

# Release Note NRSW 4.6.0.102

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**Project Name:** NRSW

## Abstract:

This document represents the release note for NetModule Router Software 4.6.0.102. It informs on new functionality, corrections and known issues of this software version of NetModule's router series.

## Keywords:

NetModule, Software Development, NRSW, Release Note

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## 1 Release Information

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### NetModule Router Software:

Version: **4.6.0.102**  
Date: **Apr 21, 2022**

### Supported Hardware:

NetModule Router	Hardware Version
NB800	V2.0 - V2.2, V3.2 (Rev. B02)
NG800	V3.0 - V3.1
NB1600 (*)	V1.0 - V3.3
NB1601	V1.0 - V1.6
NB1800	V2.4 - V2.6
NB1810	V2.4 - V2.6
NB2700 (*)	V1.0 - V2.7
NB2710 (*)	V1.0 - V2.7
NB2800	V1.0 - V1.4
NB2810	V1.2
NB3700 (*)	V2.0 - V4.4
NB3701	V1.0 - V1.10
NB3710 (*)	V2.0 - V4.3
NB3711 (*)	V1.0 - V1.5
NB3720 (*)	V2.0 - V4.3
NB3800	V1.0 - V1.10

(\*) Please note that release 4.6 will be the last LTS version of NRSW for this routers. If you still use this hardware please get in touch with our sales team. Release 4.6 will be supported until end of 2024.

### Unsupported Hardware:

**NetModule Router**  
NB1300 Series  
NB2200 Series  
NB2300 Series  
NB2500 Series  
NB2600 Series

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## 2 New Features

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Case-#	Description
59655	<b>CLI improvements</b> The command line interface now shows active DHCP leases in status output.
70636	<b>Change PLMN without global WWAN restart</b> Changing the allowed PLMN on one WWAN module triggered a restart of all WWAN connections on all modules. This was changed. An ongoing WWAN connection is not interrupted by PLMN change on another connection.
77230	<b>Increase number of Ethernet WAN links</b> The maximum number for LAN or VLAN based WAN interfaces was increased to 10.
77573	<b>Random certificate key</b> On initial login from factory state a random key is generated to store generated and uploaded key encrypted internally. In the past a dedicated key had to be configured. This is still possible.
77804	<b>Number of static multicast routes increased</b> It is now possible to configure up to 10 static multicast routes.
78085	<b>GUI improvements</b> The WWAN configuration via list of known APN does now allow to select IP version for the connection.

### 3 Security Fixes

The following security relevant issues have been fixed.

Case-#	Description
74452	<p><b>Additional HTTP Security Header added to web interface</b></p> <p>The HTTP Content-Security-Policy response header whitelists resources the user agent is allowed to load for a given page. This helps guard against cross-site scripting attacks (XSS).</p>
78025	<p><b>Security Bug-Fixes for libexpat</b></p> <p>The open source library is used in context with ITxPT in our software.</p>
78026	CVE-2018-20843 fixes a potential Denial-Of-Service attack.
78028	CVE-2019-15903 fixes a potential heap overflow.
78029	CVE-2022-22822 to CVE-2022-22827 fix several potential integer overflows.
78030	CVE-2021-46143 fixes a potential integer overflow.
78031	CVE-2021-45690 fixes an issue with potential left shifts by 29 places or more. CVE-2022-23852 fixes a potential integer overflow.
78103	<p><b>Linux kernel security patches</b></p> <p>CVE-2022-0492 fixes a missing capabilities check for cgroups.</p>
78106	<p><b>Security issues fixed in BusyBox package</b></p> <p>CVE-2018-20679 and CVE-2019-5747: An out of bounds read in udhcp server, client and relay may allow a remote attacker to leak sensitive information from the stack by sending a crafted DHCP message.</p> <p>CVE-2018-1000500 and CVE-2021-42374 - CVE-2021-42386: These CVEs have been fixed in the source code even though they did not apply to the NRSW or were only exploitable by users with administrative status which have full access to the device anyway.</p>
78344	<p><b>OpenSSL security patches</b></p> <p>CVE-2021-4160: Actually NRSW was not affected because this applies to MIPS hardware only. Never the less we applied the patch in case we ever adopt our system to this hardware. For existing routers running NRSW on ARM or PPC this should have no impact at all.</p> <p>CVE-2022-0778 fixed possible remote denial of service attack when parsing certificates. In NRSW only users with administrative rights may install certificates. Therefor the severity is considered low.</p>
78803	
78954	<p><b>CVE-2018-25032 zlib denial of service</b></p> <p>The compression library zlib was vulnerable to a memory corruption when compressing input with distant matches. The upstream patches were back-ported to NRSW.</p>

## 4 Fixes

The following issues and problems have been fixed.

Case-#	Description
74299	<p><b>OpenVPN</b> Due to an update of openssl, older configurations with ciphers like md5 were no longer accepted which broke backwards compatibility. This issue has been fixed.</p>
74590 75393 75394 75701 75946 77099 77337 77487 77591 77595 77596 78157 78477 78742	<p><b>GUI improvements</b> The initial password setup did not deny non-ASCII characters in the user password. Never the less these characters were not handled correctly resulting in a device where the user could not log in. This was fixed. Now non-ASCII characters are rejected with an appropriate error message. The tabbing links under System - Settings were broken. This was fixed. If a 3rd party software package was published under more than one license the link to the second license text was broken. This was fixed. The web interface WAN status page did not show IPv6 address. This was fixed. A failure was fixed that prevented to set up ToS based extended routing filters. The web interface showed a misleading message when a new WWAN connection assigned a second SIM card to a WWAN module. The message was corrected. Links to support web sites for trouble shooting were updated. Some eUICC profiles could not be imported via GUI interface. This was due to an invalid integrity check of the activation code. This was fixed. A WWAN network Scan always showed results linked to SIM1 even if another SIM was configured and used for the network scan. This was fixed. Not yet applied IPsec tunnel configurations could not be deleted via web interface. This was fixed. An Ethernet WAN link was not removed from the WAN link list if the corresponding Ethernet interface was bridged to another logical LAN interface. This was fixed. The system status page did not show the correct system power supply voltage range. The value was changed to meet the requirements from the manual and the specification plate. It was not possible to set client routes while the OpenVPN server was enabled. This was fixed. Some GUI input fields escaped HTML characters twice. This was fixed.</p>
74832	<p><b>WLAN AP configuration with automatic channel selection could fail</b> In some situations the WLAN Access-Point with automatic channel selection did not start up correctly due to a timing issue. This was fixed.</p>
74962	<p><b>Bridged VLAN blocks broadcast packets</b> The hardware switch chip drops VLAN tagged broadcast packets if a VLAN is bridged with an Ethernet interface. This was fixed by disabling the HW offload in such situations.</p>
75827	<p><b>SNMP v1 broken</b> With NRSW 4.5 and 4.6 the SNMP server did not answer on SNMP v1 requests any more. This was fixed.</p>
75844	<p><b>2nd DNS relay service does not work</b> Configurations with different DNS relay servers for different interfaces did not work. This was fixed.</p>
77270	<p><b>OpenVPN generated invalid client configuration files</b> The client configuration files generated by NRSW contained an invalid protocol entry making it impossible to use them for proper client configuration. This was fixed. You may have to regenerate client configuration files if you faced this problem.</p>
77576	<p><b>WLAN dual mode did not show up as WAN interface</b> If WLAN was configured in dual mode the client connection sometimes was not enabled as new WAN connection. This was fixed.</p>
77725	<p><b>WWAN connection broken after switch from 2G-first to 4G-only</b> It could happen that no WWAN connection came up after switching from 2G-first to 4G only even though both networks were available. This was fixed.</p>

Case-#	Description
77888	<b>DHCP requests failed if 802.1X authenticator was enabled</b> In some setups the DHCP server did not answer on DHCP requests on ports where the 802.1X authenticator was enabled. This was fixed.
78699	<b>Change of HTTP port failed</b> With NRSW 4.6.0.100 and 4.6.0.101 it was not possible to change the port of the HTTP server on some devices. This was fixed.
78966	<b>CLI improvements</b> Sending a techsupport to via email resulted in a crash of the CLI process. This was fixed.
78995	<b>IP passthrough failed</b> In some situations IP passthrough failed to propagate the IP settings correctly. This resulted in a reboot loop because the DHCP settings were considered invalid.

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## 6 Change History

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Version	Date	Name	Reason
1.0	Apr 21, 2022	Moritz Rosenthal	Final RN

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