



Digi Accelerated Linux (DAL) Release Notes

IX14

Version 19.8.1.61

INTRODUCTION

This is a patch firmware release for all DAL supported products. This is a recommended production firmware release

SUPPORTED PRODUCTS

- Digi IX14

KNOWN ISSUES

- none

UPDATE BEST PRACTICES

Digi recommends the following best practices:

1. Test the new release in a controlled environment with your application before you update production devices.
2. Unless otherwise noted, apply updates in the following order:
 - a. Device firmware
 - b. Modem firmware
 - c. Configuration
 - d. Application

Digi recommends Digi Remote Manager or Digi aView for automated device updates. For more information, follow the instructions for Digi Remote manager or Digi aView in the links below:

- **Instructions for Digi Remote Manager:**
https://www.digi.com/resources/documentation/digidocs/90001436-13/default.htm#tasks/t_update_device_firmware.htm
- **Instructions for Digi aView:**
<https://www.digi.com/resources/documentation/digidocs/acl-kb/default.htm#Subsystems/kb-6300-cx/update-firmware.htm>

If you prefer manually updating one device at a time, follow these steps:

1. Download the firmware file from the [Digi firmware support page](#).
2. Connect to the device's web UI by connecting your PC to the WAN Ethernet port of the device and then going to <http://192.168.210.1>.

3. Select the **System** tab on the left side of the page.
4. Select the **Browse** button next to the **Firmware image** section.
5. Browse for and select the downloaded firmware file.
6. Click the **Update Firmware** button.

TECHNICAL SUPPORT

Get the help you need via our Technical Support team and online resources. Digi offers multiple support levels and professional services to meet your needs. All Digi customers have access to product documentation, firmware, drivers, knowledge base and peer-to-peer support forums. Visit us at <https://www.digi.com/support> to find out more.

CHANGE LOG

VERSION 19.8.1.61 (October 22, 2019)

This is a **recommended** release.

ENHANCEMENTS

1. Skip auto-APN detection when using Telus SIM cards [DAL-1928]
2. Add QCDM service for accessing QXDM ports of Qualcomm-based modems [DAL-1904]
3. Add microcom tool [DAL-1872]

BUG FIXES

1. Fixed bug in runt where the boot version was reported incorrectly (bug present in firmware version 19.8.1.43) [DAL-1828]
2. Fixed registration delays on devices with Telit modems using Sprint SIM cards (bug present in firmware versions 19.8.1.43 and older) [DAL-1872]
3. Fixed stability issues with 1003-CM11 modem (bug present in firmware versions 19.8.1.43 and older) [DAL-1843]
4. Fixed bug preventing devices using a 1002-CM06 modem (Sierra MC7455) with a Telus SIM from loading the Telus carrier-firmware onto the modem (bug present in firmware versions 19.8.1.43 and older) [DAL-1823]
5. Fixed memory leak causing a DAL device in passthrough mode to stop responding to ARP requests on its LAN port (bug present in firmware versions 19.8.1.43 and older) [DAL-1686]
6. Fixed bug preventing SSH keys from being used to authenticate when establishing a SSH session to the DAL device (bug present in firmware version 19.8.1.43) [DAL-1742]

VERSION 19.8.1.43 (August 30, 2019)

This is a **mandatory** release.

NEW FEATURES

1. Telit LE910c4-NF modem support
2. WAN passthrough, allowing for [multi-WAN passthrough setups](#) [DALP-163 & DAL-959]
 - As a result, passthrough settings are not under the Modem section anymore, and instead are by default listed under the Network-Interface->LAN section for devices with passthrough enabled by default. To change a device defaulting in passthrough mode to router mode, simply change the "Network->Interfaces->LAN->Interface type" from "IP Passthrough" to "Ethernet", and then you'll see the normal router-mode configurations options available.
3. Auto-generated CLI documentation [DAL-1091]

ENHANCEMENTS

1. ModemManager update to version 1.10.2 [DAL-885]
2. Add verbose system log error messages when issues are encountered posting device health metrics to Digi Remote Manager [DAL-203]
3. Add system log when 1003-CM11 modem (LM940) carrier aggregation is disabled due to temperature limits
4. Include Telit carrier aggregation details in device support report [DAL-1435]
5. Add support for python RCI/SCI data_service callbacks and requests from Digi Remote Manager [DAL-1003]
6. Implement protocol to be used for all local communication between cc_acld and connector clients [DAL-203]
7. Include SIM locked/ready status in show modem CLI output [DAL-1320]
8. Update show modem CLI output formatting to have a summary mode that can be used to display the status of the modem(s) in the device, and the verbose output to display additional information for each modem, including the SIM, registration and attachment status [DAL-1184]
9. Improved formatting in the show route CLI output, including finer distinction of static routes [DAL-1176]
10. Include policy and connection details in show ipsec CLI output, along with improved status details [DAL-1190 & DAL-1174]
11. Improve labeling in output of the show network interface X CLI command
12. Show OpenVPN client list and rx/tx bytes in show openvpn CLI output [DAL-1192]
13. Add filtering options in show log CLI command [DAL-1181]
14. Add CPU usage, device temperature (if available), device description, and location details in show system CLI output [DAL-1172]
15. Updated local web UI logout link to list the name of the logged in user [DAL-1142]
16. Renamed the section of central management options from config to cloud [DAL-1255 & DAL-1256]
17. Added configuration option to have DHCP leases file persistent or clear across reboot [DAL-1196]

18. Update CLI table formatting to double space & blank fields [DAL-1186]
19. Add bypass-lan plugin to strongswan to allow 0.0.0.0/0 remote IPSec networks [DAL-1007]

SECURITY FIXES

1. Update Linux kernel to version 5.1.14 [DAL-1076]
2. Busybox update to version 1.31.0 [DAL-1161]
 - The new busybox shell environment no longer allows local variable statements such as the following:
local ip_addr='1.2.3.4'
 - and instead the variable must be set without the local option, such as:
ip_addr='1.2.3.4'
 - includes update to httpd webUI
3. Remove option to change Wi-Fi country code on US-products [DAL-1402]
4. Update dnsmasq2 to version 2.80 to address DNS cache snooping (CVE-2017-15107) [DAL-1386]
5. Update contrack-tools to version 1.4.5
6. Update libnetfilter_contrack to version 1.0.7
7. Update libmnl to version 1.0.4
8. Update bind to version 9.14.2 [DAL-1338]
9. Update iptables to version 1.8.3
10. Update libqmi to version 1.23.1 [DAL-885]
11. Update libmbim to version 1.18.0 [DAL-885]
12. Update stunnel to version 5.54 [DAL-1162]
13. Update quagga to version 1.2.4 (CVE-2016-1245 and CVE-2017-5495) [DAL-1160]
14. Update tar to version 1.32 [DAL-1159]
15. Add Digi Remote Manager serial port configuration to all DAL products with managed serial ports (previously only available on Connect IT products) [DAL-1213]
16. Remove unused user passwords from /etc/password [DAL-1316]

BUG FIXES

1. Fixed bug causing loss of cellular connectivity on devices in passthrough mode with IPSec tunnels built through the cellular passthrough connection (issue present on firmware versions 19.5.x) [DAL-1612]
2. Fix issues where Telit QMI modems would disconnect from USB hub and not recover [DAL-1321/DAL-1556]
3. Fix issues where QMI-based modems would disconnect from cellular network and not automatically re-attach (bug present in 19.5.x firmware) [DAL-1375]
4. Fix issue where logging out of the local web UI from the Terminal page would result in the left-side navbar still showing the menu instead of the **Log in** link [DAL-863]
5. Fix issue where client devices sending a DHCP request over WiFi to an external server would fail due to the ARP broadcast reply packets having the wrong source MAC address [DAL-1526]
6. Fix issue where a DHCP relay endpoint couldn't be setup through modem or IPSec interfaces [DAL-956]

7. Close any open sessions on a serial port when configuration update changes the mode of the serial port
8. Fix bug in show network CLI output when both IPv4 and IPv6 networks were available
9. Fix bug where show network CLI command would show incorrect output when no SIM was present
10. Fix bug in returning dynamic-only ref_enums in device config to Digi Remote Manager [DAL-1323]
11. Fix service serversocket binding when cc_acl restarts [DAL-1411]
12. Fix reloading of displayed configuration options when enabling/disabling aView central management in the local web UI [DAL-834]
13. Fix reloading of the Dashboard page when enabling/disabling Intelliflow in the local web UI [DAL-780]
14. Reset LEDs displayed during reboot instead of freezing the LEDs to show the last known device state before the reboot [DAL-886]
15. Fix bug where Digi Remote Manager RCI thread blocks indefinitely waiting for config write lock [DAL-573]
16. Fix bug where ls command in the admin CLI required a terminating / on the path [DAL-1251]
17. Fix output of show wifi CLI output to show which physical radio a WiFi-as-WAN client is on, instead of a device name [DAL-1171]
18. Fix labeling and format errors in show wifi CLI output
19. Fix multiple SSID traversal with WiFi-as-WAN client setups [DAL-1246]
20. Fix bug with show openvpn name CLI command output [DAL-1191 & DAL-1192]
21. Fix bug with carrier, plmn, and modem status output in show modem CLI command
22. Fix column spacing and lower-casing consistency in show arp CLI output [DAL-1173]
23. Fix parsing of carrier names when posting cellular modem details to Digi Remote Manager [DAL-1553 & DAL-1326]
24. Fix error showing signal strength of WiFi network(s) when the signal was 0% [DAL-1404]
25. Limit decimal numbers reported to Digi Remote Manager to six decimal places [DAL-807]
26. Fixed issue with Telit LE910-NAv2 cellular modules not receiving SMS messages while cellular data session was active/online (bug present on firmware versions 19.8.1.30 and older) [DAL-1634]
27. Add Telus m2m APNs to fallback list [DALP-452]

VERSION 19.5.88.81 (June 26, 2019)

This is a **mandatory** release.

NEW FEATURES

1. Added support for getting NMEA location information from a UDP port (default port 2948) [DAL-1084]

SECURITY FIXES

1. Kernel patch for SACK attack (CVE-2019-11477). For more information, see <https://www.digi.com/resources/security>

BUG FIXES

1. Fixed bug where IPSec tunnel would cause a system crash when the tunnel was established over QMI-based modems [DAL-1170]
2. Fixed aView tunnel issue where the tunnel drops over time and remote commands fail [DAL-776]
3. Fixed bug preventing QMI-based Telit modems (CAT1 and CAT-M1 modules in particular) from connecting with vzwstatic APNs (bug present on 19.5.88.59 firmware)
4. Fixed bug where the 1003-CM modem (LTE CAT11 Telit LM940) would shut-down and not recover its cellular connection if temperatures were too high
5. Fixed bug where the cellular modem occasionally would not initialize properly on devices with a large number of serial ports

VERSION 19.5.88.59 (May 24, 2019)

This is a **mandatory** release.

NEW FEATURES

1. New CLI with more commands/consistency [DAL-773]
2. Enable Multicast DNS service on all platforms [DAL-972]
3. Implement RADIUS authentication support for users [DAL-903]
4. Add NTP Server option (disabled by default) [DAL-340]
5. Add sftp server to all DAL platforms [DAL-859]
6. ECC Custom Cert Support [DAL-764]

ENHANCEMENTS

1. Improvements to CLI show serial [DAL-1175]
2. Improved reliability of security chip from userspace access due to wakeup
3. Send interface name with cellular status events [DAL-916]
4. Updated ipset version to 7.1 [DAL-917]
5. Update to newest shadow-4.6 package
6. TACACS+ authorization for more server implementations [DAL-933]
7. stunnel updated to version 5.52 [DAL-915]

8. Additional health metrics required for DRM 3.0 [DAL-810]
9. Add support for Telit ME910C1_WW
10. Direct remote serial port access via WebUI (shellinabox) [DAL-775]
11. Dual-APN Support on Telit LE910-NAv2 (1002-CM04) [DAL-818]
12. Improved OpenVPN operation and customization [DAL-798]
13. Update to linux-5.0 [DAL-842]
14. Add **description** field to system group [DAL-581]
15. Upgrade MC7455 to 02.30.01.01 (SWI9X30C 2.0 Release 23) added latest Sierra firmware for MC7455 and MC7430 [DAL-759]
16. Add an additional APN for Bouygues in France [DAL-840]
17. Improved Telit location reporting [DALP-226]
18. Improved collection of network LINK and Speed reporting
19. Implement Digi Remote Manager health metrics [DAL-707]
20. Added latest Telit LE910_XX_V2 firmware md5 sums

SECURITY FIXES

1. Update to openssl-1.0.2r (security) CVE-2019-1559
2. busybox: fix for CVE-2014-9645 [DAL-1159]
3. busybox: fix for CVE-2017-16544 [DAL-1159]
4. libcurl: update to 7.64.1 (CVE-2017-8816, CVE-2017-8817, CVE-2017-8818, CVE-2018-0500 CVE-2018-1000300, CVE-2018-1000301, CVE-2018-14618, CVE-2018-16839, CVE-2018-16840, CVE-2018-16842 CVE-2018-16890, CVE-2019-3822, CVE-2019-3823)
5. libcurl: fixes for CVE-2018-1000007, CVE-2017-8818, CVE-2017-8816, CVE-2018-1000005 Zebra 0.99.24: fix for CVE-2016-1245
6. busybox fixes for CVE-2016-6301, CVE-2016-2148, CVE-2017-16544, CVE-2016-2147, CVE-2017-15874, CVE-2014-9645, CVE-2011-5325 [DAL-1159]
7. pppd update to 2.4.7 (CVE-2014-3158, CVE-2015-3310)
8. Kernel patch to resolve CVE-2019-11815

BUG FIXES

1. Fix issue on 6300-CX preventing WebUI based firmware update up to 1 in 3 tries [DAL-1194]
2. Remote cloud connections were locked until while long running commands completed [DAL-1177]
3. Fix major issue with multiple IPsec policies When two remote subnets are configured in 2 Policies for an IKEv2 tunnel only Policy 2 traffic will pass [DAL-934]
4. Corrections to CLI show route [DAL-1176]
5. CLI **show system** output included outdated current time and uptime [DAL-1172]
6. Errors on console during WebUI firmware update [DAL-1140]
7. Faster fetching of signal attributes for LE910_NA_V2 modem
8. Fixed bug with parsing out MCC/MNC from AT#RFSTS response (LE910NAv2)
9. Fixed cloud connector crash on shutdown
10. Fixed process management issue with cloud connector and configuration

11. Check for configured serial ports in **show serial** command
12. Fixed bug where **show serial** option is visible for devices with no serial ports [DAL-1114]
13. Web GUI input validation rewording to be consistent
14. DAL-CLI: fix typos in descriptions, titles, and minimums
15. WebUI: Ensure correct versions of static files are loaded (using md5hash)
16. Serial ports were mistakenly listed under **Network** for metrics and state
17. Metrics had incorrect title, "System" in descriptors/state.
18. ModemManager: Telit error reporting patch
19. Intelliflow crash fix (divide by 0 on some datasets)
20. Intelliflow improve error reporting
21. System maintenance tasks do not run during duration window if reboot time is set [DAL-960]
22. SPIKE: Asynchronous CLI under DRM [URMA-1996]
23. Firmware update through WebUI doesn't recover when some other page is clicked during the update process [DAL-869]
24. Signal/dbm/percentage inaccurate on Verizon 2G and 3G connections with MC7354 [DAL-786]
25. Verify and fix dual APN support on the LM940 [DAL-742]
26. Unable to establish dual-APN connection with AT&T using Sierra modem [DAL-813]
27. Telit: Added logic to protect new C1_AP modems from being bricked [DAL-744]
28. Telit: Added firmware check sum for version 414 of LE910-EU1 [DAL-822]
29. Update Telit LE910C1-NS modem firmware from 25.00.244 to 25.00.246 [NPIX-939]
30. Fix MTU support for PPP based connections
31. Added md5 sums for the latest Telit firmware for LE910_NA1

VERSION 19.1.134.81 (Feb 14, 2019)

- Initial mass production release for Digi IX14
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