

STAGENOW V2.7 RELEASE NOTES

INTRODUCTION

StageNow is Zebra's next generation Android Staging Solution, supporting Marshmallow, Lollipop, KitKat, and Jelly Bean and built on the MX 4.3/4.4/5.X/6.0/6.1/6.2/6.3 platforms. It allows simple profile creation, and easy device deployment with a simple bar code scan, tag read, or audio file play.

The StageNow Staging Solution includes the following components:

- The StageNow Workstation Tool offers a user interface that is accessed within a staging workstation (host computer). The staging administrator uses this tool to create staging profiles that configure device components, in addition to other staging actions. The Workstation Tool includes a database and server which store and save content entered in the Tool, e.g., settings and staging profiles.
- The StageNow Client resides on the device and provides a user interface for the staging operator to initiate staging. The operator uses a staging method, e.g., prints and scans a bar code, plays an audio file, or reads an NFC tag, to deliver staging material to the device

DESCRIPTION

Thank you for selecting Zebra Technologies Corp as your mobility solution tool provider. The StageNow solution targets customers' need for a software tool that allows out of the box device Staging and configuration. Essentially, the process by which an enterprise device is configured and desired firmware / software is deployed on to the device, preparing it for a desired production use. We simplified the staging experience with the user interface and new modalities of staging.

For the latest software updates, go to the Developer Kits & Software Tools page on the Zebra Technologies Web site at:

<https://www.zebra.com/us/en/support-downloads.html>

For information on Zebra products, please visit the Products Web site at:

<https://www.zebra.com/gb/en/products.html>

Thank you,

The Software Development Team

RELEASE NOTES

Please refer User Guide accessible through "Help" Menu in the StageNow tool to know more about the below features

Version 2.7

- Added support for MX 6.3 which adds functionality to the following setting types for devices:
 - Bug Reporter Manager – New Feature
 - Set Bug Report Handling to default (Android) or custom (Zebra)
 - Present device-user questionnaire to collect additional information
 - Store an unlimited number of bug report files in available flash
 - Capture audio and attach to bug reports
 - Trigger "silent" bug reports with an intent
 - Enable or Disable:
 - Generate Bug Report from Power Off Menu
 - Store reports in flash memory
 - Send reports to a specified email address
 - Upload reports to the Zebra Cloud
 - Cellular Manager - Added new feature
 - Avoid garbled UI when CellularDataWarningValue was higher than CellularDataLimitValue
 - Accept the value 2 for CellularDataLimitState
 - Threat Manager- Added feature to detect rooted device detection
 - Key Mapping Manager – Added key mapping support for NAV PAD Button
 - Touch Manager –Touch Mode support for ET5X M devices
 - License Manager-Bug fixes
 - Ability to select custom feature name or standard feature name.
 - DHCP Option Manager- Added new Feature
 - Added new feature to enable/disable features such as client identifier, FQDN and add custom DHCP options such as Vendor Specific 230.
 - Remote Scanner Manager – Added support for DS3678 Bluetooth scanner with the features such as firmware update, paging
 - Enterprise Keyboard-Feature is removed, Now it is a user app.
 - Personal Dictionary- Added an option to add bulk of dictionary words as file data to optimize the performance.

Version 2.6

The following features are added for StageNow 2.6:

- Added support for MX 6.2 which adds functionality to the following setting types for devices:
 - Ethernet Manager – Added new setting type to configure
 - Ethernet Proxy Server Settings
 - Configure IP
 - DHCP IP Settings
 - Static IP Settings
 - Persist Manager - Added new feature
 - Device Lock - Lock the device (USB, Touch) once the device settings persistence is in progress after device enterprise reset - Once the reapply of profiles is done, Lock will be removed and User will be having access

- On Battery Removal - Re-apply/persist the device configuration persisted settings if battery is removed while device in enterprise reset mode
- OS Upgrade – Device lock will not take in place while device OS Upgrade
- Touch Manager - Added support for
 - Device Type - Select the Device Type to configure touch sensitivity
 - Protector - Enable or disable the screen protector on the supported devices
- KeyMapping Manager – Added key mapping support for NAV PAD Button
- Cellular Manager – Added support for
 - Selecting active SIM socket types, SIM1, SIM2, SIM3 and SIM4
 - Enable/Disable SIM socket selection
- Support for retaining Host Name after device reboot in Host Manager CSP
- Support for handling advanced options on unsupported device in Wi-Fi Manager CSP
- Support for Regional PC settings for most of the format on the Windows 7 workstation

Version 2.5

The following features are added for StageNow 2.5:

- Added support for Marshmallow devices such as TC75X, TC51, TC56.
- Added support for MX 6.1 which adds functionality to the following setting types:
 - Bluetooth Manager - Added new feature to enable and disable Bluetooth discoverability
 - GPRS Manager - Added new capability to add APN and set certain parameters such as proxy, server, port
 - Persist Manager - Added support for device Lockdown after an enterprise reset
 - Threat Manager - Added support for periodic scan and folder monitoring
 - UI Manager - Added new feature to allow or disallow network monitored messages/notifications
 - Wirelesmgr – Added new feature to specify balance between accuracy and battery life when using GPS
 - Analyticsmgr – Added support for enabling or disabling the data collection metrics for the subsystem as a whole.
 - Wi-Fi – Added new feature to enable or disable the password protected encryption.
 - Device Administrator – Added new feature to select the type of screen lock such as no password, password, pattern and swipe.
 - KeyMapping Manager – Added key mapping support for Rear Button and Grip Trigger 2.
- Support for adding locale using UIMgr for JB devices
- Support for adding APN using GPRSMgr for JB devices

Version 2.4

The following features are added or updated for StageNow 2.4:

- Support for connection via Wi-Fi Hotspot
- Support for MX 6.0 with following functionalities:
 - Clock - Support for configuring automatic time zone

- AppGallery
 - Auto-Login: Automatically providing the credentials to log in into AppGallery
 - Notification Configuration: You can configure the android notifications.
- Enterprise Keyboard
 - Switch keyboard layouts with taps or swipes.
 - Scan directly with the Barcode tab to collect data where and when it's needed.
 - Input long-press characters with a finger-flick.
 - The Globe key quickly pages through selected languages.
 - Remappable keys easily enable custom key layouts.
 - A specially designed color scheme permits easy viewing indoors and out.
- Personal Dictionary
 - Supports use of Android's Personal dictionary for spelling suggestions, corrections, etc
- Camera support for disabling a picture taken via the imager
- Analytics
 - Added new DCAs ANR, Feature usage and Device information
 - ANR DCA: DCA collects ANR (Application Not Responding) logs when ANR occurs from any application on the device.
 - FeatureUsage DCA: DCA collecte feature usage metrics (features like WiFi, BT, NFC).
 - Device Information DCA: This DCA collects below listed metrics.
 - country name
 - wlanradio name
 - hwrev no
 - scan engine version name
 - country code
 - keyboard type
 - display vendor id
 - touch panel vendor id
 - Added feature to restrict self update on WiFi only. By default, this feature is disabled, i.e., self update will happen on both mobile data and WiFi
- Updated OS Update Wizard to support conditional and incremental OS update
- Troubleshooting

Version 2.3

The following topics are added or updated for StageNow 2.3:

- Support for Lollipop devices, MX 5.1, and MX 5.2
- Software Update
- Exporting for an MDM
- Enrolling in an MDM for MX 5.1
- Upgrading Profiles
- Client Error Logging
- Remote Scanner Manager
- UI Manager now supports extended locales and enable/disable QuickSettings from Notification
- KeyMap now supports P1, P2, P3 keys for Zebra RS6000 devices

- Intent Manager no longer requires a package name (com.package.name), only an application name, e.g., Enterprise Home Screen
- Bluetooth Manager controls whether to allow new devices to pair.
- Hosts Manager sets the device's Host Name.

Version 2.2

The following topics are added or updated for StageNow 2.2:

- Enhanced Xpert Mode UI
- Staging an Audio Profile (Administrator) (Only supported on StageNow Client 2.2 and later)
- Selecting an Audio File for Staging (Operator) (Only supported on StageNow Client 2.2 and later)
- Audio Staging Modality (Only supported on StageNow Client 2.2 and later)
- MX 5.0 Support
- Manage Enterprise Home Screen (EHS)
- Exporting All Profiles
- Exporting Settings
- Importing Settings
- Device Staging
- File Manager Archive/Unarchive Feature
- StageNow Client Menu
- Change Password

Version 2.1

- Support for MX4.4
- ConditionMgr CSP support to check for a device parameter value before proceeding with further operation like staging
- StatusMgr CSP support to notify the application (like StageNow client) regarding the progress of the staging operation. Currently this is not implemented by all the CSPs.
- Support for filtering the wizards based on MX framework support (like MX4.3, 4.4etc)
- Tooltips for each section in the wizard to help admin understand the functionality better.
- Support to stop the staging operation in progress based on the flag set in the profile. This is driven by global setting First Error Termination in StageNow Tool.
- Support to turn on/off the legacy mode support. This enables the admin to print legacy barcodes targeted for RD deployment.

Version 2.0

The following features are supported in StageNow 2.0

- Support for MX4.3 which enables StageNow to configure the devices
- Following modalities are supported
 - Bar Code - The operator generates bar code(s) containing profile information and scans those bar codes with the device, either printed on paper or displayed on the workstation screen, to configure that device.

- NFC Tag - The operator exports profile data and programs it into an NFC tag, then reads the tag with the device's NFC tag reader by bringing the tag within a certain proximity of the device, to deploy the profile to the device.
- Wizard driven UI for creating the profiles which stitches the configuration settings together to achieve certain use case on the device.
- Support for staging legacy devices which has RD client on it
 - Tool enables the administrator to print RD barcodes and scan the same using RD client to enable legacy devices for StageNow support.
- Configure a Device - Configure the most common device settings such as locale, security options, applications, MDM enrollment, and production network settings. This Wizard also allows you to connect to a staging and/or production network, reboot the device, or update the OS.
- Connect Network - Connect to a Wi-Fi or GPRS network. You can also enable, disable, add, or remove networks.
- Enroll in an MDM - Enroll a device for management by an MDM. Use this Wizard to download, install, configure, and launch an MDM agent. This Wizard also allows you to connect to a staging and/or production network and reboot the device.
- Manage Applications - Manage applications on a device. Use this Wizard to download, install, uninstall and launch any applications. This Wizard also allows you to connect to a staging and/or production network, install licenses, configure simulScan, download data files, and reboot the device.
- Manage Device Security - Configure security options and policies for a device. Use this Wizard to whitelist and blacklist applications, control screen time-outs, enable or disable an SD card, camera, GPRS, Bluetooth, GPS, USB, encrypt SD card, control PowerKey menu, settings UI, unknown sources, and threat management.
- Perform OS Update - Perform an OS update on a device. Use this Wizard to apply an update or a patch to the OS by downloading a zip file to the device or using an existing zip file on the device. This Wizard also allows you to connect to a network.
- Wipe a Device - Destroy device data using Enterprise or Factory Reset.
- Xpert Mode - Configure any available settings for a device. Use this Wizard to create any combination of settings in any sequence.
- FileMgr CSP support to copy, download and delete the file on the device
- Batch CSP support to encode and decode the barcode data.

COMPONENTS

StageNow Tool

The StageNow Workstation Tool offers a user interface that is accessed within a staging workstation (host computer). The staging administrator uses this tool to create staging profiles that configure device components, in addition to other staging actions. The Workstation Tool includes a database and server which store and save content entered in the Tool, e.g., settings and staging profiles.

Note: The tool's built-in staging server is an FTP server to which devices download the staging content of the Deployment section, files selected for download from the remote server, and RD staging files. Because multiple applications cannot use Port #21 (usually used by FTP servers) at the same time, ensure the Workstation Tool PC does not have another FTP server running in the background, or that the other

FTP server uses a different port. Also note that the staging (FTP) server runs only when the tool is running, and stops when the application closes. Therefore, the tool must be running when staging the device with profiles as described above.

StageNow Client

The StageNow Client resides on the device and provides a user interface for the staging operator to initiate staging. The operator uses a staging method, e.g., prints and scans a bar code, plays an audio file, or reads an NFC tag, to deliver staging material to the device

NOTE:

- JellyBean and non-rebranded KitKat devices (e.g. TC70) can be brought to StageNow ready state by using RD client on the device. Or StageNow client and MX can be upgraded to the latest version by using “StageNow_and_MX_upgrade_for_JB” profile (Only for JellyBean and KitKat devices).
Please see StageNow tool documentation available as part of the Desktop tool, to know more about RD staging feature.
- MX is not making any further releases (after V4.4) for Non-rebranded devices. So StageNow supports these devices only till StageNow 2.2 and MX4.4.
- “StageNow_and_MX_upgrade_for_KK_L” default profile on the tool which upgrades the device to latest StageNow client and MX is not supported on TC8000 KK devices.
- StageNow_and_MX_upgrade_for_JB and StageNow_and_MX_upgrade_for_KK_L default profiles updates the following components on the device
 - Enterprise KeyBoard Layout (EKB)
 - MXMS
 - StageNow client
- StageNow supports only authenticated FTP server access.

INSTALLATION REQUIREMENTS

StageNow Workstation Requirements

Following are the minimum requirements for the host computer to run the StageNow Workstation Tool:

- Operating system: Microsoft Windows 7 (64 bit)
- Operating memory: 2 GB minimum
- Hard drive storage: 6 GB minimum (if .Net Framework is not already installed)
- Screen resolution: 1366 x 768 (16:9 ratio) recommended
- .Net Framework 4.5.
.Net 4.5.1 is included in the StageNow installation wizard if required, and also available at <http://www.microsoft.com>
- StageNow Workstation Tool installer, available at <http://www.zebra.com/support>
- A PDF reader for supporting staging material, Adobe® Acrobat® Reader recommended.
- Java JDK to use Audio staging (Make sure JAVA_HOME points to jdk installed location under system environment variables)
- Wireless network interface card to use the Wi-Fi Hotspot feature



StageNow Client Requirements

- MX Framework 5.1 or higher
- Android KitKat OS or higher
- DataWedge Software 2.2.9 or higher

Please refer to the extensive installation guide for step by step instructions to install StageNow tool on workstation and also to deploy StageNow Client on the device. This is available in the zebra support portal for StageNow.

DEVICES SUPPORTED

StageNow supports all Zebra Jelly Bean, KitKat, Lollipop and Marshmallow Android devices that have MX installed.

Each OS supports the following MX versions:

- Jelly Bean: MX 4.4 and lesser
- KitKat: MX 4.4 and higher
- Lollipop: MX 5.0 and higher
- Marshmallow: MX 6.0 and higher

Zebra KitKat, Lollipop and Marshmallow devices that ship with the StageNow Client support all device configuration options that the StageNow Tool offers.

Zebra Jelly Bean and older TC70 KitKat devices that ship with the Rapid Deployment Client only support most of the device configuration options that the StageNow Tool offers.

StageNow is certified on the following devices

Device	Operating System
TC70(NonRebranded)	Android KitKat
TC55	Android KitKat and Jelly Bean
MC40	Android Lollipop, KitKat and Jelly Bean
MC67NA	Android KitKat and Jelly Bean
MC92	Android KitKat
MC18	Android Lollipop and KitKat
MC32	Android Jelly Bean
TC70	Android Lollipop and KitKat
TC75	Android Lollipop and KitKat

TC8000	Android Lollipop and KitKat
WT6000	Android Lollipop
ET51	Android Lollipop
ET55	Android Lollipop
TC51	Android Marshmallow
TC56	Android Marshmallow
TC70X	Android Marshmallow
TC75X	Android Marshmallow

MX Feature sets supported on our devices have dependencies on the Android OS, OSX, and MX versions in the BSP. Please select your devices versions in the Matrix found at <http://techdocs.zebra.com/mx/compatibility/> in order to determine which MX Features are supported by your device's OS. Refer to StageNow help to determine if your device supports a specific feature

DEPENDENCIES

StageNow Client

- StageNow client v2.4 has dependency on MX5.1 or higher for advanced error logging feature to work. If this client is upgraded with MX version lesser than MX5.1, it might have some discrepancies in showing proper error logs.
- Because StageNow client depends on the DataWedge to scan barcodes, make sure that the DataWedge is included in the white-listed applications when the white-listing is enabled in Access manager setting.
- Hardware requirements need to perform NFC Staging.
 - **OBID Reader/Writer Hardware Software**
 - This is an RFID writer hardware which we are using along with software to write the binary data to NFC data format into the RFID tag.
 - **M24LR64-R Dynamic NFC/RFID tag**
 - IC with 64-Kbit EEPROM with I²C bus and ISO 15693 RF interface

KNOWN ISSUES

StageNow Tool

Reference No	Description	Notes and Workaround
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TUT-16286	[ECRT31940/32082] StageNow2.6 - copied profile when edited, it edits the original profile too	We can create a new profile
TUT-16075	Setting Stage Now as default launcher not working on Ironman devices with action SetDefaultLauncher	Once "Set Default Launcher" is set, please wait for 15 sec before rebooting the device
TUT-16949	Upgrade/Downgrade via StageNow fails with an error message "android.os.DeadObjectException" on Low memory device	Please do close application which are running in the background and try to upgrade/downgrade it
	Upgrade of StageNow tools from 2.5 to 2.7 is not possible	Please do upgrade StageNow tool from 2.5 to 2.6 then to 2.7
	Default profile which updates the device to latest StageNowclient and MXMS is not supported for Marshmallow devices.	Please download the required BSP update for the device model and android flavor from support central and perform an OSUpdate.
	Retention of the selection for Use Wi-Fi Hotspot checkbox is common across different modalities and different profile actions for both admin as well as operators	Use WiFi Hotspot flag is common for all the modalities, all profile actions for admin as well as operator. If admin selects wifi hotspot for one modality and unselects for other modality, it will override the previous selection.
	Configuration setting templates for Encryption manager, UI manager and Power Key manager always loads the latest one (corresponding to MX 5.0)	Users have to be conscious about the MX version on the device, it's all good if it has the latest Version (MX 5.0 or higher). If the MX version is lesser than 5.0, few features

	<p>irrespective of chosen MX version while creating setting/profile</p>	<p>should not be exercised to make the staging successful. UI manager has introduced new locales (SPANISH, US_SPANISH, BRAZILIAN PORTUGUESE, and PORTUGUESE), these locales will work only with MX 5.0 or higher version on the device. Do not try them otherwise.</p>
	<p>New Xpert mode wizard flow will not allow administrators to have RD settings alone in the Staging profile</p>	<p>It's as designed, we can try other wizards if we want to have RD settings alone, RD profile is mainly to migrate the device to the StageNow ready state.</p>
	<p>Staging may fail in TC55 GMS JellyBean devices as certain features are disabled by default.</p>	<p>There is a package that needs to be loaded, via an OS Update, to Enterprise Enable, the JellyBeanTC55 device. Doing that makes ALL MX functionality work. Prior to that, some important MX functionality will not work.</p>
	<p>Incomplete profiles cannot be edited if they are incomplete before upgrading to the latest StageNow tool version</p>	<p>It's mandatory to take the profiles to the "complete" state. Else, they could become invalid and user may not be able to edit the profiles after upgrade.</p>
	<p>MX 5.0 and 5.1 is not supported on non-rebranded (Jelly Bean) devices, Auto-RD profiles (profile which contains both RD and StageNow configurations) will not work if they are created using MX 5.0 templates</p>	<p>It's working as expected, MX 5.0 and 5.1 configurations will not work when the device doesn't have MX 5.0 and 5.1. This is just avoidmisunderstanding and restate that MX 5.0</p>

		and 5.1 is not supported on JB devices.
	Staging of Imported profiles with FileMgr setting and exported from SN tool 2.1 and below will not work.	This is a known limitation in the earlier version, File manager settings needs to be updated again (if they are imported from the earlier version source).
MC-102872	RD Staging via barcodes generated from the StageNowTool will fail on an MC40 (Jelly Bean) devices if the device is connected to an external charger	Disconnect the charger while doing the RD Staging. This is not an issue when the device is getting charged via USB from a computer.
MC-99833	Within a Wizard, setting values that are inherited from a previous Wizard Step (parent) will not be automatically modified if the Setting Value in the parent Step is manually edited	Admin has to manually change the values in the child Setting. Ex. If you Edit the SSID after you have already completed the Add Network Step, the Connect to Added Network step will not automatically inherit the new value.
	We will have to keep the screen aspect ratio to 100% (Smaller font in Windows7) to display all text properly in the StageNow Tool UI	Goto Control Panel->Display. Select Make text and other items larger or smaller and set the size to smaller 100%
	A broken URI is received through Intent in the application after creating an Intent based StageNow profile in which original URI is set	This is a known limitation from MX, if needed please make use of Batch CSP to embed the xml and stage the device

StageNow Client

Reference No	Description	Notes and Workaround
TUT-16075	Setting Stage Now as default launcher not working on any “N” and few “L” devices	Once StageNow is set as Default APP, with Persistent checked, then user may have to wait for 15 sec before restart the device
TUT-15276	Upgrade/Downgrade via StageNow fails with an error message "android.os.DeadObjectException"	Clear some internal memory and try it again
	Google security popup is being displayed on GMS user builds while trying to install an application using AppmgrCSP. This requires user action to click on either Accept or Decline to dismiss the dialogue which is preventing the Staging process to happen in background.	Partially Handled for few of the scenarios
	Dangerous permissions (like 'RECORD_AUDIO') which was granted to the StageNow client will be dynamically revoked if the user goes to Settings=>Apps=>StageNow and clicks Clear Data button. StageNow client will be crashing after this end user behaviour.	Rebooting the device will grant all the dangerous permission required by StageNow to run.
	Setting WiFi Advanced options in the StageNow profile will result in staging error even though the applicable advanced options for that particular device has been set successfully	This is addressed in MX 6.2
TUT-13144	PersistMgr CSP will throw error saying "Cannot bind to CSP service"	Rebooting the device will successfully bind

	once after successful upgrade of MXMS to version 6.1	the persistmgr CSP to MXMS framework.
TUT-13144	Applying any setting specific to MX 6.1 fails on Creemore devices after MX is upgraded successfully to MX6.1	
	Device cannot connect to WiFi Hotspot if it is already connected to the production/staging network	First disconnect the device from connected network and then perform WiFi Hotspot staging.
	Success of the Audio staging depends on the environmental conditions, please explore the Audio staging help in the tool and Client to know more about the audio staging expectations. Audio staging uses Microphone to collect data, it can block any other application from using the same, at the same time if some other application is already using the microphone, StageNow will not be able to acquire the data. For this reason Audio staging modality will be disabled.	
	Audio staging not working on TC55 KK with built in Microphone	Looks like there is some issue with the built-in microphone, connecting the external Mic could solve the problem.
BSPA-14385	Audio staging not working on TC51, TC56 and TC75X with built in Microphone	
MC-128531	Audio staging not working on WT6000 with built in Microphone	

	<p>SN client will keep the device display ON when the SN client is in the foreground</p>	<p>It's as designed to make the job of a staging operator easy to see the status of staging multiple device at a time. This could drain the battery if the StageNow is left in the foreground after staging. Screen will become dim after some time of inactivity and once the staging is done, it will turn the screen off after some time (30 min).</p>
	<p>WiFi Setting with EAP TLS WEP 104 is not created properly on the device</p>	
	<p>NFC Staging fails if bin file size is more than one KB</p>	<p>This is an issue with the NFC data writer application, we will make another release of this software to address this problem.</p>
	<p>Back key not working when SN is background and user navigates in other screens (ex: settings, Wi-Fi config etc.)</p>	<p>Exit StageNow application if it's required to navigate to other pages on the device while Audio staging is happening in the background.</p>
	<p>Log path to be changed if the stage logs are not seen</p>	<p>If the StageNow logs are not seen under "Last Staging Error" there could be some issue with the log path write permissions. Change the log path under "Last Staging Error >> Log Path" to a writable location.</p>
	<p>StageNow will disappear from the device if "Verify all app signatures" flag is enabled in the Access manager setting.</p>	<p>This is an access security feature provided by MXMS. When this check is enabled, system will verify all apps including MX framework</p>

		<p>and StageNow client and disable application which are not with the registered signatures. User need to be careful while enabling this feature, if they want to enable, enable StageNow application signature as well, else StageNow client application will not be shown in the device.</p>
	<p>Keeping StageNow client with Audio Staging turned ON in foreground may impact the device battery performance</p>	<p>Turn OFF audio staging on the client or minimize the Staging client on the device if not intended to perform audio staging</p>

PART NUMBER AND RELEASE DATE

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