

# TOC

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# 22.11.48.10 - November 2022, Feature

Release category: **Mandatory**

## New features

1. Updated the intelliFlow feature to integrate with Digi Remote Manager for aggregated insights and analytics [DAL-6656]
2. Add options under **Network** → **Routes** → **Routing services** for configuring Next-hop routing protocol (NHRP) advertisements [DAL-6711]
3. Added advanced watchdog to monitor critical services and automatically reboot if those services fail. The advanced watchdog also monitors system memory usage and will automatically log an error and reboot the device when memory usage exceeds 95%. The advanced watchdog settings can be configured and the **System** → **Advanced watchdog** section of the device's configuration [DAL-6094]
4. New MQTT Broker service with configuration options for:
  1. multiple MQTT clients with unique topics and authentication credentials
  2. pre-shared key encryption with multiple configurable keys
  3. pattern filtering for topic access control
5. EX50: New **System** → **FIPs** setting to limit encryption ciphers to FIPS 140-2 compliant algorithms (disabled by default) [DAL-6927]

6. TX54/TX64: ITxPT support has been added for the TX54 and TX64 platforms. The following services are supported
  - Time Service
  - GNSS Location Service
  - MQTT Broker Service
7. TX54/TX64: Support for a MQTT broker has been added to the TX54 and TX64 platforms.
8. TX64: Support for a FIPS mode has been added to the TX64 platforms.

## Enhancements

1. Add option under **VPN** → **IP Tunnels** → **Mode** for supporting mGRE tunnels [DAL-6709]
2. Added option under **Network** → **Advanced** settings to allow ICMP redirect messages (disabled by default) [DAL-6013]
3. Disable automatic modem/device firmware update options if using DigiRM [DAL-5738]
4. Added new Signal strength query interval setting under the **Network** → **Modems** configuration options to control how often the cellular modem is polled for signal strength and other network status updates (default is once every 30 seconds) [DAL-6272]
5. Display the LTE Cat-M or NB-IoT network type in the Admin CLI, local web UI, and Digi Remote Manager metrics for devices with ME910c1-WW modems [DAL-6155]
6. New **tail** and **grep** Admin CLI commands

7. Send container datapoints to DigiRM with the configured container name instead of container index number [DAL-6551]
8. Update wording of help text for the **Authentication** → **Methods** options in the device configuration settings to provide clarification on the mode of operation between authoritative versus non-authoritative options [DAL-6928]
9. Add modem scan timeout option to **Scan** window on the **Status** → **Modems** → **Carrier Scan** page in the web UI [DAL-6938]
10. Update error message in the web UI when restoring a configuration backup if the web connection is lost before a response is received [DAL-6553]
11. Added new **Data logging** options under **Serial** configuration settings to have any data sent/received on the serial port logged to the system logs in addition to whatever mode the serial port is in. The previous Web UI and CLI command that allowed the serial logs to be manually started, stopped and cleared have been removed.[DAL-6719]
  1. Remove options in the local web UI and Admin CLI for manually starting/stopping/clearing serial logs. These actions are now controlled under the Data logging configuration settings
12. DMVPN phase 1 spoke support has been added.
13. The automatic device and cellular module firmware update options are disabled if Digi Remote Manager in order to prevent conflicts with Digi Remote Manager configurations.
14. EX50: disable automatic modem firmware update in EM9191 driver by default [DAL-7014]

## Bug fixes

1. Fixed occasional issue where containers could not start due to a permissions issue [DAL-7041]
2. Fixed intermittent issue preventing configuration restores from the Admin CLI due to the output of the **show config cli\_format** command presenting configuration settings in the wrong order [DAL-6435]
3. Fixed issue in **digidevice.sms** python library where it couldn't process MMS messages [DAL-6952]
4. Fixed output of iperf speedtests in the Admin CLI [DAL-7001]
5. Disable GPS reading on ME910c1-WW modems to prevent CPU utilization spike from ModemManager [DAL-6575]
6. Fixed intermittent issue with SIM failover on devices with Telit LM940 modems [DAL-6569]
7. Fixed intermittent issue preventing modem firmware updates if no SIM card was inserted into the active SIM slot [DAL-6309]
8. Fixed issue resulting in slow upload speeds for clients connected to a Wi-Fi hotspot [DAL-6674]
9. Fixed intermittent issue in IPsec strict routing mode where a default route change could result in packets not going through the IPsec tunnel [DAL-6518]
10. Fixed intermittent issue where a device configured as a L2TP LAC would sometimes drop its tunnel and not automatically reconnect [DAL-5415]

11. Fixed intermittent issue where a device configured as a L2TP server would sometimes drop packets from L2TP client tunnels [DAL-6696]
12. Fixed issue preventing L2TP tunnels from running if they were configured with a name longer than 12 characters [DAL-6718]
13. EX15: Fixed intermittent issue resulting in system performance issues when heavily utilizing VPN tunnels on an EX15 device [DAL-6731 & DAL-5926]
14. EX50: Fixed issue preventing creation of password-protected backup configuration files on an EX50 device [DAL-6931]
15. TX54/LR54: An intermittent issue that caused system performance issues when heavily utilizing VPN tunnels on the TX54 and LR54 platforms has been resolved. [DAL-5926, DAL-6534, DAL-6731]

## **Deprecation**

1. TX64: The Bluetooth scanner support has been removed on the TX64 platforms. [DAL-6803]

# DAL OS firmware update guidelines

Digi recommends that users of DAL OS devices update firmware in Digi Remote Manager.



TIP If you are updating many routers, see [Best practice | Update the firmware on multiple routers using a template](#).

It is also recommended that you review the following:

- Release information
- [What's new](#) and [release notes](#) for the current firmware version running on your devices, as well as any newer ones as this information may affect your update plan.

# Known issues

- **TX54 product models**

The Serial status and statistics for the TX54 are incorrect on the Web UI and CLI (DAL-5763).

- **Bridging traffic from devices connected on an Ethernet port or Wi-Fi AP**

Due to the changes in the firewall, it is currently not possible to bridge traffic from devices connected on an Ethernet port or Wi-Fi AP in a bridged interface to a remote IP device via a gateway connected to an Ethernet port in the same bridged interface [DAL-9799].

- **IPsec using Default Router as the Local Endpoint**

There is an issue with IPsec where the tunnel will not come up when the default route is used as the Local Endpoint and the tunnel is not acting as the initiator. Specifying the interface type for the local endpoint should resolve the issue. [DAL-11361].

- **SSH / SCP login slow when FIPS mode is enabled**

Logging into SSH or SCP when FIPS mode is enabled can take more than 20 seconds. [DAL-12606].

# Primary Responder mode considerations

DAL OS 23.9 and later supports a **PR<sup>1</sup>** mode that can be enabled on any device. When enabled, the device acts as a Primary Responder PR device with a security-hardened, feature-restricted firmware targeted to comply with AT&T FirstNet® and Verizon ResponseVerify™ security requirements.

Features not available	Features available but disabled by default	Features enabled when PR mode is enabled
Telnet	SSH*	FIPS mode
Raw TCP listeners for serial ports	Wi-Fi pre-configured access points	
Wi-Fi WPA1 encryption	Internal serial console port	
Backup configuration file restore	USB ports	

\*For DAL OS 25.8 feature release and newer, Primary Responder mode now requires key-based SSH authorization.

## *Additional considerations*

- Users are prompted to enable two-factor authentication.
- A notification will appear in both the Web UI and CLI if the DAL device has Primary Responder mode enabled, but there are local users who do not have two-factor authentication enabled.

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<sup>1</sup>Primary responder

- The system `custom-default-config` CLI command available in release 24.12 cannot be run in Primary Responder mode.

# Devices that use DAL OS firmware

Changes to DAL OS firmware for supported Cellular business unit devices are documented in this documentation portal and in the corresponding device user guides:

Console server	Enterprise	Industrial	IoT gateway and cellular router	Transportation
<a href="#">Connect IT Mini</a>	<a href="#">EX12</a>	<a href="#">IX10</a>	<a href="#">IX15</a>	<a href="#">TX40</a>
	<a href="#">EX15</a>	<a href="#">IX20</a>		<a href="#">TX54</a>
<a href="#">Connect IT 4</a>	<a href="#">EX50</a>	<a href="#">IX25</a>		<a href="#">TX64</a>
		<a href="#">IX30</a>		<a href="#">TX64 RAIL</a>
		<a href="#">IX40</a>		


# Step updates

If your devices are running a firmware version **earlier than 24.6.17.54** and you want to update them to version **24.9.79.151** or newer:

1. Do a step update to version **24.6.17.69**.
2. Proceed with updating to newer versions.

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# Glossary

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**2FA**

Two Factor Authentication

**A**

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**AI**

Artificial Intelligence

**API**

Application Programming Interface

**AT**

Attention

**C**

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**CA**

Carrier Aggregation

**CLI**

Command Line Interface

**CMP**

Connectivity Management Portal

**CSV**

Comma Separated Values

**CTS**

Clear to Send

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## **D**

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### **DAL OS**

Digi Accelerated Linux Operating System

### **DANI**

Digi Artificial Network Intelligence

### **DCD**

Data Carrier Detect

### **DL**

Download

### **DRM**

Digi Remote Manager

### **DSR**

Data Set Ready

### **DSSS**

Dual SIM Single Standby

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## **E**

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### **eID**

Embedded Identity Document

### **eIM**

eSIM IoT Remote Manager

### **eMBB**

Enhanced Mobile Broadband

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**ERC/CIP**

Ethereum Request for Comments/Cardano Improvement Proposal

**eSIM**

Embedded Subscriber Identity Module

**eUICC**

Embedded Universal Integrated Circuit Card

**EX**

Enterprise

**F**

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**FOTA**

Firmware Over-the-Air

**G**

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**GPS**

Global Positioning System

**GSMA**

Global System for Mobile Communications Association

**H**

---

**HTTPS**

Hypertext Transfer Protocol Secure

**I**

---

**IMSI**

International Mobile Subscriber Identity

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**IP**

Internet Protocol

**IPA**

IoT Profile Assistant

**IX**

Industrial

**J**

---

**JSON**

JavaScript Object Notation

**L**

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**LAN**

Local Area Network

**LPA**

Local Profile Assistant

**LTS**

Long Term Support

**M**

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**MBIM**

Mobile Broadband Interface Model

**MCP**

Model Context Protocol

**mDNS**

Multicast Domain Name System

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**MIoT**

Massive Internet of Things

**MNO**

Mobile Network Operator

**MSP**

Managed Service Provider

**MVNO**

Mobile Virtual Network Operator

**N**

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**NMEA**

National Marine Electronics Association

**NSA**

Non-Standalone

**O**

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**OTA**

Over the Air

**P**

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**PLC**

Programmable Logic Controller

**PLMN ID**

Public Land Mobile Network Identifier

**PR**

Primary responder

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## **Q**

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### **QoS**

Quality of Service

## **R**

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### **RSP**

Remote SIM Provisioning

### **RTU**

Remote Terminal Unit

## **S**

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### **SA**

Standalone

### **SGP**

Standardized Global Platform (for Secure Remote SIM Provisioning)

### **SIM**

Subscriber Identity Module

### **SPN**

Service Provider Name

### **SSH**

Secure Shell or Secure Socket Shell

### **SSO**

Single Sign On

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**T**

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**TAIP**

Trimble ASCII Interface Protocol

**TCP**

Transmission Control Protocol

**TX**

Transportation

**U**

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**UI**

User Interface

**UL**

Upload

**URL**

Uniform Resource Locator

**URLLC**

Ultra-Reliable Low Latency Communication

**V**

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**VLAN**

Virtual Local Area Network

**VR**

Virtual Reality

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## **W**

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### **WAN**

Wide Area Network

### **WLAN**

Wide Local Area Network

### **WWAN**

Wireless Wide Area Network