSA) Elevation of Privilege Vulnerability
- CVE-2022-24495 Windows Direct Show - Remote Code Execution Vulnerability
- CVE-2022-24494 Windows Ancillary Function Driver for WinSock Elevation of Privilege Vulnerability
- CVE-2022-24493 Microsoft Local Security Authority (LSA) Server Information Disclosure Vulnerability
- CVE-2022-24492 Remote Procedure Call Runtime Remote Code Execution Vulnerability
- CVE-2022-24491 Windows Network File System Remote Code Execution Vulnerability
- CVE-2022-24490 Windows Hyper-V Shared Virtual Hard Disks Information Disclosure Vulnerability
- CVE-2022-24489 Cluster Client Failover (CCF) Elevation of Privilege Vulnerability
- CVE-2022-24488 Windows Desktop Bridge Elevation of Privilege Vulnerability
- CVE-2022-24487 Windows Local Security Authority (LSA) Remote Code Execution Vulnerability
- CVE-2022-24486 Windows Kerberos Elevation of Privilege Vulnerability
- CVE-2022-24485 Win32 File Enumeration Remote Code Execution Vulnerability
- CVE-2022-24484 Windows Cluster Shared Volume (CSV) Denial of Service Vulnerability
- CVE-2022-24483 Windows Kernel Information Disclosure Vulnerability
- CVE-2022-24481 Windows Common Log File System Driver Elevation of Privilege Vulnerability
- CVE-2022-24479 Connected User Experiences and Telemetry Elevation of Privilege Vulnerability
- CVE-2022-24474 Windows Win32k Elevation of Privilege Vulnerability
- CVE-2022-22008 Windows Hyper-V Remote Code Execution Vulnerability
- CVE-2022-21983 Win32 Stream Enumeration Remote Code Execution Vulnerability

For more details, please refer to the Microsoft website:

<https://portal.msrc.microsoft.com/en-us/security-guidance>.

### Impacted Mindray Products:

The following table lists the impacted device and those hotfixes determined to be applicable to each device:

Product	OS	Hotfix	Download website	Pre-installed patch
BeneVision CMS	Windows 10 Professional SP1 64bit 1809	KB5012647	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu</a>	KB5005112 KB5003243 KB4587735
	Windows Server 2019	KB5012647	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7</a>	KB5005112 KB5003243 KB4587735

			<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x86_59e0c3e402a5088a407894da98c7e9b87a69f20a.msu">d8507e7a53e31b.msu</a>	
	Windows 10 1607 for 32-bit	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x86_59e0c3e402a5088a407894da98c7e9b87a69f20a.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x86_59e0c3e402a5088a407894da98c7e9b87a69f20a.msu</a>	KB4498947 KB4132216
	Windows 10 1607 for x64-based	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216
	Windows Server 2012 R2	KB5012639	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows8.1-kb5012639-x64_3a6168057b11b31200c4ad9eb7cd268829e7e3be.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows8.1-kb5012639-x64_3a6168057b11b31200c4ad9eb7cd268829e7e3be.msu</a>	
	Windows Server 2016	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216
CMS Viewer	Windows 10 Professional SP1 64bit 1809	KB5012647	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu</a>	KB5005112 KB5003243 KB4587735
	Windows 10 1607 for 32-bit	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216
	Windows 10 1607 for x64-based	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216
	Windows Server 2012 R2	KB5012670	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows8.1-kb5012670-x64_07585eb5c24babfb0627903fc">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows8.1-kb5012670-x64_07585eb5c24babfb0627903fc</a>	

			<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secur/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu">1436a4a4ab54a82.msu</a>	
Hypervisor X	Windows 10 Professional SP1 64bit 1809	KB5012647	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secur/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secur/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu</a>	KB5005112 KB5003243 KB4587735
	Windows Server 2019	KB5012647	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secur/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secur/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu</a>	KB5005112 KB5003243 KB4587735
	Windows 10 1607 for 32-bit Systems	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secur/2022/04/windows10.0-kb5012596-x86_59e0c3e402a5088a407894da98c7e9b87a69f20a.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secur/2022/04/windows10.0-kb5012596-x86_59e0c3e402a5088a407894da98c7e9b87a69f20a.msu</a>	KB4498947 KB4132216
	Windows 10 1607 for x64-based Systems	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secur/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secur/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216
eGateway	Windows 10 Professional SP1 64bit 1809	KB5012647	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secur/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secur/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu</a>	KB5005112 KB5003243 KB4587735
	Windows Server 2019	KB5012647	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secur/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secur/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu</a>	KB5005112 KB5003243 KB4587735
	Windows 10 1607 for x64-based	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secur/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secur/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216
	Windows Server 2012 R2	KB5012639	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secur/2022/04/windows8.1-kb5012639-x64_3a6168057b11b31200c4ad9e">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secur/2022/04/windows8.1-kb5012639-x64_3a6168057b11b31200c4ad9e</a>	

			<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">b7cd268829e7e3be.msu</a>	
	Windows Server 2016	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216
MLDAP Server	Windows 10 1607 for x64-based	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216
	Windows Server 2012 R2	KB5012670	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows8.1-kb5012670-x64_07585eb5c24babfb0627903fc1436a4a4ab54a82.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows8.1-kb5012670-x64_07585eb5c24babfb0627903fc1436a4a4ab54a82.msu</a>	
	Windows Server 2016	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216
	Windows Server 2019	KB5012647	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu</a>	KB5005112 KB5003243 KB4587735
	Windows Server 2016	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216
Mobile Server	Windows Server 2012 R2	KB5012670	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows8.1-kb5012670-x64_07585eb5c24babfb0627903fc1436a4a4ab54a82.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows8.1-kb5012670-x64_07585eb5c24babfb0627903fc1436a4a4ab54a82.msu</a>	
	Windows Server 2019	KB5012647	<a href="https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu">https://catalog.s.download.windowsupdate.com/d/msdownload/update/software/secu/2022/04/windows10.0-kb5012647-x64_546889f367caf2a1edd79f5db7d8507e7a53e31b.msu</a>	KB5005112 KB5003243 KB4587735
	Windows Server 2016	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216

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iView	Windows 10 1607 for x64-based	KB5012596	<a href="https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu">https://catalog.s.download.windowsupdate.com/c/msdownload/update/software/secu/2022/04/windows10.0-kb5012596-x64_af3466a508184a5c1cb62cd6767a0bd2c66ddf01.msu</a>	KB4498947 KB4132216

### Conclusion and Recommendation:

We have validated that the Mindray products of the latest version can perform to specification with the applicable patches applied to the OS. It is recommended that the applicable patches defined in the table above should be installed on the affected Mindray products.

If you need information on how to obtain the approved patches or have any question, please feel free to contact Mindray regional service engineer or Mindray Service Department (email: [service@mindray.com](mailto:service@mindray.com)).

Thank you for your kind attention and cooperation.

Sincerely yours,

Mindray Service Department  
Shenzhen Mindray Bio-Medical Electronics Co., Ltd.

Release Time: 2022-5-22