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# Release Notes - Zebra TC8000 Android L GMS – LifeGuard Update 12 Release

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## Description

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This release contains the following software package which is compatible with the TC8000 GMS product. LifeGuard patches are cumulative and include all previous fixes that are part of earlier patch releases

**Note: Downgrade to Patch 6 or older patch version are not allowed on TC8000L devices which contains Hynix 16gb A15nm eMMC Memory.**

## Component Description and Version

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Component / Description	Version
Product Build Number	02-10-02-LG-00-A
Finger Print ID	Zebra/TC8000/TC8000:5.1.1/02-10-02-LG-00-A/180316:user/release-keys
Android Version	5.1.1
Android security patch level	2018-03-05 (Critical Patch Level:2019-04-05)
Linux Kernel	3.4.0
Android SDK Level	22
Platform	Qualcomm - APQ8060A Pro
Bluetooth Stack	01.018.00

Flash Size	4GB/8GB/16GB
RAM Size	1GB/2GB
MSP Package	7.08.85 (Included for Airwatch support only)
Scanner Framework	19.53.37.0
Datawedge	6.7.48
OSX/ Mx	OSX QC.51.5.2.14 / MXMF version:7.2.10.2
Wi-Fi	FUSION_QA_2.00.0.0.018
Mlog	MLogPackage v06.54 / MLogManager v06.54 / Service v06.54
PTT Express	3.1.27
EMDK Service	6.8.21.1121
RxLogger	4.58.5.0
Touch FW	TTDA.03.04.721053 FW:2.0.860395, TTCONFIG0017
Zebra Volume Control	1.1.23
B2M	1.0.0.297
Bluetooth Pairing Utility	3.7
DataAnalytics	1.0.2.1859
File Browser	1.19.1.2
Stage Now	2.10.1.1389
App Gallery	2.8.4.13
WLAN FW	MAAAAANAZW1240301
NFC	2.0.0.14
Sensors (Accel, Gyro, Light, Prox)	1
MobiControl	12.2.0. Build 23469
Wavelink Velocity	1.2.104.17026.bb967b9
Tap and Pair	2.0
ZSL	3.1.1
EKB	1.7.0.5
WifiConfigCSP	7.0.1
Zebra Data Service	1.0.0.1002

SimulScan Demo App	3.0.2
SimulScanRes	2.0.2

## 1. CFE v12 Updates:

❖ CFE-TC8000-L-XX-021002-G-00-12.zip (GMS)

❖ **Android Security Patch Level:** March 05, 2018 (Critical Patch Level: April 05, 2019)

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR35912 - Resolved an issue wherein 11k operation depends on 11r functionality
- SPR35838 - Resolved an issue wherein binder death between IMS and DW due to Keyboard switch
- SPR36617 - Resolved an issue wherein device was not connecting to EAP-MSCHAPv2 enabled infra for localized supported countries.
- SPR35288 - Fixed an issue wherein initialization of scanner was taking ~1sec.
- SPR35054 - Added support for reduced quiet zone barcode decoding.
- SPR34844 - Resolved an issue wherein multiple open calls are prevented when multiple application tries to open scanner without releasing previous instance.
- Updated below mentioned components:
  - Scanner Framework: 19.53.37.0
  - Bluetooth: 01.018.00

## 2. CFE v11 Updates:

❖ CFE-TC8000-L-XX-021002-G-00-11.zip (GMS)

❖ **Android Security Patch Level:** March 05, 2018 (Critical Patch Level: December 05, 2018)

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR36118 – Resolved an issue wherein patch version was not updating in cfe.ini.
- SPR34738 – Resolved an issue wherein device reboots when VPN connection established over Cellular (AT & T).
- SPR35368 – Resolved an issue wherein scanner crash while scan the barcode just before suspend or after resume the device.
- SPR35362 – Resolved an issue to set hardware picklist to scan barcodes which are very close to each other.
- SPR35400 – Resolved an issue where LEAP/FAST authentication was not listed for localized language.
- SPR35368 – Resolved an issue wherein DW demo app has stopped access to SE965 scanner.
- SPR35125 – Resolved an issue wherein Audio MIC gain api's were not working as expected for TC8000.
- SPR35476 – Resolved an issue wherein DW demo app has stopped access to SE965 scanner.
- SPR33709 – Implemented the intercharacter delay functionality in Datawedge to support RDP session scan data transfer.
- SPR34191 – Resolved an issue where Devices not sending the hostname to the DHCP server.
- Updated below mentioned components:

- MX: 7.2.10.2 (For detail please refer <http://techdocs.zebra.com>)
- Scanner Framework: 19.12.35.0
- EKB:1.7.0.5
- Bluetooth: 01.015.00

### 3. CFE v10 Updates:

❖ CFE-TC8000-L-XX-021002-G-00-10.zip (GMS)

❖ **Android Security Patch Level:** March 05, 2018 (Critical Patch Level: September 05, 2018)

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR35025 – Resolved an issue where Proxy Auto Config (PAC) did not work properly following stops/restarts of the PacService.
- SPR33977 – Resolved an issue wherein set time zone issue observed with StageNow.
- SPR34716 – Resolved an issue wherein the MX Framework did not restart properly following events where the service was stopped.
- SPR34679 – Resolved an issue wherein setting WiFi Band selection to Auto was not working properly with StageNow.
- SPR34936 – Resolved an issue wherein Datawedge used to crash on bootup.
- SPR33755 – Resolved an issue wherein the Whitelisted apps were unable to submit XML to MX.
- SPR35536 – Added support for Enterprise Lockdown feature.
- SettingsEULA has been renamed to Zebra Data Services.
- Updated below mentioned components:
  - MX: 7.2.9.0 (For detail please refer <http://techdocs.zebra.com>)
  - Scanner Framework: 19.10.35.1
  - ZSL:3.1.1
  - WifiConfigCSP:7.0.1

### 4. CFE v9 Updates:

❖ CFE-TC8000-L-XX-021002-G-00-09.zip (GMS)

❖ Note: If whitelisting (Applock) is enabled, ZSL functionalities will NOT work. This issue will be fixed in next LifeGuard patch release.

❖ **Android Security Patch Level:** March 05, 2018 (Critical Patch Level: June 05, 2018)

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR33207 – Resolved an issue wherein the Device Diagnostic tool had an issue with reading the Battery Cycles in the application for PP+ batteries.
- SPR34267 – Resolved an issue where-in user was not able to enable USB debugging option using StageNow.
- SPR33862 – Fixed an issue where-in user could not set Display Timeout value of 30min using StageNow.
- SPR34145 – Fixed an issue wherein user was unable to connect to WLAN network due to WEP Key Index issue.
- SPR34307 – Resolved an issue wherein device out of the box intermittently failed to get staged via StageNow.
- SPR34083/34014/32519 – Resolved an issue wherein disabling WWAN radio via Airwatch using StageNow XML fails.
- SPR33639 – Resolved an issue wherein the customer app install and launch during device sleep state and device stop emitting scan beam after awake from suspend.
- SPR33876 – Resolved an issue wherein Display Timeout was unable set via StageNow.
- SPR33607 – Resolved an issue where few fresh devices were unable to stage after unbox the device.

- SPR33538 – Resolved an issue wherein the Scanner beam stuck off and No LED beam while pressing scanner button.
- SPR33981 – Resolved an issue Czech Republic Regulatory Country could not be set using Wifi config profile.
- SPR34429 – Resolved an issue wherein device failed to emit scan beam if the application was launched during device suspend.
- SPR34614 – Fixed an issue in DataWedge wherein scanner could not be enabled due to quick enabling and disabling of scanner through Intents.
- SPR34716 – Resolved an issue wherein the MX was getting killed by Backupmanager and didn't restart properly.
- SPR34213 – Resolved an issue wherein shared preference initialization without launching EKB
- Updated below mentioned components:
  - Datawedge: 6.7.48
  - EKB: 1.7.0.2 (Added as an System application with this CFE 09)
  - MX: 7.2.8.2

## 5. CFE v8 Updates:

❖ CFE-TC8000-L-XX-021002-G-00-08.zip (GMS)

❖ **Android Security Patch Level:** March 05, 2018

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- Spectre & Meltdown correction for variant 1 and variant 2
- SPR33599 – Resolved an issue wherein few of the system applications are getting disabled after enabling whitelist.
- SPR33799 - Resolved an issue wherein scanner was unable to read '\n' and '\r'.
- SPR33930 - Resolved an issue wherein dhcp address was not acquired by the device, while hostname is greater than 32 characters.
- SPR33823 - Resolved an issue wherein black screen occurred in DataWedge application.
- SPR33674- Resolved a flash corruption issue with multiple symptoms like unable to turn on WIFI.
- SPR33973- Resolved an issue wherein erroneously loading default profile by providing feature to ignore disabled profiles in DataWedge.
- SPR33671- Resolved an issue wherein user was unable to create WIFI profile with username as backslash followed by number.
- Updated below mentioned components:
  - Datawedge: 6.7.47
  - StageNow: 2.10.1.1389
  - EMDK: 6.8.21.1121
  - MX: 7.2.1.0
  - File Browser: 1.19.12
  - Diagnostic Tool: 1.15.0.11
  - Scanner Framework: 19.9.35.0
  - Radio: 2.00.0.0.009
  - Bluetooth: 01.12.00

## 6. CFE v6 Updates:

❖ CFE-TC8000-L-XX-021002-G-00-06.zip (GMS)

❖ **Android Security Patch Level:** January 05, 2018

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

## 7. CFE v5 Updates:

❖ CFE-TC8000-L-XX-021002-G-00-05.zip (GMS)

❖ **Android Security Patch Level:** December 05, 2017

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR32988 - Resolved an issue wherein the BUTTON\_R2 has been consumed by both barcode scanner and Google chrome client.
- SPR33233 - Resolved an issue wherein the DataWedge 6.2.24 could not replace separator or non-printable ascii character with \$.
- SPR32825 - Resolved an issue wherein BT headset volume up/down was not working during Bluetooth call scenario.
- SPR32463 - Resolved an issue wherein the StageNow File Manager downloads frequently fails due to Sockettimeout exception.
- Updated below mentioned components:
  - Datawedge: 6.6.49
  - StageNow: 2.9.1.1344
  - EMDK: 6.7.10.1010
  - MX: 7.1.1.0

## 8. CFE v4 Updates:

❖ CFE-TC8000-L-XX-021002-G-00-04.zip (GMS)

❖ **Android Security Patch Level:** September 05, 2017

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- Corrections for KRACK vulnerabilities applied.
- SPR30400/31340 – Added support to enable/disable Network Monitoring Notification.

## 9. CFE v3 Updates:

❖ CFE-TC8000-L-XX-021002-G-00-03.zip (GMS)

❖ **Android Security Patch Level:** September 05, 2017

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- Updated below mentioned components:
  - MXMF - Version 7.0.2.1
  - DataWedge - Version 6.5.61
  - EMDK - Version 6.6.14.914
  - Staging Client - Version 2.8.1.1221
- Resolved an issue in MX to prevent leakage of configuration parameters.
- Included fix for BlueBorne vulnerability.
- SPR31745 - Resolved an issue wherein AOSP doesn't returns a network interface address when myIpAddress/myIpAddressEx is queried.
- SPR32373 - Resolved an issue wherein the barcode data is not transmitted when "All Decoders" is unchecked and every single decoder is checked.
- SPR32582 - Added support for Netherlands - Belgium language.
- SPR32008\_SPR31820 - Resolved an issue wherein scanning PDF417 barcodes which contain embedded 0x0D characters resulted in continuous line of data instead of displaying in different lines.
- SPR32132/SPR32896 - Resolved an issue wherein wifi was getting disabled intermittently when the battery hot swaps were done frequently.
- SPR32676 - Resolved an issue wherein DataWedge App crashes when Velocity App tries to send an Intent to enable the scanner plugin.

- SPR32775 - Resolved an issue wherein the notification class created with FLAG\_INSISTENT was not getting cleared upon pulling down the notification drawer.

## 10. CFE v2 Updates:

❖ CFE-TC8000-L-XX-021002-G-00-02.zip (GMS)

❖ **Android Security Patch Level:** August 05, 2017

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR29912 - Resolved an issue wherein certificates installation failed through stagenow.
- SPR30401 - Added support to get the CFE version via MDM clients.
- SPR31954 - Resolved an issue wherein dhcpd was not able to start due to lengthy host name.
- SPR32135 - Resolved an issue wherein Settings screen does not revert to its normal state even though the locale language is changed from Arabic to English via EMDK.
- SPR32240 - Resolved an issue wherein the scanner service was not responding while switching between applications.
- SPR32193\_SPR32230 - Resolved an issue wherein devices experiencing authentication failures, and were not able to recover.
- SPR32539 - Resolved an issue wherein build certificates were lost randomly even though certificates were not expired.
- SPR32355 - Resolved an issue wherein dhcp was not able to start due to lengthy host name.
- SPR32413 - Resolved an issue wherein after selecting the static option in the ethernet settings, changes are not reflecting in interface and the interface was always dhcp.
- SPR32326 - Resolved an issue wherein Settings application crashed while trying to set enterprise keyboard as the default keyboard and disable AOSP keyboard through the stageNow profile.

## 11. CFE v1 Updates:

❖ CFE-TC8000-L-XX-021002-G-00-01.zip (GMS)

❖ **Android Security Patch Level:** July 05, 2017

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- Added Zebra patch version value in Settings to identify the CFE Patch version.

## Device Compatibility

This software release has been approved for Android TC8000 L models mentioned below.

Device	Operating System
TC80N0-A000K110NA	Android 5.1.1
TC80N0-1000K210NA	Android 5.1.1
TC80N0-2000K210NA	Android 5.1.1
TC80N0-3000K210NA	Android 5.1.1
TC80N0-A001K31CNA	Android 5.1.1
TC80N0-1001K31CNA	Android 5.1.1
TC80N0-2001K31CNA	Android 5.1.1
TC80N0-3001K31CNA	Android 5.1.1
TC80NH-A101K320NA	Android 5.1.1
TC80NH-1101K420NA	Android 5.1.1
TC80NH-2101K420NA	Android 5.1.1

TC80NH-3101K420NA	Android 5.1.1
TC80N0-1101K42ENA	Android 5.1.1
TC80N0-A000K110IN	Android 5.1.1
TC80N0-1000K210IN	Android 5.1.1
TC80N0-2000K210IN	Android 5.1.1
TC80N0-3000K210IN	Android 5.1.1
TC80N0-A001K31CIN	Android 5.1.1
TC80N0-1001K31CIN	Android 5.1.1
TC80N0-2001K31CIN	Android 5.1.1
TC80N0-3001K31CIN	Android 5.1.1
TC80NH-A101K320IN	Android 5.1.1
TC80NH-1101K420IN	Android 5.1.1
TC80NH-2101K420IN	Android 5.1.1
TC80NH-3101K420IN	Android 5.1.1
TC80N0-1101K42EIN	Android 5.1.1
TC80NH-2101K42ENA	Android 5.1.1
TC80NH-2101K42EIN	Android 5.1.1
TC80NH-1102K420NA	Android 5.1.1
TC80NH-3102K420NA	Android 5.1.1
TC80NH-1102K420IN	Android 5.1.1
TC80NH-3102K420IN	Android 5.1.1
TC80NH-1101K42ENA	Android 5.1.1
TC80NH-1101K42EIN	Android 5.1.1

## Installation Requirements

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- The Software update requires SKU hardware device.
- Enterprise Reset and Factory Reset package files are available on the TC8000 Software Download section on Zebra.com

## Installation Instructions

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BEFORE UPDATING THE OS IMAGE, EXTERNAL POWER MUST BE APPLIED TO THE TERMINAL VIA USB CHARGING CABLE OR CRADLE.

PLEASE ENSURE BATTERY LEVEL IS > 30%

### CFE software update procedure for TC8000 GMS:

1. Connect the USB cable from your PC to the device and enable USB mass storage mode on the device.
2. On your PC you should see an internal and external USB mass storage drive (SD card) appears in the File Explore and copy "**CFE-TC8000-L-XX-021002-G-00-12.zip**" file to any storage.
3. Press and hold on the device Power button, click on power off and wait until the screen is turned OFF.
4. Press and hold power, Vol+ button and Scanner button.
5. Keep holding all three buttons until the device vibrates.
6. Device should enter recovery mode.



7. if applying update via Sideload Method
  - a. Use the Volume + and – to highlight, “Apply update from ADB” and press the Scanner Key to select it
  - b. With your Command Prompt open in the Host machine, type “adb sideload” command and add a space and then drag and drop the CFE on to it and click enter.
  - c. Your PC screen will show files being installed and a little blue horizontal progress bar on your device will show status... and after about 6~ minutes it should be done and you should be back at the Android Recovery screen.
  - d. “*Reboot system now*” is highlighted. Press the Scanner Key to Reboot.
  
8. If applying update via SD card.
  - a. Click on Vol+ or Vol- to navigate and select SD card or internal storage. Press Scanner button to select it.
  - b. Click on Vol+ or Vol- to navigate to the recovery update zip file.
  - c. Click on Scanner button to select and start the recovery update process.
  - d. Device will automatically reboot and will be ready to use.
  
9. To Check the Android Patch Level after installing the CFE package in the device,
  - a. Settings->About Device->SW Components: Device Patch Version: 12
  - b. ADB Shell method: Execute following command from PC's command prompt:
 

```
$ adb shell getprop ro.device.patch.version
$ 12
```
  
10. Now you are all set to use your **TC8000**.

## Downloadable Software Included in this Release

Filename	Description
<b>CFE-TC8000-L-XX-021002-G-00-12.zip</b>	OTA incremental CFE v12 update software for GMS build

Last Revised: <10-04-2019>