Zebra Workstation Connect

Developer Guide

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About This Guide

This guide provides information on using the developer interface to configure Zebra Workstation Connect.

Icon Conventions

The documentation set is designed to give the reader more visual clues. The following visual indicators are used throughout the documentation set.

NOTE: The text here indicates information that is supplemental for the user to know and that is not required to complete a task.

IMPORTANT: The text here indicates information that is important for the user to know.

CAUTION: If the precaution is not heeded, the user could receive a minor or moderate injury.

WARNING: If danger is not avoided, the user CAN be seriously injured or killed.

DANGER: If danger is not avoided, the user WILL be seriously injured or killed.

Notational Conventions

The following notational conventions make the content of this document easy to navigate.

- **Bold** text is used to highlight the following:
  - Dialog box, window, and screen names
  - Dropdown list and list box names
  - Checkbox and radio button names
  - Icons on a screen
  - Key names on a keypad
  - Button names on a screen

- Bullets (•) indicate:

  - Action items

  - List of alternatives

  - Lists of required steps that are not necessarily sequential.

- Sequential lists (for example, those that describe step-by-step procedures) appear as numbered lists.

Service Information

If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at: zebra.com/support.

When contacting support, please have the following information available:

- Serial number of the unit

- Model number or product name

- Software type and version number

Zebra responds to calls by email, telephone, or fax within the time limits set forth in support agreements.

If your problem cannot be solved by Zebra Customer Support, you may need to return your equipment for servicing and will be given specific directions. Zebra is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you purchased your Zebra business product from a Zebra business partner, contact that business partner for support.

Version Compatibility

For additional information on Zebra Workstation Connect features and release notes, go to zebra.com/us/en/support-downloads/software/productivity-apps/workstation-connect.html

Release Date	Features	Zebra Workstation Connect Version
10/24	• App launch orientation (portrait or landscape)	4.1
3/23	• Immersive Mode • Resolution and Size Mode	1.7
12/22	• Screen Size (Inches) • Version Control • Update Behavior • Paste the content of the shortcuts file exported from Zebra Workstation Connect	1.6
8/22	• Enable or Disable configuration reset	1.5

Release Date	Features	Zebra Workstation Connect Version
	• Enable or Disable custom shortcut icons	
5/22	• Desktop UI elements • Freeform Windows • Desktop SIP configuration • Application behavior persistence	1.4
12/21	• Screen Density • Allow or Disallow screen capture • Restrict the mobile application taskbar access at the package level. • Turn screen dimming On or Off	1.2
10/21	• Enable or disable launching the corresponding settings UI when clicking a status icon • Advanced application permissions on the desktop home screen • Enable or Disable the All Apps button on the desktop taskbar • Enable or Disable mobile device application icons on the desktop taskbar • Access to device settings from the taskbar status icons	1.1
8/21	• Configure a desktop wallpaper • Restrict user access to changing the wallpaper • Desktop shortcuts and sort order • Launch applications (on the device screen or external monitor) when a device is docked or undocked • Show or hide status icons	1.0

Configurations

This guide covers the following configurations:

Table 1 Compatible Configurations

Configuration	Description	Device Compatibility
CRD-EC5X-1SWS-01	Workstation Docking Cradle Kit with Standard Cup, HDMI, Ethernet, and multiple USB Ports. Included in the kit: • Cradle (for example, CRD-EC5X-1SWS-02) • Power Supply (for example, PWRBGA12V50W0WW) • DC Cable (for example, CBL-DC-388A1-01) Country-specific AC line cords are sold separately.	EC50 and EC55 Mobile Computers
CRD-TC2X-1SNWS-01	The TC21, TC26, TC21-HC, TC26-HC Connect Cradle (Workstation) connects a mobile computer to an external monitor and multiple peripherals, including HDMI, Ethernet, USB-A (4), and a 3.5mm headset jack. Included in the kit: • Cradle (for example, CRD-TC2X-1SNWS-01) • Power Supply (for example, PWR-BGA12V50W0WW) • DC Cable (for example, CBL-DC-388A2-01) Country-specific AC line cords are sold separately.	TC21, TC26, TC21-HC, and TC26-HC Mobile Computers

Table 1 Compatible Configurations (Continued)

Configuration	Description	Device Compatibility
CRD-TC5X-1SWS-01	Workstation Docking Cradle Kit with Standard Cup, HDMI, Ethernet, and multiple USB Ports. Included in the kit: • Cradle (for example, (CRD-TC5X-1SWS1-01) • Power Supply (for example, PWRBGA12V50W0WW) • DC Cable (for example, CBL-DC-388A1-01) Country-specific AC line cords are sold separately.	TC52, TC52x, TC57, TC57x, TC52ax, TC52x-HC and TC52ax-HC Mobile Computers
CRD-NTC5X-1SNWS-01	The TC53, TC58 Connect Cradle (Workstation) connects a mobile computer to an external monitor and multiple peripherals, including HDMI, Ethernet, and USB-A (4) Included in the kit: • Cradle (for example, CRD-NTC5X-1SNWS-01) • Power Supply (for example, PWR-BGA12V50W0WW) • DC Line Cord (for example, CBL-DC-388A2-01) Country-specific grounded AC Line Cord sold separately.	TC53 and TC58 Mobile Computers
CRD-NTC7X-1SNWS-01	The TC73/TC78 Connect Cradle (Workstation) connects a mobile computer to an external monitor and multiple peripherals, including HDMI, Ethernet, and USB-A (4). Included in the kit: • Cradle (for example, CRD-NTC7X-1SNWS-01) • Power Supply (for example, PWR-BGA12V50W0WW • DC Line Cord (for example, CBL-DC-388A2-01) Country-specific AC line cords are sold separately.	TC73 and TC78 Mobile Computers

Table 1 Compatible Configurations (Continued)

Configuration	Description	Device Compatibility
CRD-ET4X-1SNWS-01	The ET40, ET45, ET40-HC, ET45-HC Connect Cradle (Workstation) connects a 10 or 8 in. tablet to an external monitor and multiple peripherals, including HDMI, Ethernet, USB-A (x4), and a 3.5 mm headset jack. Included in the kit: • Cradle (for example, CRD-ET4X-1SNWS-01) • Power Supply (for example, PWR-BGA12V50W0WW) • DC Line Cord (CBL-DC- 388A2-01)) Country-specific grounded AC Line Cord sold separately.	ET40, ET45, ET40-HC, ET45-HC Tablets
CRD-ET5X-1SWS-01	Workstation Docking Cradle Kit with Standard Cup, HDMI, Ethernet, and multiple USB Ports. Included in the kit: • Cradle with Rugged I/O Adaptor (for example, CRD-ET5X-1SCOM2R) • Cradle (for example, CRD-ET5X-1SCOM1) • Power Supply (for example, PWRBGA12V50W0WW) • DC Cable (for example, CBL-DC-388A1-01) Country-specific AC line cords are sold separately.	ET51 and ET56 Mobile Computers
CRD-L10A-XVEHCOMS21-01	The L10 tablet comes with a Lithium-ion battery and a power supply.	L10 Tablets

NOTE: A Mobility DNA Enterprise license is required to use Zebra Workstation Connect on Zebra Professional series devices.

Using the Developer Interface for Configuration

Developers can create JSON strings using the procedure in this section to configure Zebra Workstation Connect. This method provides additional flexibility and customization.

Zebra Workstation Connect supports configuration changes using two procedures:

- An administrator sends managed configurations to Workstation Connect using an EMM.
- A developer submits JSON strings to Workstation Connect.

Configuration changes are applied to the application based on the settings of the managed configuration:

- On Next Dock – a previously saved configuration is applied at the start of each session, beginning with a docking event and ending with an undocking event.
- Immediately – a saved configuration is applied immediately, potentially impacting user activity.

NOTE: Changing the resolution while configuration changes are set to apply immediately could negatively impact the user experience if the user is in the middle of a task and the change is unexpected. Applying new configurations on the next dock ensures that changes occur following a dock/undock event and do not interrupt application behavior.

Administrators typically define the operating mode. While administrators could operate mainly in a single dedicated mode, developers might toggle between modes based on login credentials that determine shared and dedicated devices based on role.

Using a Client Application to Communicate with Workstation Connect

Any third-party application that attempts to configure Workstation Connect must bind to an AIDL interface exposed by Workstation Connect.

```
package com.zebra.valueadd;
//AIDL interface to provide to third-party applications
interface IZVAService {
  /**
   * Method that receives the JSON string from the third-party application as input
   * If the data is valid, returns success, otherwise returns failure as an output.
   * The caller should call this API just after binding to the service.
   */
 String processZVARequest(in String json);
}
```

This interface is protected by a custom permission that must be declared in the manifest of the third-party application.

```
<uses-permission
 android:name="com.zebra.workstationconnect.ACCESS_CONFIGURATION_SERVICE"/>
```

To successfully configure Workstation Connect from a third-party application, the third-party application must declare in its manifest the intention to bind to and configure Workstation Connect through a custom permission. To correctly perform this configuration, Workstation Connect must be installed before the third-party application to ensure that the custom permission is defined before the third-party application attempts to use it.

The permission is not defined If the third-party application was installed before Workstation Connect, and the third-party application does not have permission. As a result, the application cannot bind to the AIDL interface and the third-party application cannot configure Workstation Connect successfully.

In this case, the third-party application must be uninstalled and re-installed while Workstation Connect is on the device. At that point, the third-party application can receive the requisite permission and configure Workstation Connect.

A third-party application binds to the AIDL interface exposed by Workstation Connect by sending a bindService intent that specifies the package name and service name of Workstation Connect.

```
/**
 * Option 1: Bind to service through intent
 */
private void bindToZVAServiceThroughIntent() {
    Intent intent = new Intent();
    intent.setClassName(getAppPackageName(),
        "com.zebra.workstationconnect.DeviceManagementService");
    bindService(intent, this, BIND_AUTO_CREATE);
}

/**
 * Option 2: Bind to service through component
 */
private void bindToZVAServiceThroughComponent() {
    Intent intent = new Intent();
    intent.setComponent(new ComponentName(getAppPackageName(),
        "com.zebra.workstationconnect.DeviceManagementService"));
    bindService(intent, this, BIND_AUTO_CREATE);
}
```
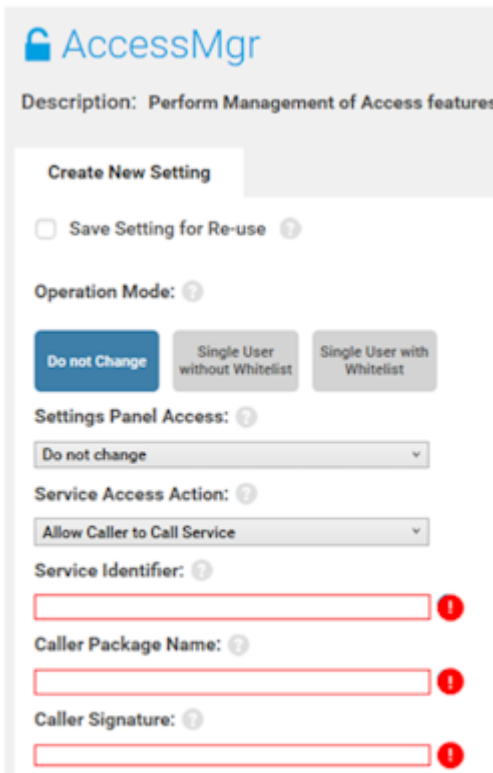
NOTE: Strings setComponent and setClassname are both supported for binding the service identifier.

Any third-party application can declare the custom permission in its manifest; it does not provide sufficient security over which applications can configure Workstation Connect. Declaring the custom permission in its manifest allows a third-party application to bind to Workstation Connect and to attempt to submit JSON to configure Workstation Connect. However, unless the administrator explicitly grants the third-party application permission to configure Workstation Connect, the attempt to submit a JSON string fails due to a security exception.

The administrator must use XML sent to the AccessMgr CSP (for example, through StageNow) or Managed Configurations sent to OemConfig, to grant third-party applications the right to submit the configuration to Workstation Connect as JSON strings.

Access Manager must be invoked to grant the needed permission. To invoke Access Manager, provide the Service Access Action, Service Identifier, Caller Package Name, and the Caller Signature. Go to techdocs.zebra.com/mx/accessmgr/ for additional information on using Access Manager to enable configurations.

- Service Access Action - select **Allow Caller to Call Service** from the dropdown.

- Service Identifier - the Zebra Value Add service name you intend to interface, enter: delegation-zebra-workstationconnect-api-access-configuration-service

- Caller Package Name - the application's **applicationId** found in the module Build.gradle file under the defaultConfig section; for example, com.zebra.wsc-sample-app

- Caller Signature - the application signature in DER format, provided in a .CRT file. Extract the application signature to obtain the certificate.

NOTE: Ensure the application you plan to authorize is installed.

Go to techdocs.zebra.com/emdk-for-android/latest/samples/sigtools/ for instructions on extracting the application signature.

If a third-party application successfully binds to Workstation Connect, it receives and saves an IBinder object used to access the methods of that service using a callback.

```
public ServiceConnection myConnection = new ServiceConnection() {
```

```
      public void onServiceConnected(ComponentName className, IBinder binder) {
          //cast the IBinder and get LocalService instance
      }
}
```

If an administrator successfully grants the third-party application permission to configure Workstation Connect, it can submit a JSON string to configure Workstation Connect using a previously saved IBinder:

```
String configJson = "some JSON text";
String resultJson = myService.processZVARequest(configJson);
```

NOTE: Coordinate with the administrator to understand roles and relevant use cases.

Using Package and Activity Names

Some application configurations require a package and activity name. When providing a package or activity name, ensure that you are utilizing Android conventions.

For package names:

- Capital and small English letters (for example, A to Z or a to z)

- Underscore (for example, ___)

- English numbers (for example, 0 to 9)

For activity names:

- Letters, digits, underscores (_), and dollar signs ($) that do not begin with a digit and do not contain spaces.

Configuring the Do Not Change Setting

Enabling Do Not Change persists the previous configuration. This setting does not alter the current configuration. If a setting was not configured previously, the default state persists.

Desktop Orientation

Select the orientation of the content on the external monitor.

NOTE: Zebra Workstation Connect version 1.0 or higher is required to use this feature.

- Key: desktopOrientation
- Type: choice

Table 2   Desktop Orientation Configurations

Input Name	Input Value
Landscape (No Rotation)	0

Table 2   Desktop Orientation Configurations (Continued)

Input Name	Input Value
Portrait (90 degrees left)	1
Landscape Inverted (180 degrees)	2
Portrait Inverted (270 degrees)	3

Resolution and Size Mode

Automatically determine a native resolution and screen size of the external monitor or provide values manually.

NOTE: Zebra Workstation Connect version 1.7 or higher is required to use this feature.

- Key: resolutionAndSizeMode
- Type: choice

Table 3   Resolution and Size Mode

Key	Input Name	Input Value
resolutionAndSizeMode	Do Not Change	do not change
	Manual	1
	Automatic	2

Configure Screen Size

Enter the diagonal screen size (in inches) of the external monitor in use. Use resolution and monitor size to optimize the pixel density setting for the user experience.

NOTE: Zebra Workstation Connect version 1.6 or higher is required to use this feature.

- Key: desktopCustomDensityScreenSize
- Type: string

Table 4   Screen Size

Key	Input Name
desktopCustomDensityScreenSize	String

Desktop Resolution

Select the resolution of the content on the external monitor.

NOTE: Zebra Workstation Connect version 1.0 or higher is required to use this feature.

- Key: desktopResolution
- Type: choice

Table 5   Desktop Resolution Configurations

UI (Input Name)	JSON (Input Value)
1920 x 1080	1920,1080,200,10
1920 x 1200	1920,1200,200,11
800 x 600	800,600,320,0
1024 x 600	1024,600,320,1
1024 x 768	1024,768,320,2
1280 x 720	1280,720,320,3
1280 x 800	1280,800,320,4
1280 x 1024	1280,1024,240,5
1366 x 768	1366,768,240,6
1440 x 900	1440,900,240,7
1600 x 900	1600, 900,200,8
1680 x 1050	1680,1050,200,9
2560 x 1440	2560,1440,200,12

Desktop UI Elements

Configure the desktop UI elements on the home screen.

NOTE: Zebra Workstation Connect version 1.4 or higher is required to use this feature.

- Key: configDesktopUIElements
- Type: bundle

Table 6   Desktop UI Elements

Nested Key	Input Name	Input Value
DesktopUIShortcuts	Show	1
	Hide	2
DesktopUIWallpaper	Show	1
	Hide	2

Table 6 Desktop UI Elements (Continued)

Nested Key	Input Name	Input Value
DesktopUIHomeContextMenu	Show	1
	Hide	2
DesktopUINotificationPanel	Show	1
	Hide	2
DesktopUITaskBar	Show	1
	Hide	2
ExportConfigMenu	Show	1
	Hide	2

Shortcuts

Select whether shortcuts are displayed on the secondary screen.

- Key: DesktopUIShortcuts
- Type: choice

Table 7 Shortcut Settings

Nested Key	Input Name	Input Value
DesktopUIShortcuts	Do Not Change	do not change
	Show	1
	Hide	2

Wallpaper

Select whether the wallpaper is displayed on the secondary screen..

- Key: DesktopUIWallpaper
- Type: choice

Table 8 Wallpaper Settings

Nested Key	Input Name	Input Value
DesktopUIWallpaper	Do Not Change	do not change
	Show	1
	Hide	2

Context Menu

Enter a version number (integers only) to identify the configuration being pushed to the devices.

NOTE: Zebra Workstation Connect version 1.0 or higher is required to use this feature.

- Key: DesktopUIHomeContextMenu
- Type: choice

Table 9   Context Menu Settings

Key	Input Name	Input Value
DesktopUIHomeContextMenu	Do Not Change	do not change
	Show	1
	Hide	2

Notification Panel

Select whether the notification panel is displayed on the secondary screen.

NOTE: Zebra Workstation Connect version 1.1 or higher is required to use this feature.

- Key: DesktopUINotificationPanel
- Type: choice

Table 10   Notification Settings

Key	Input Name	Input Value
DesktopUINotificationPanel	Do Not Change	do not change
	Show	1
	Hide	2

Taskbar Visibility

Select whether the taskbar is visible on the secondary screen.

NOTE: Zebra Workstation Connect version 1.1 or higher is required to use this feature.

- Key: DesktopUITaskBar
- Type: choice

Table 11 Taskbar Visibility Settings

Nested Key	Input Name	Input Value
DesktopUITaskBar	Do Not Change	do not change
	Show	1
	Hide	2

Exporting Managed Configurations

Configure the visibility of the menu option to save the current set of managed configurations on the device to a file.

NOTE: Zebra Workstation Connect version 2.0 or higher is required to use this feature.

- Key: ExportConfigMenu
- Type: choice

Table 12 Export Managed Configurations

Key	Input Name	Input Value
ExportConfigMenu	Do Not Change	do not change
	Show	1
	Hide	2

Freeform Windows

Configure the ability for applications on the secondary screen to run within a movable and resizable window.

NOTE: Zebra Workstation Connect version 1.4 or higher is required to use this feature.

- Key: FreeformWindows
- Type: choice

Table 13 Freeform Window Settings

Key	Input Name	Input Value
FreeformWindows	Do Not Change	do not change
	Turn On	1
	Turn Off	2

Configure Status Icons

Show or hide specific status icons based on use case.

NOTE: Zebra Workstation Connect version 1.0 or higher is required to use this feature.

- Key: configStatusIcons
- Type: bundle

Table 14   Status Icon Settings

Nested Key	Input Name	Input Value
batteryStatusIcon	Show	1
	Hide	2
bluetoothStatusIcon	Show	1
	Hide	2
ethernetStatusIcon	Show	1
	Hide	2
cellularStatusIcon	Show	1
	Hide	2
vpnStatusIcon	Show	1
	Hide	2
sipStatusIcon	Show	1
	Hide	2
wiFiStatusIcon	Show	1
	Hide	2
settingsFragmentAudioPanel	Enable	1
	Disable	2
settingsFragmentsStatusIcons	Enable	1
	Disable	2

Configure Desktop Shortcuts

Determine how shortcuts are sorted, imported, and exported.

NOTE: Zebra Workstation Connect version 1.0 or higher is required to use this feature.

- Key: configDesktopShortcuts
- Type: bundle

NOTE: This setting requires a package name and an activity name. For additional information, see the Package and Activity Name section.

Table 15 Desktop Shortcuts

Nested Key	Type	Input Name	Input Value
shortcutUserControl	choice	Allow	1
		Disallow	2
sortShortcuts	choice	Alphabetical	1
		Time/date added	2
appShortcuts (Deprecated)	bundle	shortcutPackagename	String
		shortcutActivityname	String
shortcutImportFile (Deprecated)	string	-	String

Configure Wallpaper

Configure the ability for a user to set the desktop wallpaper.

NOTE: Zebra Workstation Connect version 1.0 or higher is required to use this feature.

NOTE: This setting requires a package name and an activity name. For additional information, see the Package and Activity Name section.

- Key: configureWallpaper
- Type: bundle

Table 16 Wallpaper Configurations

Nested Key	type	UI (Input Name)	Input Value
wallpaperPath	string	-	String
userControl	choice	Allow	1
		Disallow	2

Application Behavior

Configure the application behavior during a docking or undocking event.

NOTE: Zebra Workstation Connect version 1.0 or higher is required to use this feature.

- Key: configAppBehavior
- Type: bundle

Table 17 Application Behavior

Key	Input Type	Input Value	Input Type	Input Value
configAppBehavior	bundle	appCriteria	bundle_array	autoMovePackagename
				appBehaviorActivityname
				dockingCondition
				undockingCondition
				accessibilityOptions
				taskbarImmersiveMode

Nested Key	Input Type	Input Value
autoMovePackagename	string	String
appBehaviorActivityName	string	String

Table 18 Docking Condition

Key	Input Name	Input Value	Input Type	Input Name
DockingCondition	bundle	dockingAction	choice	Stop
				Launch
				Move
		dockingWindowState	choice	Minimize
				Maximize
				Restore

Table 19 Undocking Condition

Key	Input Type	Input Value	Input Type	Input Name
UndockingCondition	bundle	undockingAction	choice	Stop
				Launch
				Move

Table 20   Accessibility Options

Key	Type	Nested Key	Input Name	Input Value
accessibilityOptions	bundle	accessibilityAllApps	Allow	1
			Disallow	2
		accessibilityCreateShortcut	Allow	1
			Disallow	2
		accessibilityLaunchShortcut	Allow	1
			Disallow	2
		accessibilityTaskbarMoveToDesktop	Allow	1
			Disallow	2
		accessibilityTaskbarMoveToDevice	Allow	1
			Disallow	2
		accessibilityNotification	Allow	1
			Disallow	2
		taskbarIcon	Show	1
			Hide	2

Table 21   Undocking Condition

Key	Type	Input Name	Input Value
taskbarImmersiveMode	choice	Show	1
		Hide	2

Screen Capture

Configure the ability to capture a desktop screenshot.

NOTE: Zebra Workstation Connect version 1.2 or higher is required to use this feature.

- Key: captureScreenshot
- Type: choice

Table 22   Screen Capture

Key	Input Name	Input Value
captureScreenshot	Do Not Change	do not change
	Allow	1
	Disallow	2

Desktop SIP

Configure the Soft Input Panel (SIP) while in desktop mode.

NOTE: Zebra Workstation Connect version 1.4 or higher is required to use this feature.

- Key: DefaultSIP
- Type: bundle

Table 23   Desktop SIP

Key	Input Name
packageSip_description	Package Name
activitySip_description	Activity Name

Taskbar

Configure taskbar options such as the visibility of the All Applications button, mobile application icons, or the SIP icon.

NOTE: Zebra Workstation Connect version 1.1 or higher is required to use this feature.

- Key: TaskbarCapability
- Type: bundle

Table 24   Taskbar

Nested Key	Input Name	Input Value
AllAppsButton	Enable	1
	Disable	2
DisplayMobileApps	Show	1
	Hide	2
SIPIcon	Show	1
	Hide	2

Device Behaviors

Enable or disable dimming on the mobile device while docked in the cradle.

NOTE: Zebra Workstation Connect version 1.2 or higher is required to use this feature.

- Key: DeviceCapability
- Type: bundle

Table 25   Device Behaviors

Nested Key	Input Name	Input Value
DimmingMobileScreen	Turn On	1
	Turn Off	2

Persistence

Determine if configurations remain on the device after an Enterprise Reboot.

NOTE: Zebra Workstation Connect version 1.4 or higher is required to use this feature.

- Key: persistConfiguration
- Type: choice

Table 26   Persistence

Key	Input Name	Input Value
persistConfiguration	Do Not Change	do not change
	Turn Off	1
	Turn On	2

Reset Configuration

Configure the ability for the user to reset all Zebra Workstation Connect settings to their default state.

NOTE: Zebra Workstation Connect version 1.5 or higher is required to use this feature.

- Key: resetConfiguration
- Type: choice

Table 27   Reset Configuration

Key	Input Name	Input Value
resetConfiguration	Do Not Change	do not change
	Enable	1
	Disable	2

Exporting Managed Configurations

Configure the visibility of the menu option to save the current set of managed configurations on the device to a file.

NOTE: Zebra Workstation Connect version 2.0 or higher is required to use this feature.

- Key: ExportConfigMenu
- Type: choice

Table 28   Export Managed Configurations

Key	Input Name	Input Value
ExportConfigMenu	Do Not Change	do not change
	Show	1
	Hide	2

Update Behavior

Configure when the behavior defined by a new configuration goes into effect.

NOTE: Zebra Workstation Connect version 1.6 or higher is required to use this feature.

- Key: configurationMode
- Type: choice

Table 29   Update Behavior

Key	Input Name	Input Value
configurationMode	Do Not Change	do not change
	On Next Dock	1
	Immediately	2

Version

Enter a version number to identify the configuration being pushed to the device.

NOTE: Zebra Workstation Connect version 1.6 or higher is required to use this feature.

- Key: zwcConfigurationVersion
- Type: string

Table 30   Version

Key	Input Name
zwcConfigurationVersion	String

Application Launch Orientation Mode

Configure a global setting to open applications in Portrait or Landscape mode upon initial launch and after resetting/relaunching the application from the taskbar.

NOTE: Zebra Workstation Connect version 4.1 or higher is required to use this feature.

- Key: appLaunchOrientationMode
- Type: choice

Table 31

Key	Input Name	Input Value
appLaunchOrientationMode	Do Not Change	do not change
	Portrait	1
	Landscape	2

Deployable Developer Use Cases

Creating a JSON configuration file provides increased flexibility for developers to deploy customized settings based on specific user roles.

Create and deploy a set of managed configurations based on the tasks the user needs to accomplish in their workflow.

- Configure application shortcuts or device behaviors:
- Launch an application or Chrome shortcut upon a docking event.
- Change display settings including resolution and density.
- Configure desktop elements and status icons based on user permissions.
- Assign application behaviors based on a specific device state such as launching a Chrome shortcut or email upon a docking event.
- Revoke permissions such as screen capture based on roles.

Display Settings

Configure the orientation (landscape or portrait), resolution, and size of the secondary monitor.

The following JSON snippet sets the secondary monitor orientation to landscape, manual resolution (1920x1080), and size.

```
{
    "kind": "androidenterprise#managedConfiguration",
```

```
    "productId": "com.zebra.workstationconnect.release",
    "managedProperty": [{
        "key": "resolutionAndSizeMode",
        "valueString": "1"
    }, {
        "key": "desktopResolution",
        "valueString": "1920,1080,160,10"
    }, {
        "key": "desktopDensity",
        "valueString": "160"
    }, {
        "key": "desktopOrientation",
        "valueString": "0"
    }]
}
```

Desktop UI Elements

Configure the UI elements of the application, including shortcuts (application, web, and file), wallpaper, contextual menu, notification panel, and taskbar) on the secondary monitor.

The following JSON snippet enables the visibility of all desktop UI elements except the notification panel.

```
{
    "kind": "androidenterprise#managedConfiguration",
    "productId": "com.zebra.workstationconnect.release",
    "managedProperty": [{
        "key": "configDesktopUIElements",
        "valueBundle": {
            "managedProperty": [{
                "key": "DesktopUIWallpaper",
                "valueString": "1"
            }, {
                "key": "DesktopUIHomeContextMenu",
                "valueString": "1"
            }, {
                "key": "DesktopUINotificationPanel",
                "valueString": "2"
            }, {
                "key": "DesktopUITaskBar",
                "valueString": "1"
            }, {
                "key": "DesktopUIShortcuts",
                "valueString": "1"
            }]
        }
    }]
}
```

Status Icons

Configure the visibility of status icons for battery, Bluetooth, cellular, Ethernet, VPN, Wi-Fi, SIP, and audio settings.

The following JSON snippet disables the visibility of icon and audio settings.

```
{
    "kind": "androidenterprise#managedConfiguration",
    "productId": "com.zebra.workstationconnect.release",
    "managedProperty": [{
        "key": "configStatusIcons",
        "valueBundle": {
            "managedProperty": [{
                "key": "settingsFragmentsStatusIcons",
                "valueString": "2"
            }, {
                "key": "settingsFragmentAudioPanel",
                "valueString": "2"
            }, {
                "key": "ethernetStatusIcon",
                "valueString": "1"
            }, {
                "key": "vpnStatusIcon",
                "valueString": "1"
            }, {
                "key": "sipStatusIcon",
                "valueString": "1"
            }, {
                "key": "batteryStatusIcon",
                "valueString": "1"
            }, {
                "key": "cellularStatusIcon",
                "valueString": "1"
            }, {
                "key": "wiFiStatusIcon",
                "valueString": "1"
            }, {
                "key": "bluetoothStatusIcon",
                "valueString": "1"
            }]
        }
    }]
}
```

Desktop Shortcuts

Use a shortcut file to deploy a series of application, weblink, or file shortcuts.

The following shortcut file includes an application shortcut, a weblink shortcut with a standard icon, a weblink shortcut with a custom icon, and a file shortcut.

```
{
    "kind": "androidenterprise#managedConfiguration",
    "productId": "com.zebra.workstationconnect.release",
    "managedProperty": [{
        "key": "configDesktopShortcuts",
        "valueBundle": {
```

```
        "managedProperty": [{
            "key": "shortcutImportFile",
            "valueString": [{
                "addedDatetime": 1701895478546,
                "appInfo": {
                    "activityName":
"com.google.android.apps.chrome.Main",
                    "iconImageString": null,
                    "imagePath": null,
                    "packageName": "com.android.chrome"
                },
                "groupInfo": null,
                "id": "sc2023.12.06.15:44:38.9e4fa1",
                "modifiedDatetime": 0,
                "shortcutInfo": null,
                "type": "application"
            }, {
                "addedDatetime": 1701895478546,
                "appInfo": {
                    "activityName":
"com.android.documentsui.LauncherActivity",
                    "iconImageString": null,
                    "imagePath": null,
                    "packageName": "com.android.documentsui"
                },
                "groupInfo": null,
                "id": "sc2023.12.06.15:44:38.e537eb",
                "modifiedDatetime": 0,
                "shortcutInfo": null,
                "type": "application"
            }, {
                "addedDatetime": 1701895553474,
                "appInfo": null,
                "groupInfo": null,
                "id": "sc2023.12.06.15:45:53.f712e6",
                "modifiedDatetime": 1701895553475,
                "shortcutInfo": {
                    "browserType": "default",
                    "iconImageString": null,
                    "id": null,
                    "imagePath": null,
                    "name": "Zconnect",
                    "packageName": null,
                    "path": "http://www.zconnect.zebra.com"
                },
                "type": "web"
            }, {
                "addedDatetime": 1701895594602,
                "appInfo": null,
                "groupInfo": null,
                "id": "sc2023.12.06.15:46:34.d0871a",
                "modifiedDatetime": 1701895594608,
                "shortcutInfo": {
                    "browserType": "chrome",
```

```
                    "iconImageString":
 "UklGRqAHAABXRUJQVlA4WAoAAAAgAAAARwAARwAASUNDUBgCAAAAAAIYAAAAAAIQAABtbnRy
UkdCIFhZWiAAAAAAAAAAAAAAAAAAAhY3NwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAA9tYAAQ
AAAADTLQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAlk
ZXNjAAAA8AAAAHRyWFlaAAABZAAAABRnWFlaAAABeAAAABRiWFlaAAABjAAAABRyVFJDAAABoAAAAC
hnVFJDAAABoAAAAChiVFJDAAABoAAAACh3dHB0AAAByAAAABRjcHJ0AAAB3AAAADxtbHVjAAAAAAA
AAEAAAAMZW5VUwAAAFgAAAAcAHMAUgBHAEIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAFhZWiAAAAAAABv
ogAAOPUAAAOQWFlaIAAAAAAAGKZAAC3hQAAGNpYWVogAAAAAAAAJKAAAA
+EAAC2z3BhcmEAAAAAA
AAACZmYAAPKnAAANWQAAE9AAAApbAAAAAAAAABYWVogAAAAAAA9tYAAQAAAADTLW1sdWMAAAAAAA
AAAQAAAAxlblVTAAAAIAAAABwARwBvAG8AZwBsAGUAIABJAG4AYwAuACAAMgAwADEANlZQOEExiBQAA
L0fAEQCnxKBtJEfvuc6f8d03CArbtm1xqW6Fbdu2uFT3/
JtN22ZPUvWNa4wAAAAAAAAAAAAACQAmVOKWVOUOYEKfdemVOZO7hXmRPUtdS1AK
  SUOY17lTmllDmlHNnxrP+1vd2RKTt3Bx/mk/
GGOc5br64lpa6lzCllvqefA8qcUiAlJeXfywBq17YZkqQnklXVHtuetW2NzbVtG6NSIjLuP1ydWd07
UctvEf1nGABpG7rbrA4BewIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgCvsh
IftnHN1BxXZcDSCCaKqqqqqO7CPbft0NIIJYghl3YHlGaNjv1WT2x2c1LlhVVWWJyXzx8SQMWXCFa8
4CngslFkYYTKt4QrUDluMQyNMprXuRUv3/
Kwxl3E1tIjJdDHVPkvePW+koz/
zuEyw3brJdJGuSi5ctz+cjabCQ70nwlAD72h+8Hb9hvnWK32GK
+JOePKBjv7o1wOaABxT7TA5ey1jT aB02/
Zzhz7PXTkJ3OjRkcyR32BPnJhO3NFHxSgm/R8+/
Qa9qjUdt49jj5ugnQbzK5OPq1Ej3lezC+SWNVKIPS7z6GtnXnrt4tHFkPTdShnNpJeHoMi47JQx7+
  GSy9wYUhSjcPCLcyta8y/
2CoUah9adH9RRWnlG8WzUTi8MFCyFBXNnqqKnb/
B7XPDXXUeuSAlXl8SaM+vfK6IMbi6Tqr4i1DNe2pXhpBPQflvSBV+RvciVPZZZZdaztv1M2aN7jaX
  1ew owisyRMSVdvN0r6xDS93KUKzTL4XfHvTbnw9fnbTqovycqHWwHu5HgRVxGY
+xzZMOv3be5nPt3Rio9L3D2iOjG+wjXgXt615ZHSR8EGL1lSmL6N5VZnl6pGc/
W6FB/
wcbkhcddWbEj0ybAewjHpTQg0R+WUPkT1qmTCdyx+mvgj3yu1PnM59lgQHM37kqiQ7r/
GO6FMmLxW5n52r9zYGKWz78Lg+VmtPJON7rrpEN6UMUbGKPV1qrjxexx15r5kyFyq2VfKrInvFASB
jEwr8zbndl87UWZttXU6TRlZnWYIbQ/DUCYOvx169BWDi4mCT6iyMzNmKWW+Ow5NPP/
TwC+ZvhW1049w2eFkfCQ5uIf3n/
QvWpejJP4Uyssj/l3SRi2GpH//
JKnzRQ695Wyd869Z/Ugm/
rBy2eRNaXd3Z0bvc33iGAVPfTH9aHgTvtRbhA9+6UtzKdlfwW/
3zs3Fy9n2STnL37LLyc1nAN6C88XRh78MJmeZbzR8+1+gwWvYPPytQ/
xNSxjFyHNfYkbTUvFktJlyNRKVmdk/02ShrrR3azNnKlt2qdFT5wA0oKC1DnMt9fcY/7GupTmVqyx
S4IJAOkktReJAh5a5An/nKKn5XXfcTq/
m6ajyldH5zGcikCjIIkrB9s7nAEiqScVe0yg0kB2Ur6ZJELg4opF/
7XytU4I80f1u94isyyZZFHojvV2xCBttJrnJAt0cxI7nzVFPaai2hAiPUCae2gUwSxCu65VTCqeCp
4qbnMeNp1CVzRleuXMlC8Y0Sq2CjBJ9qxc4dmh0Rj5f/
BdnderB2AlItkKH6mAjpRyMqRaq/
oayofKBXa0r6XM/UnbpkWiaqYfcld/
TNzHWqe9svWC9+8pb6ThOsOrXfaksKf0eir+jNQDecuyJVmY+8b7GJOlW3TQvWCL+xchmWwrnM4mc
1LG tdGZRVUQ9iUDeR1cpgSwbkhXODq575fVn3sOhK/tORLg\u003d\u003d",
                    "id": null,
                    "imagePath": "/data/user/0/
com.zebra.workstationconnect.release/app_user_custom_shortcuts/
download792.jpeg",
                    "name": "Zebra",
                    "packageName": null,
```

```
                        "path": "https://www.zebra.com"
                    },
                    "type": "web"
                }, {
                    "addedDatetime": 1701895634929,
                    "appInfo": {
                        "activityName":
 "com.reflexisinc.mywork17.MainActivity",
                        "iconImageString": null,
                        "imagePath": null,
                        "packageName": "com.reflexisinc.mywork17"
                    },
                    "groupInfo": null,
                    "id": "sc2023.12.06.15:47:14.4c1fab",
                    "modifiedDatetime": 1701895634929,
                    "shortcutInfo": null,
                    "type": "application"
                }, {
                    "addedDatetime": 1701895668792,
                    "appInfo": null,
                    "groupInfo": null,
                    "id": "sc2023.12.06.15:47:48.816a78",
                    "modifiedDatetime": 1701895668792,
                    "shortcutInfo": {
                        "browserType": "default",
                        "iconImageString": null,
                        "id": null,
                        "imagePath": null,
                        "name": "Image",
                        "packageName": "images.jpeg",
                        "path":
"content://com.android.providers.downloads.documents/document/msf%3A80"
                    },
                    "type": "local_file"
                }]
            }]
        }
    }]
}
```

Application Behavior

Configure application behaviors such as the ability to create shortcuts, user access, and window states for applications such as web browsers, email, or video conferencing.

The following JSON snippet uses four package names for applications and launches them upon docking the device.

```
{
    "kind": "androidenterprise#managedConfiguration",
    "productId": "com.zebra.workstationconnect.release",
    "managedProperty": [{
        "key": "configAppBehavior",
        "valueBundle": {
```

```
"managedProperty": [{
    "key": "appCriteria",
    "valueBundleArray": [{
        "managedProperty": [{
            "key": "autoMovePackagename",
            "valueString": "com.android.chrome"
        }, {
            "key": "dockingCondition",
            "valueBundle": {
                "managedProperty": [{
                    "key": "dockingWindowState",
                    "valueString": "2"
                }, {
                    "key": "dockingAction",
                    "valueString": "2"
                }]
            }
        }, {
            "key": "undockingCondition",
            "valueBundle": {
                "managedProperty": [{
                    "key": "undockingAction",
                    "valueString": "1"
                }]
            }
        }]
    }, {
        "managedProperty": [{
            "key": "autoMovePackagename",
            "valueString": "com.google.android.gm"
        }, {
            "key": "dockingCondition",
            "valueBundle": {
                "managedProperty": [{
                    "key": "dockingWindowState",
                    "valueString": "3"
                }, {
                    "key": "dockingAction",
                    "valueString": "2"
                }]
            }
        }, {
            "key": "undockingCondition",
            "valueBundle": {
                "managedProperty": [{
                    "key": "undockingAction",
                    "valueString": "3"
                }]
            }
        }]
    }, {
        "managedProperty": [{
            "key": "autoMovePackagename",
            "valueString": "com.android.settings"
```

```
                }, {
                    "key": "accessibilityOptions",
                    "valueBundle": {
                        "managedProperty": [{
                            "key": "accessibilityLaunchShortcut",
                            "valueString": "2"
                        }, {
                            "key": "accessibilityTaskbarMoveToDevice",
                            "valueString": "2"
                        }, {
                            "key": "accessibilityAllApps",
                            "valueString": "2"
                        }, {
                            "key": "taskbarIcon",
                            "valueString": "2"
                        }, {
                            "key": "accessibilityCreateShortcut",
                            "valueString": "2"
                        }, {
                            "key": "accessibilityNotification",
                            "valueString": "2"
                        }, {
                            "key": "accessibilityTaskbarMoveToDesktop",
                            "valueString": "2"
                        }]
                    }
                }]
            }, {
                "managedProperty": [{
                    "key": "autoMovePackagename",
                    "valueString": "us.zoom.videomeetings"
                }, {
                    "key": "taskbarImmersiveMode",
                    "valueString": "2"
                }]
            }]
        }]
    }
    }]
}
```

Taskbar

Configure the ability to capture screenshots and the visibility of the All Applications button and mobile application icons.

The following JSON snippet disables the visibility of the All Applications button, mobile application icons, and the screenshot capture icon.

```
{
    "kind": "androidenterprise#managedConfiguration",
    "productId": "com.zebra.workstationconnect.release",
    "managedProperty": [{
        "key": "captureScreenshot",
```

```
            "valueString": "2"
    }, {
        "key": "TaskbarCapability",
        "valueBundle": {
            "managedProperty": [{
                "key": "AllAppsButton",
                "valueString": "2"
            }, {
                "key": "DisplayMobileApps",
                "valueString": "2"
            }]
        }
    }]
}
```

Device Behavior

Configure settings on the device such as screen dimming, resetting the configuration, configuration update behavior, and versioning.

The following JSON snippet dims the mobile device, enables configuration reset for the device user, updates the configuration immediately, and allows the administrator to provide a numeric value to associate with the current configuration.

```
{
    "kind": "androidenterprise#managedConfiguration",
    "productId": "com.zebra.workstationconnect.release",
    "managedProperty": [{
        "key": "zwcConfigurationVersion",
        "valueString": "1"
    }, {
        "key": "configurationMode",
        "valueString": "Immediately"
    }, {
        "key": "DeviceCapability",
        "valueBundle": {
            "managedProperty": [{
                "key": "DimmingMobileScreen",
                "valueString": "1"
            }]
        }
    }]
}
```

The following screenshot displays the UI when the configuration described in this section is deployed.
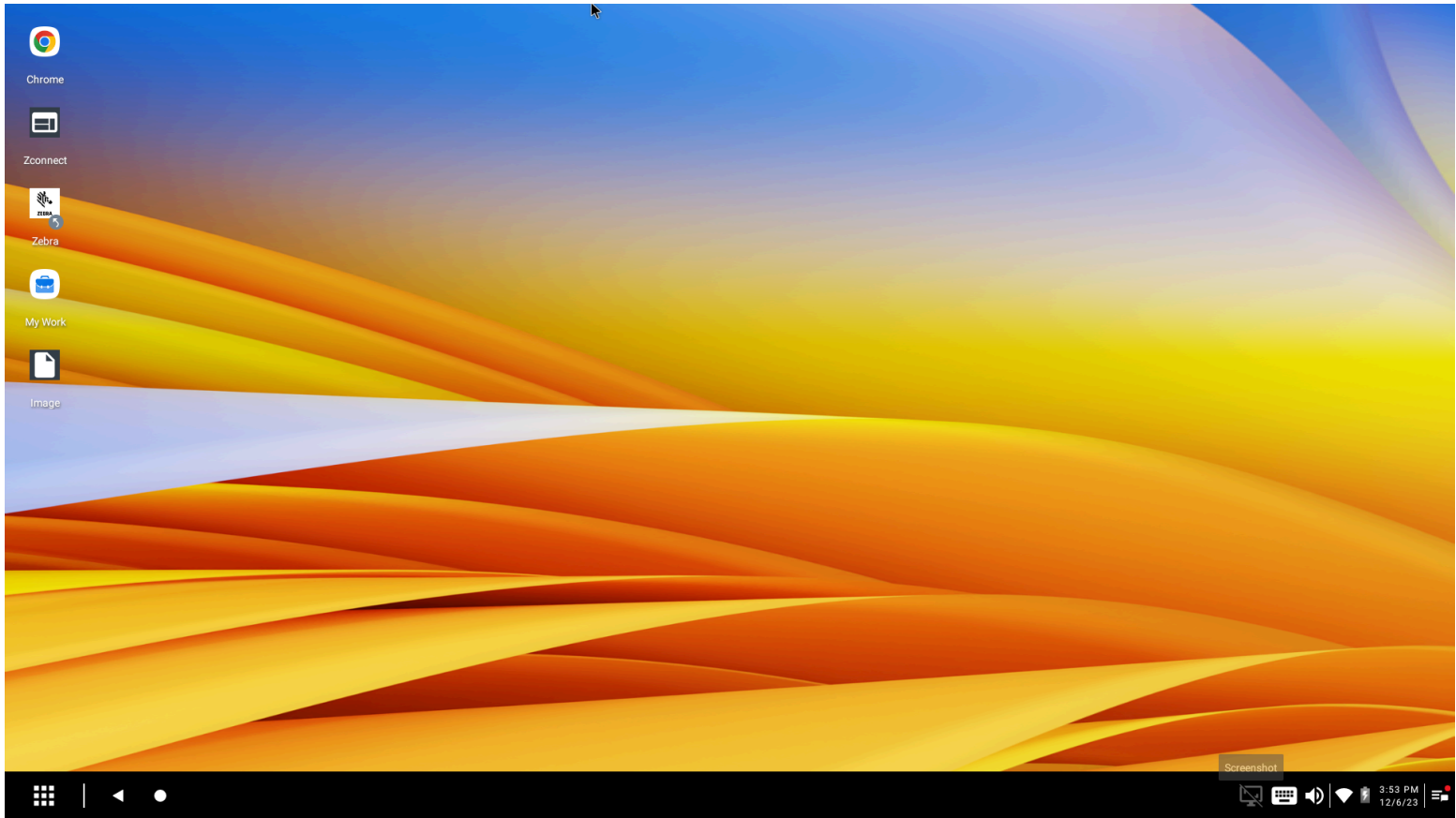
Additional Resources

For additional developer resources such as a sample project including APIs, go to developer.zebra.com/blog/streamlining-workstation-connect-configuration-step-step-guide-developers