

# Release Notes (93001306)

## Digi TransPort WR/LR Product Family

Version 4.6.0 - March, 2018

### INTRODUCTION

This is a production firmware release for the Digi TransPort WR and LR product family.

### SUPPORTED PRODUCTS

- Digi TransPort WR64
- Digi TransPort WR54
- Digi TransPort LR54
- Digi TransPort LR54W
- Digi TransPort LR54-FIPS
- Digi TransPort LR54W-FIPS

### SUPPORTED WEB BROWSERS

The following web browsers are supported with the web interface. The latest version and the previous version of each browser have been tested.

- Google Chrome
- Firefox
- Microsoft Internet Explorer 11
- Microsoft Edge

### KNOWN ISSUES

1. In the 4.6 release, IPsec tunnels using IP addresses as local and remote tunnel IDs can be unstable during the negotiation stage. Once the IPsec tunnel is up, it is stable. It is recommended that you use names for local and remote IDs rather than IP addresses. [XOS-3114]
2. With the default WAN configuration, if WAN1 state is configured to be off, the WAN2 (Cellular1-SIM1) interface will not come up. Instead the WAN4 (Cellular1-SIM2) will come up [XOS-1296].
3. On the WR64 and LR54 platforms, Wi-Fi module 1 supports both 2.4GHz and 5GHz bands, it is possible to configure a channel that is outside of the valid range for the band using the CLI (e.g. channel 11 for an AC band). This is not an issue with the Web UI interface [XOS-1267].
4. TransPort WR devices cannot be managed by Digi Remote Manager's Profile Manager if profiles have site-specific settings and custom firewall rules have been configured [TLR-4788].
5. When configuring a WAN interface with 'probe-interval' and 'timeout', the 'probe-interval' must be less than the timeout interval, otherwise the default route may disappear [XOS-250].

6. A fully qualified domain name (FQDN) cannot be used to configure a WAN interface “probe-host” [XOS-796].
7. A Wi-Fi client interface using WPA2-Personal security cannot connect with a Wi-Fi Access Point using mixed WPA/WPA2 Personal security [XOS-1851].
8. A few configuration and status values reported in DRM can be off by one due to a conversion error. [XOS-1869]
9. The “show ipsec” command may display zero bytes received and transmitted on IPsec tunnels even though data is being transferred through the tunnel.

## DIFFERENCES BETWEEN 3.2 AND 4.3 RELEASES

Apart from the new features and bug fixes that have been added as part of the 4.0, 4.1 and 4.2 releases which are documented in the **History** section, there are a few differences between the 3.2 and 4.3 releases.

1. In order to support multiple cellular modules, the **cellular** command has changed. Each **cellular** command instance now maps to a cellular module instead of a SIM. Each instance of the cellular command supports configuration for both SIMs associated with the cellular module.
2. In order to support multiple cellular modules, the **show cellular** command has been updated. The **show cellular** command now supports a summary mode that displays an abbreviated status of the available cellular interfaces. To get the detailed status of a cellular interface, the **show cellular <1|2> show** be used.
3. The **wifi** and **wifi5g** commands have been replaced with the **wifi-ap** command. On the LR54, the **wifi 1 – 4** interfaces have become the **wifi-ap 1 – 4** interfaces and **wifi5g 1 – 4** interfaces have become the **wifi-ap 5 – 8** interfaces.
4. The **show wifi** and **show wifi5g** commands have been replaced by the **show wifi-ap** command.
5. The **wifi-global** command has been replaced by the **wifi-module** command. The parameters have been updated to better support multiple Wi-Fi modules.
6. The **cellular state** and **wifi state** parameters have been replaced by the **wan state** parameter.
7. The **update modem** command has changed to **update module** command. The remaining parameters for the command are unchanged.
8. The Python version has changed from Python 3.6 to Python 3.5 from the v4.0 release onwards. This was due to a build system change rather than a technical issue with Python 3.6.

As part of the firmware update process, the affected configuration commands and parameters will be automatically updated to the new version in the 4.3 release. You should not have to make any configuration changes due to updating to the 4.3 release.

## HISTORY

### 4.6.0 – March, 2019

If you have a LR54 or LR54-FIPS that is running a pre-4.3.2 version, it must be updated to 4.3.2 before updating to 4.6.0`. To update to 4.3.2, see instructions in the 4.4.0 release information.

**Note: Once a LR54-FIPS device has been updated to 4.6.0, it cannot be downgraded to an earlier release except by using the device recovery process documented in the TransPort User Guide.**

## ENHANCEMENTS

1. Support for IPsec Failover has been added. The device will automatically renegotiate the IPsec tunnel using an alternative WAN interface if it detects the WAN interface it had been using has gone down.
2. Support for IPsec probing has been added. This allows the device to send probe packets through the IPsec tunnel and to renegotiate it if there are no probe responses for a configured period of time.
3. Support for Digi's VRRP+ has been added. This allows a VRRP backup device to monitor the VRRP master and to promote itself if a problem is detected.
4. The Digi Remote Manager (DRM) health metrics support has been updated to support a configurable rollup period. The rollup period is the amount of time the health metrics are aggregated before being reported to DRM. It is recommended that the health metrics sample and rollup periods are set to the same value.  
By default, health configurations on DRM use 1 hour rollup periods. For example, a system uptime of 3600 seconds is considered normal for a 1 hour period. If you are using health profiles, change the health profile settings on DRM when changing the rollup period to avoid false health alarms. For example, if changing the rollup period to 5 minutes, the system uptime rule would use 300 seconds for normal uptime.
5. The DMNR support has been updated to support a configurable reconnection timer.
6. Commands have been added to display and clear the ARP table.
7. An IPsec configuration has been added to force an IPsec tunnel to use NAT-T UDP encapsulation.
8. Support for OpenVPN TLS Authentication has been added.
9. The port forwarding source interface configuration now supports GRE and OpenVPN client interfaces.
10. The Python digidevice module has been updated to support a LED library to allow the device's LEDs to be controlled by Python applications.

11. Support for USB Serial adapters has been added. Devices using the prolific or FTDI chipsets are supported.

## **BUG FIXES**

1. An issue where IPsec ESP packets being incorrectly sent on a cellular WAN interface after failing over from an Ethernet WAN has been resolved. Depending on the carrier, this could result in being disconnected from the cellular network. (XOS-2974)
2. An issue with WAN SIM to SIM failover where it would not switch to the lower priority WAN interface if the higher priority WAN interface is still not operational has been resolved. (XOS-2868)
3. An issue with OpenVPN where static routes would not be reinstalled after an OpenVPN interface has gone down and then back up again has been resolved. (XOS-2964)
4. The “show ipsec” command has been updated to resolve a number of issues that could result in an error response. (XOS-2371)
5. An issue with IPsec ESP authentication SHA384 algorithm on the WR64 has been resolved. (XOS-2915)
6. An issue with the WR54 ignition sense support where the device would not power up after the configured delay once the ignition sense line goes high has been resolved. (XOS-3021)
7. An issue with location prefix being concatenated on second and subsequent data streams has been resolved. (XOS-2988)
8. The missing serial baud rate parameter has been added to the Web UI. (XOS-2865)

### **4.5.2.1 (WR64) – January, 2019**

### **4.5.1.4 (WR54, LR54, LR54-FIPS) – December, 2018**

If you have a LR54 or LR54-FIPS that is running a pre-4.3.2 version, it must be updated to 4.3.2 before updating to 4.5.1. To update to 4.3.2, see instructions in the 4.4.0 release information.

## **ENHANCEMENTS**

1. PySerial support for the Serial interface has been added.
2. Support for DHCP static IP address assignment has been added.
3. Support for DHCP options including user-class support has been added.

4. DMNR support has been updated so that it will automatically reconnect if the connection is dropped or rejected.

## BUG FIXES

1. A major security issue has been resolved. See CVE-2018-20162 for more information.
2. An issue with SIM PIN support has been resolved. (XOS-2791)
3. A Digi Remote Manager connection issue when using Wi-Fi client interfaces has been resolved. (XOS-2771)
4. An issue with forwarded TAIP messages with replaced vehicle IDs containing additional data has been resolved. (XOS-2752)
5. An issue with the WR64 where it could continually reboot at 2.5 minutes has been resolved. (XOS-2897)

### 4.5.0.12 – December, 2018

WR54 Firstnet production release.

### 4.4.0.23 (WR54, WR64) – October, 2018

#### 4.4.0.26 (LR54, LR54-FIPS)

If you have a LR54 or LR54-FIPS that is running a pre-4.3.2 version, it must be updated to 4.3.2 before updating to 4.4.0.

To update to 4.3.2

1. Download the firmware update file  
<http://ftp1.digi.com/support/firmware/transport/LR54/v4.3.2.24/lr54-migration-4.3.2.24.bin> (or <http://ftp1.digi.com/support/firmware/transport/LR54/v4.3.2.24/lr54-fips-migration-4.3.2.24.bin> for LR54-FIPS devices) to your PC.
2. In the Web UI, navigate to the System > Firmware Update page.  
In the Getting Started Wizard, navigate through to the Firmware Update page.
3. In the **Available Version** selection box, select **Upload firmware**.
4. Click on **Choose file** and select the downloaded 4.3.2 bin file
5. Click on **UPDATE FIRMWARE**.
6. Once the LR54 has rebooted, it can be updated to the 4.4 release using the Web UI or Getting Started Wizard which will automatically download the 4.4 release image.

## ENHANCEMENTS

1. IPsec support has been updated to add the following functionality:
  - a. IKEv2

- b. Multiple IP subnet support
  - c. SHA384 authentication for ESP and IKE (WR64 only)
  - d. AES GCM encryption for ESP and IKE (WR64 only)
  - e. Diffie-Hellman group 20 for ESP and IKE
  - f. Xauth authentication for client and server modes
  - g. IPsec debug now supports levels -1 to 4 to give better granularity and information when diagnosing IPsec issues
2. The location support on the WR64 has been updated to add the following functionality:
  - a. Accept NMEA and TAIP messages from an external device over UDP.
  - b. Forward NMEA and TAIP messages to external devices over UDP.

The **location gnss-state <on | off>** command has been changed to the **location state <off | gnss | server>** to support the new location server functionality. The default is still to enable the GNSS module. Any existing location configuration will automatically be converted to the new command.

3. Support for an NTP server has been added.

## BUG FIXES

1. An issue with the DHCP server messages being incorrectly routed when there is an IPsec tunnel with a remote subnet of 0.0.0.0/0 has been resolved. [XOS-2194]
2. A VRRP issue where an LR54 could become the master even if there were higher priority device already a master has been resolved. [XOS-2402]
3. An issue when configuring a LAN IP address and DHCP server parameters which could leave the DHCP giving out old gateway and DNS server information has been resolved. [XOS-1952]
4. The traffic analyzer support has been updated to correct decode GRE headers. [XOS-1141]

## 4.3.2.24 – September, 2018

### ENHANCEMENTS

1. Support for the Digi TransPort LR54, LR54W, LR54-FIPS and LR54W-FIPS platforms.

This is the first update to the LR54, LR54W, LR54-FIPS and LR54W-FIPS platforms since the 3.2.2 release.

If you are running an earlier version than 3.2.2, we recommend that you reboot your device and update to the 3.2.2 release first, before updating to 4.3.2 afterwards.

To update to 3.2.2:

1. Download the firmware update file  
<http://ftp1.digi.com/support/firmware/transport/LR54/v3.2.2.1/lr54-3.2.2.1.bin> (or

<http://ftp1.digi.com/support/firmware/transport/LR54/v3.2.2.1/lr54-fips-3.2.2.1.bin>

for LR54-FIPS devices) to your PC.

2. In the Web UI, navigate to the System > Firmware Update page.  
In the Getting Started Wizard, navigate through to the Firmware Update page.
3. In the **Available Version** selection box, select **Upload firmware**.
4. Click on **Choose file** and select the downloaded 3.2.2.1 bin file
5. Click on **UPDATE FIRMWARE**.

The firmware update from 3.2.2 to 4.3.2 will take approx. 3 minutes 40 seconds. If you are doing the firmware update via the Web UI or Getting Started Wizard, you may see the Web UI or Getting Started Wizard timeout as it waits for the LR54 to reboot. The Web UI or Getting Started Wizard may automatically reconnect once the LR54 has rebooted, or you may have to manually reconnect.

**Note: Once the LR54 device has been updated to v4.3.2, it cannot be downgraded to an earlier release.**

2. Support for IPv6 on the WAN and LAN interfaces has been added.
3. Support for SIM PINs has been added.
4. Support for DMNR has been added.
5. Support for GRE has been added.
6. Support for OpenVPN client compression has been added.
7. Support for configuration static routes over OpenVPN interfaces has been added.

#### **BUG FIXES**

1. The system time and timezone support has been updated to ensure that they are set together during bootup. [XOS-2353]
2. An issue with the LR54 HW crypto support that resulted in IPsec packets of certain sizes being dropped when received over cellular interfaces has been resolved. [XOS-2225]
3. The IPsec support has been updated to ensure a route added for an IPsec tunnel is correctly removed when the tunnel does down. [XOS-2303]

#### **4.2.1.8 – May, 2018**

#### **ENHANCEMENTS**

1. Surelink has been updated to support the resetting of the cellular module and the router when probing fails.

2. Support for policy based routing has been added.

#### **BUG FIXES**

1. A hotspot issue where data could not be sent over Wi-Fi client WAN interfaces has been resolved. [XOS-1926]
2. An issue when changing the LAN IP address using the Web UI changing the DHCP server settings has been resolved. [XOS-1952]
3. A syntax error in the geo-tagging of the Health Metrics messages when there is no fix has been resolved. [XOS-1871]
4. An issue with the drop down menus on the Port Forwarding Web UI page has been resolved. [XOS-1881]

#### **4.2.0.22 – April, 2018**

#### **ENHANCEMENTS**

1. Wi-Fi as WAN support has been added. The WR64 supports up to two active Wi-Fi WAN interfaces at once (one on each Wi-Fi module) although you can configure up to 16 Wi-Fi networks which can be assigned to one of the Wi-Fi WAN interfaces. The Wi-Fi WAN interface will scan through the assigned networks and connect to one that it finds.
2. The Health Metrics support has been updated to include Wi-Fi as WAN metrics, location tagging and configurable sampling periods.
3. Support for the Hotspotsystem.com service has been added.
4. A configurable cellular registration timeout has been added so that the cellular module will be reset if it cannot register with a network.
5. The WR64 can now be configured to disable the power button from powering down the device.
6. The gps command has been changed to be location to make it more extensible in the future.

#### **BUG FIXES**

1. A WAN failover probing issue where a device could switch back to a WAN interface without the probing being successful has been fixed [XOS-1294].
2. A WAN failover issue on a second cellular module where the device could not switch back to SIM1 after failing over to SIM2 has been fixed [XOS-1389].



3. An issue where Wi-Fi interfaces would remain active after being removed from a LAN interface has been fixed [XOS-1136].
4. The WAN probing issue where a reboot was required after changing the probe host has been fixed [XOS-356].
5. An issue with the hotspot support where the upstream and downstream bandwidth was being incorrectly throttled has been fixed [XOS-1521].
6. An issue where a SNMP walk of the Enterprise MIB would fail has been fixed [XOS-1677].
7. A memory error when using the help utility in the Python interactive has been fixed [XOS-1669].
8. An issue where an interface could be assigned to multiple WAN interfaces has been fixed [XOS-242].
9. An issue where the location GNSS state could spuriously turn off and on has been fixed [XOS-1415].

#### **4.1.0.11 – February, 2018**

##### **ENHANCEMENTS**

1. Wi-Fi Hotspot functionality
2. TLR functionality

#### **4.0.0.6 – December, 2017**

Initial WR64 production release.