Zebra Nucleus

User Guide

MN-005645-02EN Rev. A

Zebra Technologies | 3 Overlook Point | Lincolnshire, IL 60069 USA
zebra.com

Copyright

2026/06/05

Terms of Use

Proprietary Statement

This manual contains proprietary information of Zebra Technologies Corporation and its subsidiaries ("Zebra Technologies"). It is intended solely for the information and use of parties operating and maintaining the equipment described herein. Such proprietary information may not be used, reproduced, or disclosed to any other parties for any other purpose without the express, written permission of Zebra Technologies.

Product Improvements

Continuous improvement of products is a policy of Zebra Technologies. All specifications and designs are subject to change without notice.

Liability Disclaimer

Zebra Technologies takes steps to ensure that its published Engineering specifications and manuals are correct; however, errors do occur. Zebra Technologies reserves the right to correct any such errors and disclaims liability resulting therefrom.

Limitation of Liability

In no event shall Zebra Technologies or anyone else involved in the creation, production, or delivery of the accompanying product (including hardware and software) be liable for any damages whatsoever (including, without limitation, consequential damages including loss of business profits, business interruption, or loss of business information) arising out of the use of, the results of use of, or inability to use such product, even if Zebra Technologies has been advised of the possibility of such damages. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Contents

Contents

Introduction

Zebra Nucleus is a platform designed to help you manage, configure, and update all your Zebra devices. This centralized platform provides total visibility and control, allowing you to effortlessly connect, configure, and update computers, printers, and scanners in one place.

Zebra Nucleus Capabilities

The platform is designed to provide centralized control over Zebra products in a large organization. You can use Zebra Nucleus to:

- Enroll computers, printers, and scanners.
- Monitor device information, including battery health, software version, and location.
- Group devices by category, such as function or location.
- Plan and implement software updates for all devices.
- Manage device licenses.

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/firmware 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.

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 you to know and that is not required to complete a task.

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

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.

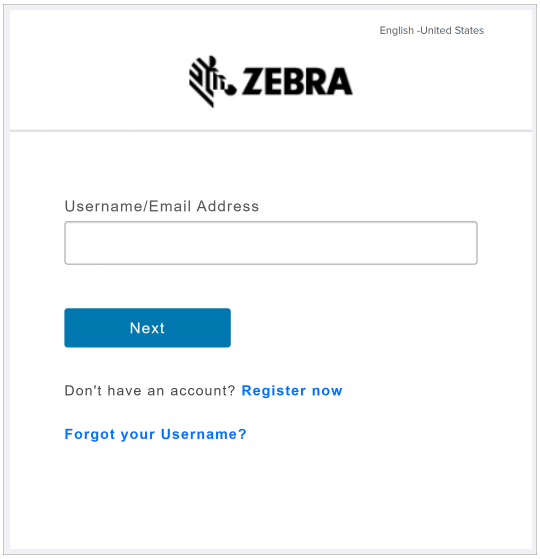
Logging into Zebra Nucleus

This section expains the login process for users who are registered with Zebra and assigned as tenants within an organization.

1. Go to https://nucleus.zebra.com/, and then click **Login**.

If you are a first-time user, you must complete the Zebra Account Registration using the following steps. If you are an existing user, skip to Step 4.

2. Click **Register now**.



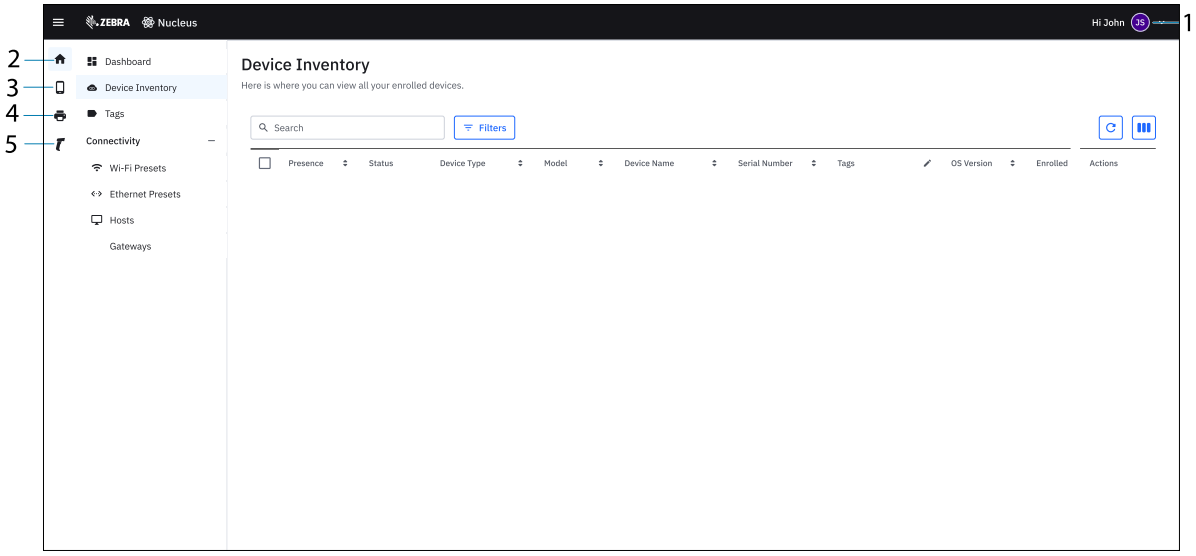
3. After receiving a confirmation email, return to the login screen.
4. Enter your user name and password, and then click **Sign In**.

- If you have forgotten your password, you can create a new one by clicking the **Reset Password** link.
- If you would like to change your current password, you can create a new one by clicking the **Change Password** link.

Zebra Nucleus Layout

This section provides an overview of the Zebra Nucleus layout and the functions of each screen.

Figure 1 Zebra Nucleus Layout



Item	Name	Description
1	Profile	Links to profile-specific functions: • My Profile: View your account status and user preferences. • My Services: Monitor and manage your services. • Licenses: Add and manage device licenses. • Users: Add and manage users within your organization. • Logout.
2	Home	• Device Inventory: View and edit the settings of all enrolled devices. • Tags: Create and manage device tags. Tags can be applied to devices to group them and apply new settings files or update software to all devices in a group at once. You can create tags based on location, function, or any other category. For example, a tag called "warehouse" can be used to group all scanners and mobile computers used in warehouses, while a group called "New York retail" can apply to all devices used across all stores in New York. • Connectivity: Contains Wi-Fi presets and Hosts. You can define Wi-Fi networks that your devices use, and manage all the host computers in your organizaiton.
3	Computers	• My Computers: View and manage all enrolled computers and their settings. • Enroll a mobile computer into Zebra Nucleus, configure its internet settings bring the device under management.
4	Printers	• My Printers: View and manage all enrolled printers and their settings. • New Printer Setup: Enroll printers in Zebra Nucleus and configure the minimum settings required for internet connectivity and remote management.
5	Scanners	• My Scanners: View and manage all enrolled scanners and their settings. • New Scanner Setup: Create and manage configuration files that allow a computer (host device) to communicate with a scanner. • Scanner Settings: Create and manage configuration files (profiles) that define scanner behavior. For example, control the volume of the scanner beep or enable/disable a specific type of barcode decoding. • Profile Deployment: Push scanner setting upadtes to your scanners.

Administration

Configure Zebra Nucleus for your organization. Ensure your devices match the system requirements, and appropriately configure your users, device tags, and internet settings to ensure that Zebra Nucleus successfully communicates with your devices.

System Requirements

Ensure your organization meets the minimum system requirements needed to work with the Nucleus device management system.

Admin Console

- Computer with Windows 10 or later
- Google Chrome (v101.0 or later) with pop-ups enabled
- An account on Zebra.com (how to register)
- Firewall or network proxy server configured as required by supported devices

Supported Devices

Zebra currently supports managing the following devices through Zebra Nucleus.

Mobile Computers

Zebra mobile computers running Android 11 require the following LifeGuard updates (or later). Devices with newer Android versions are supported out of the box.

- **6490-platform devices**: 11-12-31.00-RG-U00-STD-ATH-04
- **ET40/ET45**: 11-13-14.00-RG-U00
- **SDM660-platform devices**: 11-26-05.00-RG-U00
- **TC15**: 11-14-13.00-RG-U00
- **TC53/TC58**: 11-12-31.00-RG-U00
- **WS50 devices**: 11-19-19.00-RN-U00

NOTE: To be fully operational and manageable by this system, mobile computer(s) must be in a factory-fresh (or factory-reset) condition before enrollment. For help restoring a device to its 'out-of-the-box' condition, see: support.zebra.com/article/Performing-a-factory-reset

Printers

Nucleus supports the Zebra Print DNA series running Link-OS v6.0 (or later), including all models in the series listed.

- **ZT200 Series; ZT400 Series; ZT500 Series; ZT600 Series**
- **ZD400 Series; ZD500 Series; ZD600 Series**
- **ZQ300 Series; ZQ500 Series; ZQ600 Series**
- **ZE5x1 Series**
- **ZR Series**

Scanners

Nucleus can configure and manage most Zebra scanners, subject to the following restrictions.

NOTE: Ring scanners are not supported.

- **Configurable via barcode**: All supported Zebra scanners
- **Configurable via configuration file**: All supported Zebra scanners

Network Configuration

Printers and scanners require specific port communication permissions. If you are managing devices through Zebra Nucleus, configure them to allow communication between the devices domain names.

If Managing Mobile Computers

The Zebra Nucleus client app communicates with the ports and domain names listed below.

The client network must be configured using wildcards as follows:

- Open an HTTPS port (443 by default) between the device client and the app servers.
- Allow these domain names through the firewall or proxy server:
  - *.zebra.com †
  - connectivitycheck.gstatic.com
  - *.googleapis.com †
  - *.firebaseio.com †
  - *.cloudfunctions.net †
  - *.firebaseapp.com †
  - ts.dnac.zebra.com
  - *.linodeobjects.com
  - api.linode.com/v4/object-storage/buckets
  - api.linode.com/v4/object-storage/keys
  - api.linode.com/v4/regions
  - device-https.savannacore.zebra.com

If Managing Printers and Scanners

- Open an HTTPS port (443 by default) between the device client and the servers.
- Allow the following domain name through the firewall or proxy server:
  - *.zpc.zebra.com

† *The asterisk character (*) indicates a wildcard, which accepts any value for a particular section of a port assignment. If wildcards are NOT supported by the system (or are otherwise prohibited by the organization), please contact Zebra Support for special instructions.*

Adding Tenants

Tenants define an organization within Zebra Nucleus. Each organization, its users, devices, and device certificates are unique to one tenant. Add a new tenant by contacting Zebra and providing a new organization name and user email address.

Licenses

You can manage and apply Zebra Nucleus licenses for all devices using the Zebra Nucleus Licensing Manager. Although licenses are not required if you are using the free version of Zebra Nucleus, enterprise (paid) installations of Zebra Nucleus require paid device licenses.

Some features are available only in licensed Zebra Nucleus installations. The options you see may differ from the contents of this guide based on your organization's configuration and subscription status.

Table 1 Licensing Options Sample

Feature	Free Feature	Licensed Feature
Device Inventory	Yes	Yes
Device Licensing Information	Yes	Yes
Enrollment in Zebra Nucleus and third-party tools	Yes	Yes
Configuring Devices	Scan Barcode or via USB file	Scan Barcode, USB file, or remote implementation
Remote Settings and Application Deployments	No	Yes
Remote OS Updates	No	Yes
Remove Actions: Reboot, lock, wipe	No	Yes

Important information you should keep in mind when working with licenses:

- Licenses may be transferred between devices to manage an evolving fleet, but each device associated with Nucleus that uses paid features requires a license.
- After acquiring licenses, all license allocations are managed in the Zebra Nucleus system.
- Devices not connected at the time a license action is executed are updated the next time they come online.
- License actions are executed immediately upon exiting the Zebra Nucleus Licensing section.

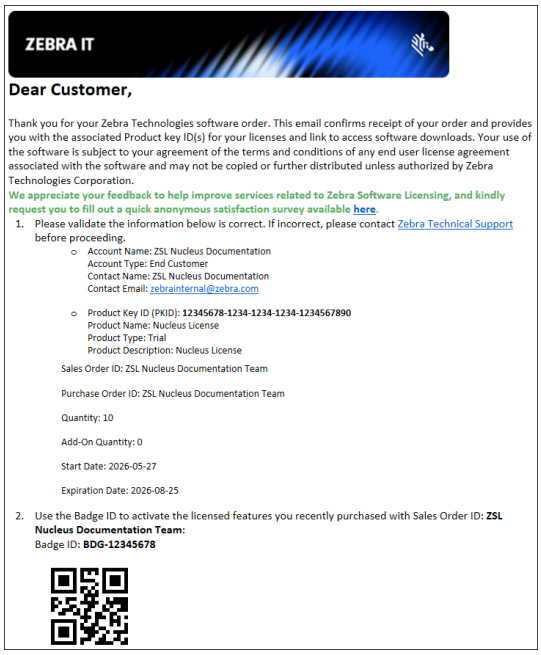
Adding and Applying a License

You can purchase device licenses from authorized Zebra partners or directly through Zebra, and then manage all device licenses in Zebra Nucleus. This section describes the process for purchasing device licenses, loading them in to the Zebra Nucleus Licenses page, and then applying them to devices.

IMPORTANT: If you are adding licenses to computers, ensure they have Zebra License Manager version 15.2 (or later) installed.

1. Contact a reseller or Zebra directly to obtain a license.
   - Find a Zebra Partner - form for submitting an inquiry via the web
   - How to Select a Channel Partner - explains the types of partners that engage with Zebra and some of their technologies and specialties
   - Partner Interaction Center - information for contacting Zebra's existing global partner network
   - Global Marketing Contact Center - organized by country
2. Locate the Badge ID assigned to the license.

   After purchasing a license, you will receive a confirmation email containing your Badge ID and purchase confirmation. Zebra issues a Badge ID with each purchase, and includes all product licenses acquired in that purchase.



ZEBRA IT

Dear Customer,

Thank you for your Zebra Technologies software order. This email confirms receipt of your order and provides you with the associated Product key ID(s) for your licenses and link to access software downloads. Your use of the software is subject to your agreement of the terms and conditions of any end user license agreement associated with the software and may not be copied or further distributed unless authorized by Zebra Technologies Corporation.

We appreciate your feedback to help improve services related to Zebra Software Licensing, and kindly request you to fill out a quick anonymous satisfaction survey available here.

1. Please validate the information below is correct. If incorrect, please contact Zebra Technical Support before proceeding.
   - Account Name: ZSL Nucleus Documentation
     Account Type: End Customer
     Contact Name: ZSL Nucleus Documentation
     Contact Email: zebrainternal@zebra.com
   - Product Key ID (PKID): **12345678-1234-1234-1234-1234567890**
     Product Name: Nucleus License
     Product Type: Trial
     Product Description: Nucleus License

   Sales Order ID: ZSL Nucleus Documentation Team

   Purchase Order ID: ZSL Nucleus Documentation Team

   Quantity: 10

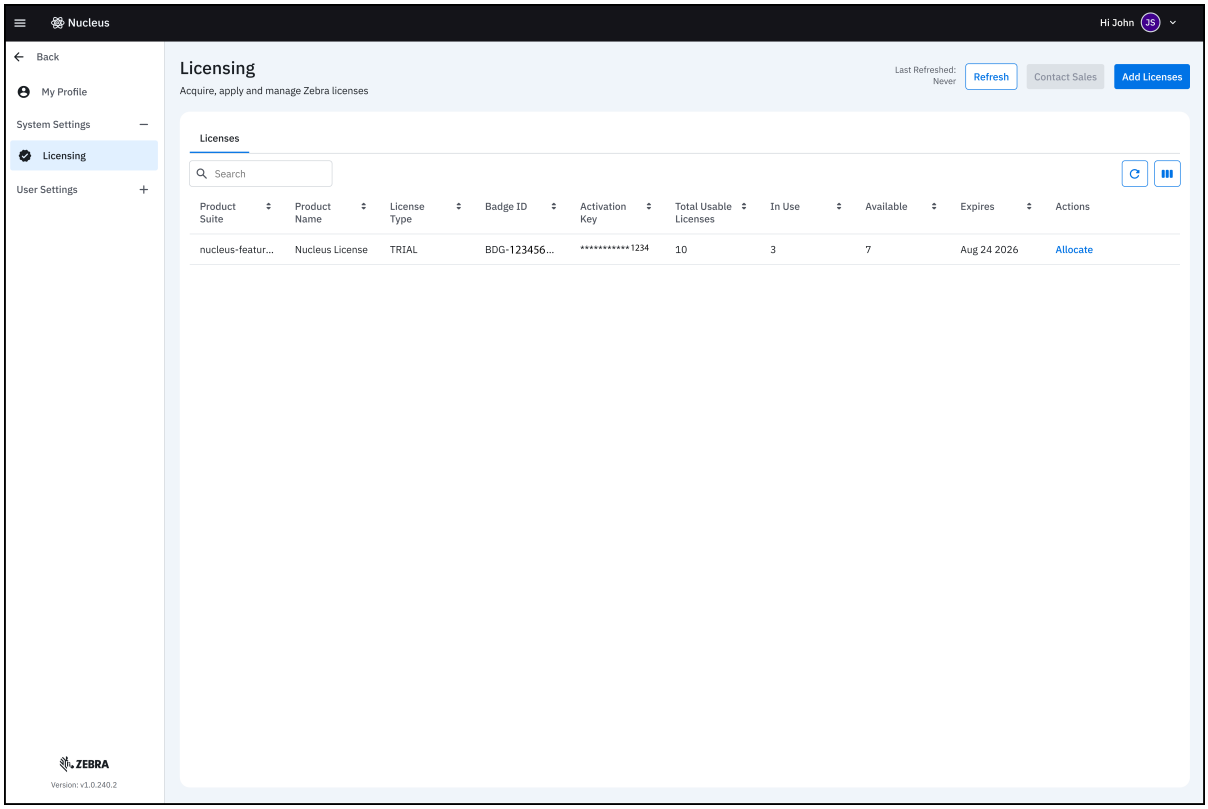
   Add-On Quantity: 0

   Start Date: 2026-05-27

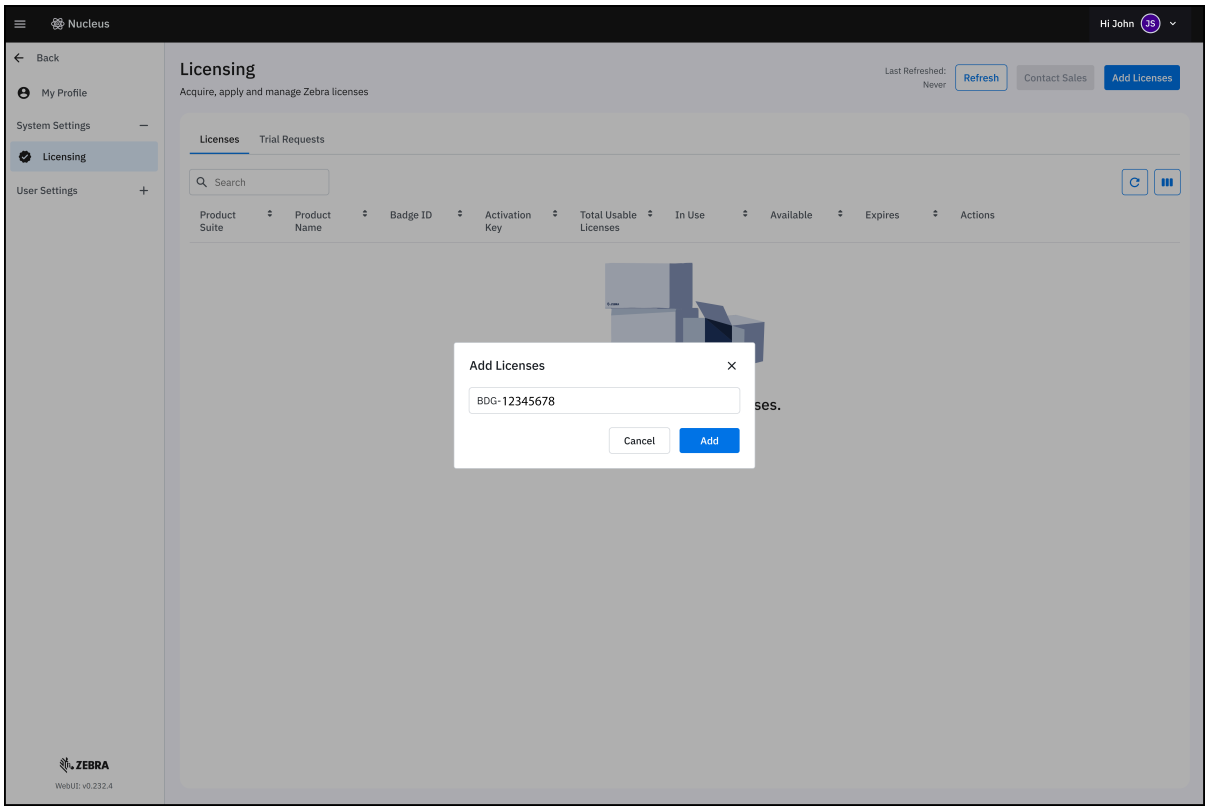
   Expiration Date: 2026-08-25

2. Use the Badge ID to activate the licensed features you recently purchased with Sales Order ID: **ZSL Nucleus Documentation Team:**
   Badge ID: **BDG-12345678**

3. In Zebra Nucleus, click **ID icon** > **Licensing** > **Add Licenses** to display the **Licensing** screen.



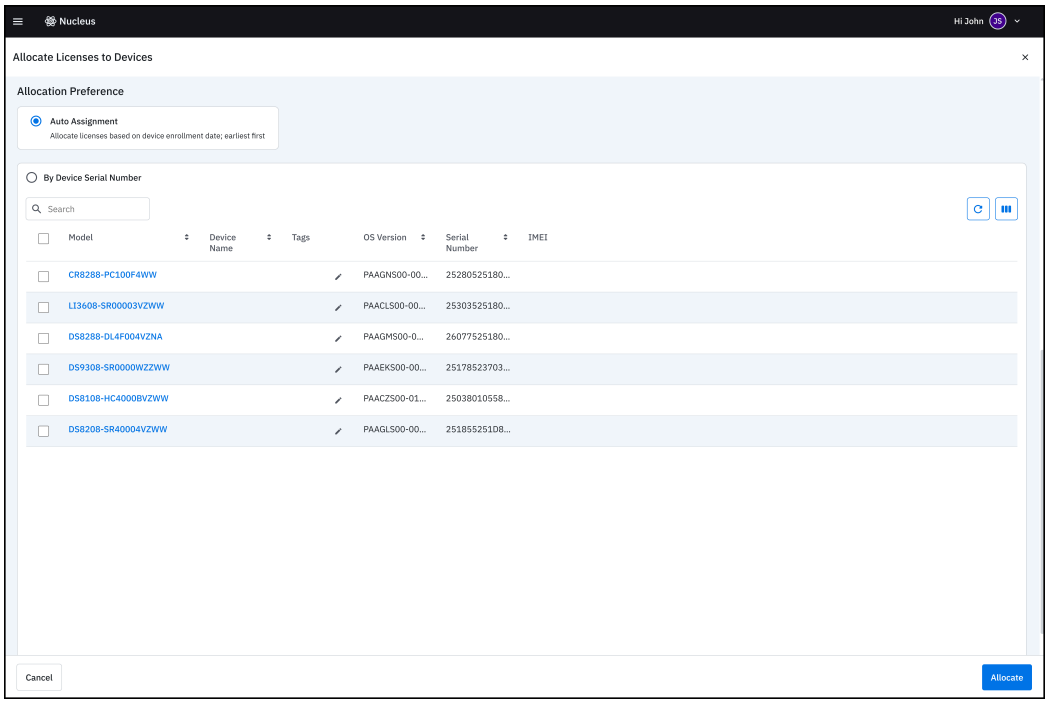
4. Click **Add Licenses** to display the **Add Licenses** box.



5. Enter the Badge ID and click **Add**.

   The License(s) display in the Licensing table.

6. Click **Allocate** in the **Allocate** column to display the **Allocate Licenses to Devices** screen.



7. Select one of the following options:

   - **Auto assignment**: Allocates by device enrollment date, earliest first.
   - **By Device Serial Number**: Allocates to devices individually by device serial number. Select the serial number(s) of the devices you will enroll under that license.

8. Click **Allocate** to apply allocation settings.

License actions are applied immediately, and the system is ready to use.

Roles and Permissions

There are two available roles that you can assign to Users.

Table 2 Roles and Permissions

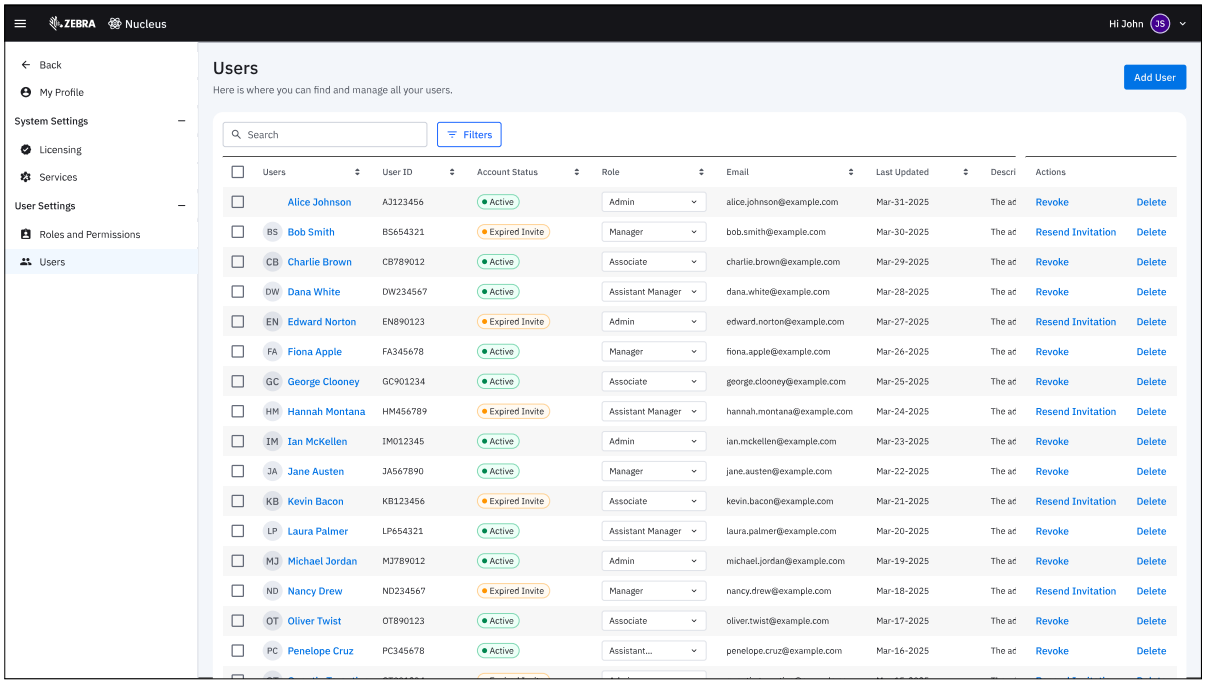
Role Name	Permissions
Admin	Admin (write) access to all domains.
Manager	Admin access to all devices, media, network, and services. No access to **Licensing** and **User Management** domains.

Adding Users

Individual email addresses define a user. You can invite users to Zebra Nucleus via email. They must register with Zebra and log in to Zebra Nucleus to complete the process.

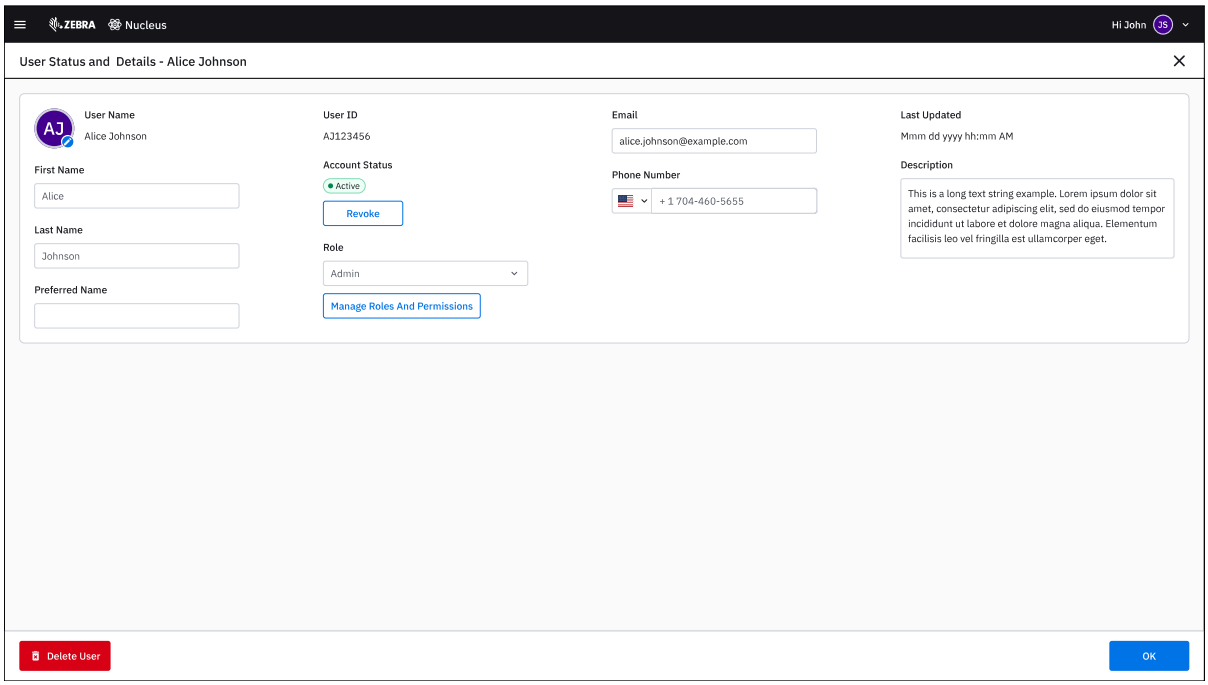
1. Click **My Profile** > **Users**.

   The **Users** screen displays.



2. Click **Add User**.

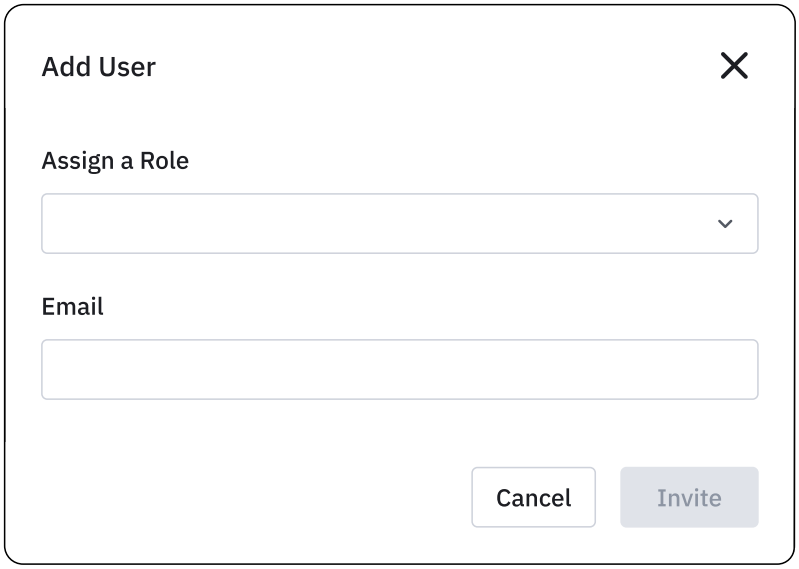
   The **Add User** dialog displays.



3. Enter the user's email address and cllick **Invite**.

IMPORTANT: Enter one email at a time.

The User appears in the **Users** screen. Their Account Status is **Invited**.

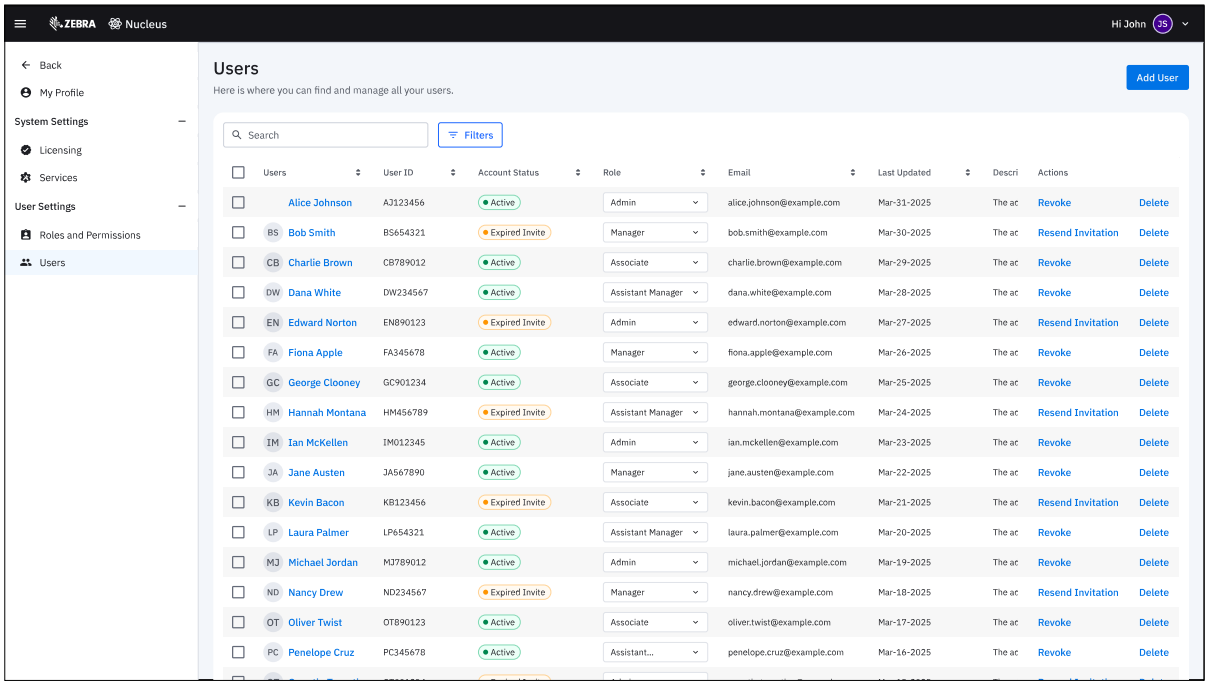


Zebra sends an email to the user with instructions for registering their email with Zebra and logging in to Zebra Nucleus. When they log in to Zebra Nucleus, the user status updates to **Active** and they can use the application. Go to Editing User Information to learn how to assign roles and descriptions to users.

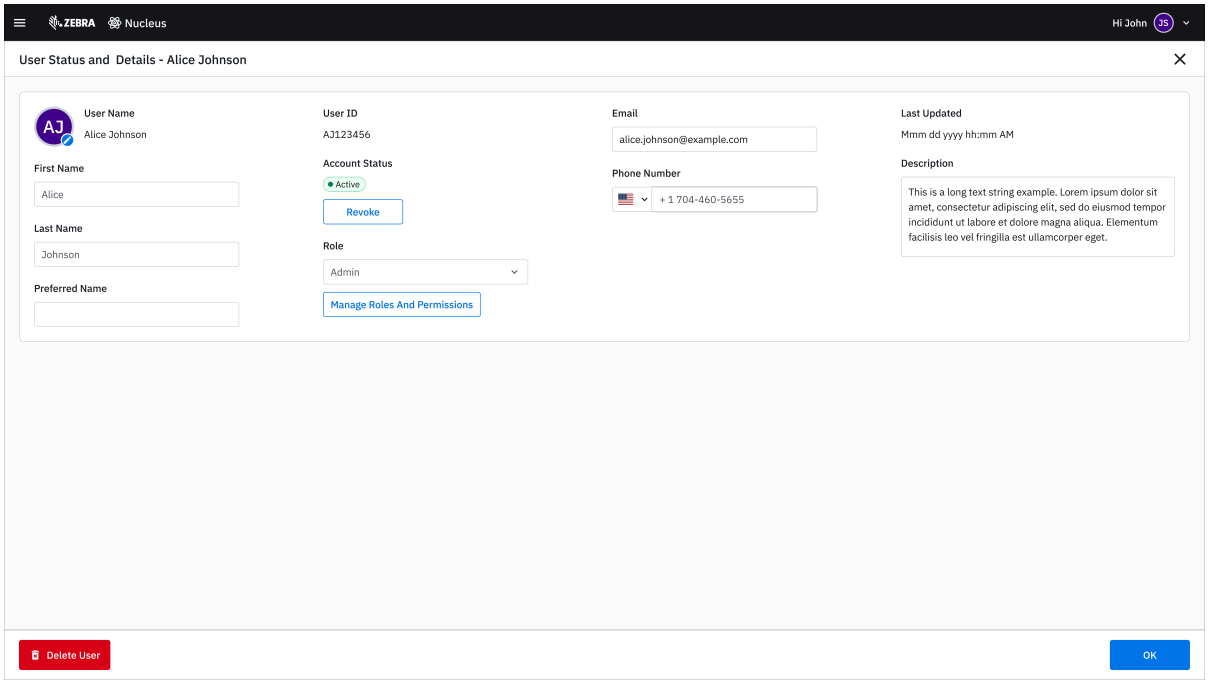
Editing User Information

Use the **User Information** screen to modify the user roles and permissions.

1. Click **My Profile** > **Users** to display the **Users** screen.



2. Click the User name to display the **User Status and Details** screen.



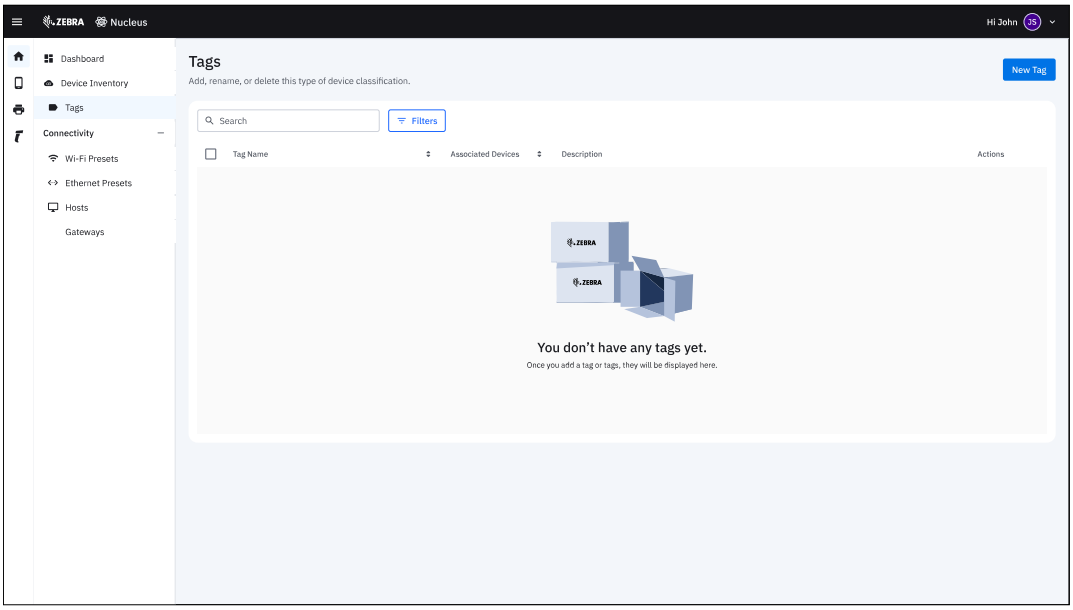
3. Edit User details as needed. Change the role in the roles drop-down menu.

Tags

The **Tags** screen displays all tags. You can create, view, and delete tags from this page.

Apply tags to devices to group them and apply new settings files or update software to all devices in a group at once. You can create tags based on location, function, or any other category. For example, a tag called warehouse can group all scanners and mobile computers used in warehouses, while a group called New York retail applies to all devices used across all stores in New York.

Figure 2 Tags section



Element	Description
New Tag	Used to create a new Tag.
Search Bar	Used to search for devices or device elements.
Control Buttons	Refreshes the page. Controls which columns display on the page.
Tag Table	Lists each tag. The field columns describe the tag and allow you to edit and delete tags.

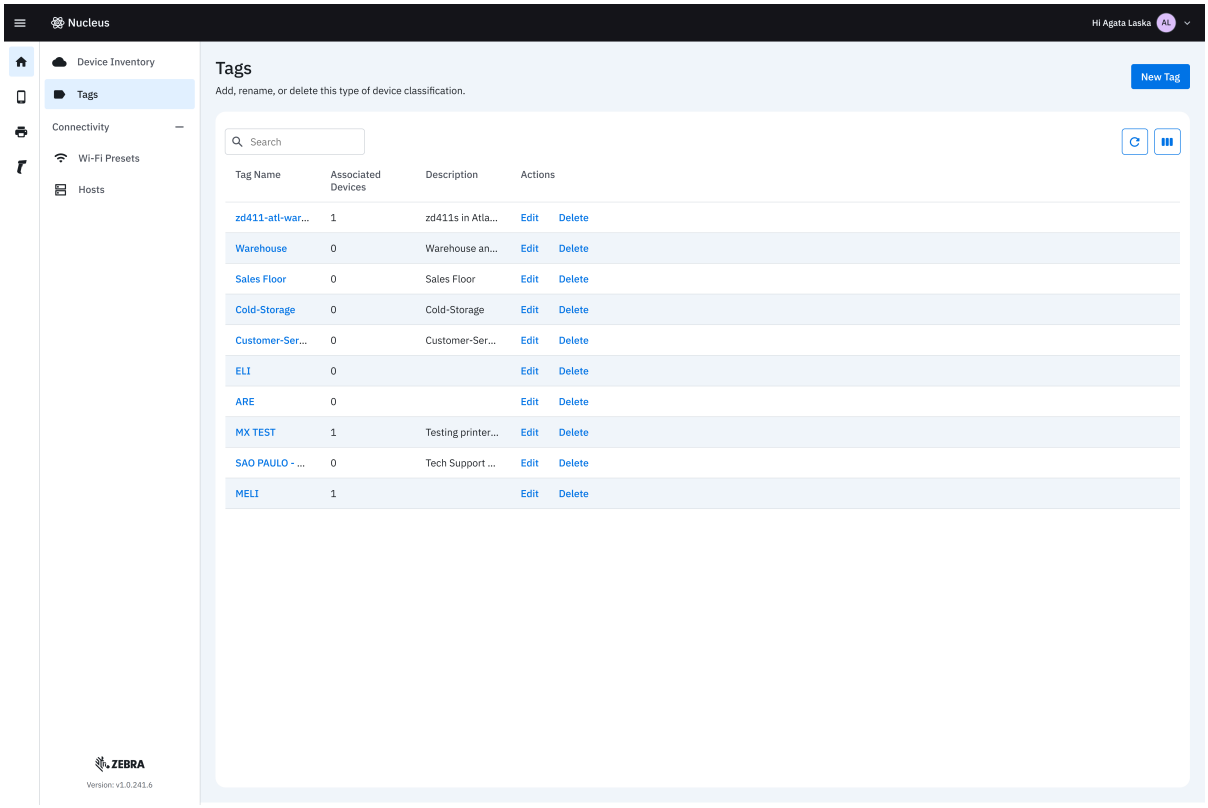
IMPORTANT: Important tag information:

- Printers and scanners can have multiple tags.
- Mobile computers can have only one tag.
- There is no limit on the number of tags you can create.
- We recommend no more than 250,000-500,000 devices in one tag.

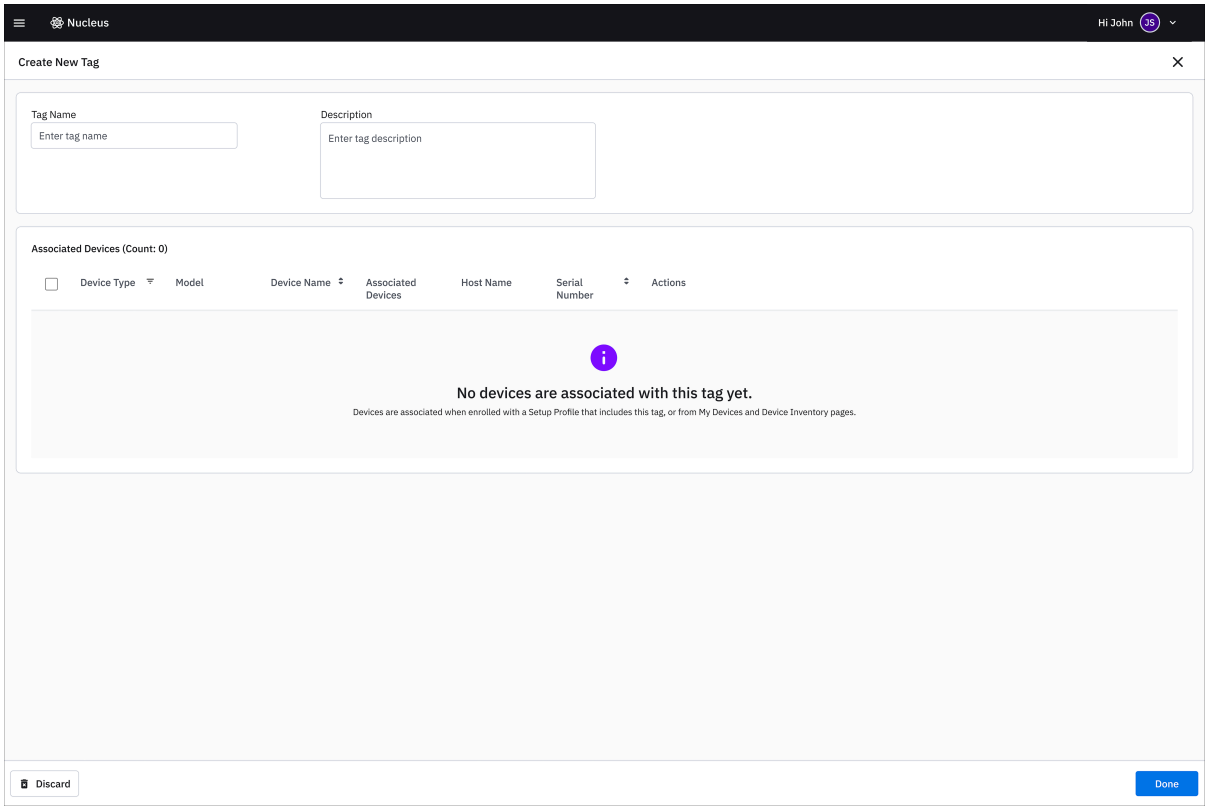
Creating a Tag

Create a tag to group your devices together to make them easier to manage. Your tags should be uniquely named and conceptually distinct.

1. Click **Home** > **Tags** to display the **Tags** screen.



2. Click **New Tag** to display the **Create New Tag** screen.



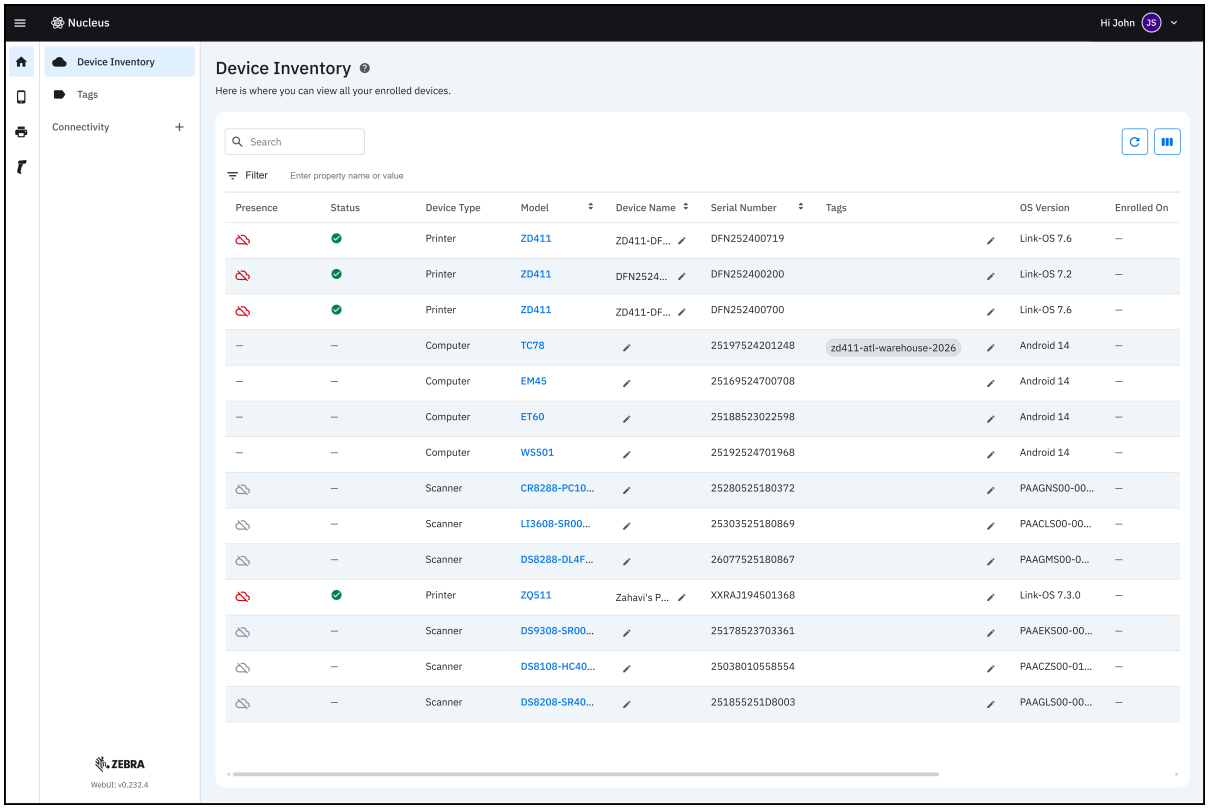
3. In the **Tag Name** field, enter a name for your new tag.
4. In the **Description** field, enter a tag description.
5. Click **Done**.

   This saves the tag and adds it to the **Tags** screen.

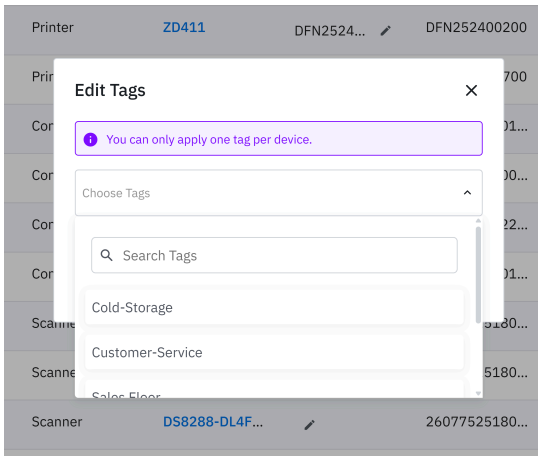
Applying Tags

You can apply tags to individual devices in the **Device Inventory** section, the **My Computers/My Printers/My Scanners** section, or when you enroll a device into Zebra Nucleus. You can also apply tags to groups of devices when you configure a device profile. These instructions focus on applying tags in the **Device Inventory** screen.

1. Click **Device Inventory**.



2. Click ✎ in the row of the device you want to associate with the tag to display the **Edit Tags** screen.



3. Choose the desired tag from the drop-down menu and click **Done**.

NOTE: You can add only one tag to mobile computers, and multiple tags to printers and scanners.

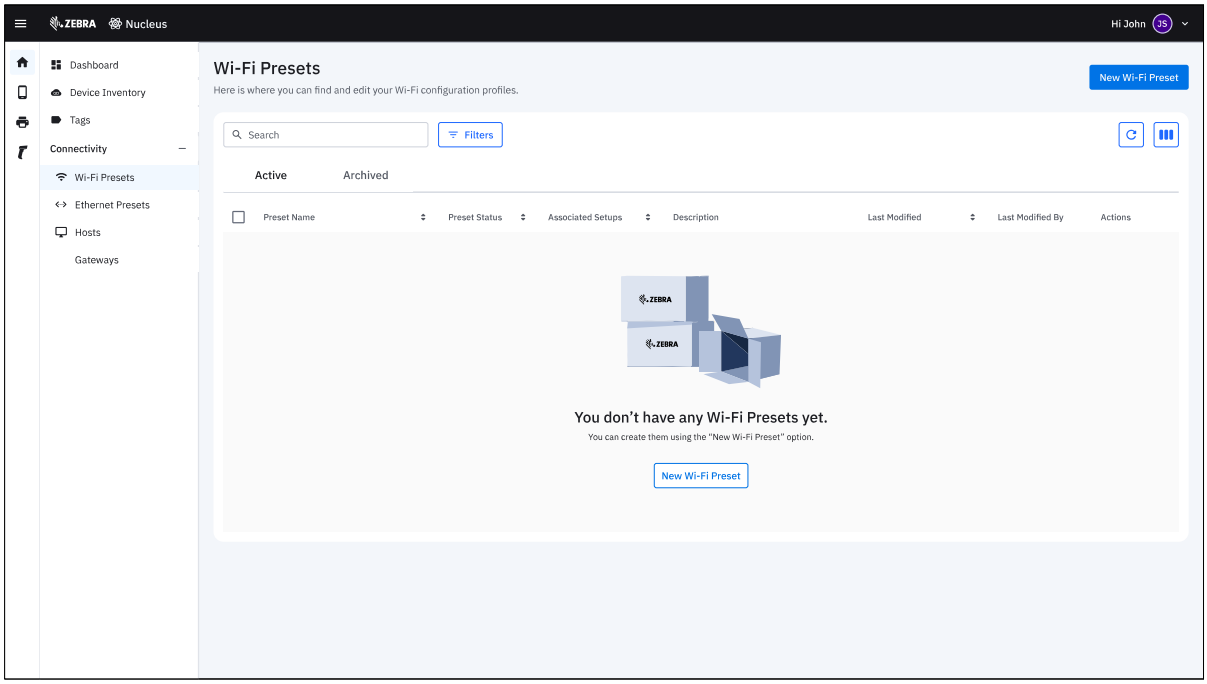
A notification displays on the screen indicating you have successfully applied the tag to the device.

Creating a Wi-Fi Preset

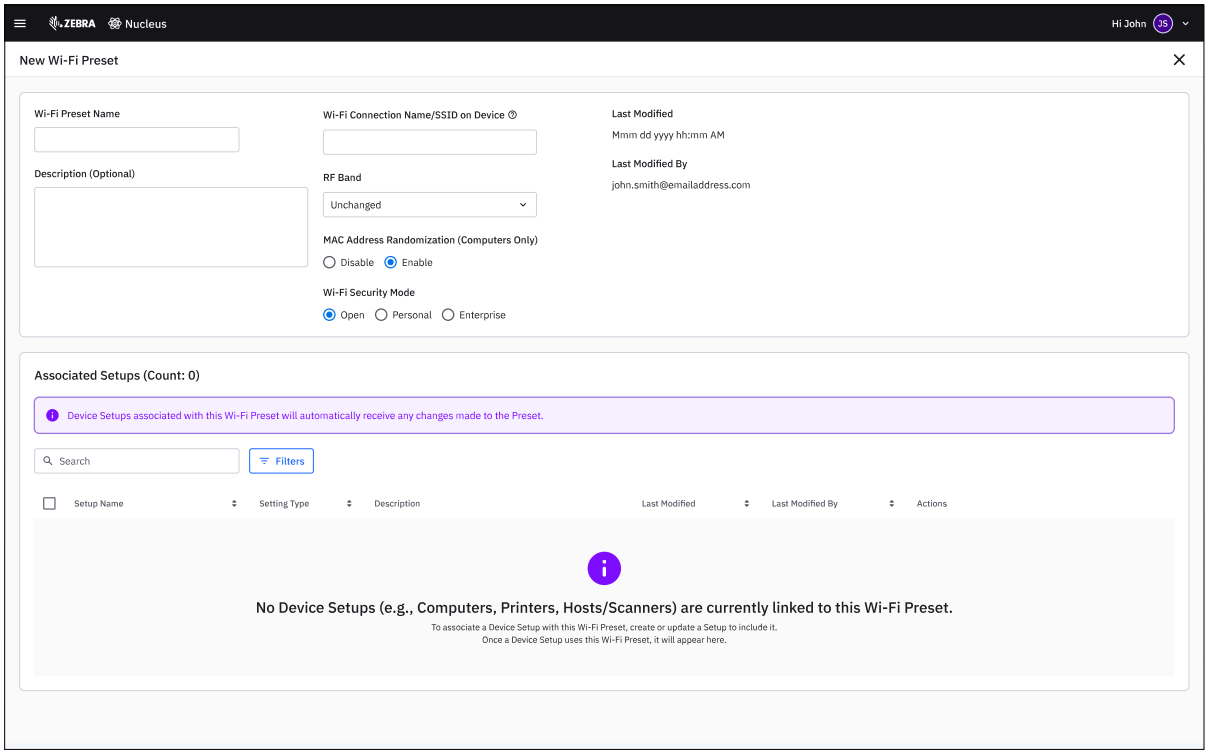
Wi-Fi presets define connectivity to a Wi-Fi network. You can apply a preset to your devices to ensure they are on the desired Wi-Fi network. When you add a device to Nucleus, you can select a Wi-Fi preset during the device setup process.

These steps apply to local Wi-Fi network. Contact Zebra support if you are configuring enterprise-level networks.

1. Click **Home** > **Connectivity** > **Wi-Fi Presets** to display the **Wi-Fi Presets** screen.



2. Click **New Wi-Fi Preset** to display the **Wi-Fi Preset Configuration** screen.



3. Enter a preset name, the SSID, and a description for the preset.
4. Select an RF band, MAC address option, and security mode from the options provided, then click **Done**.

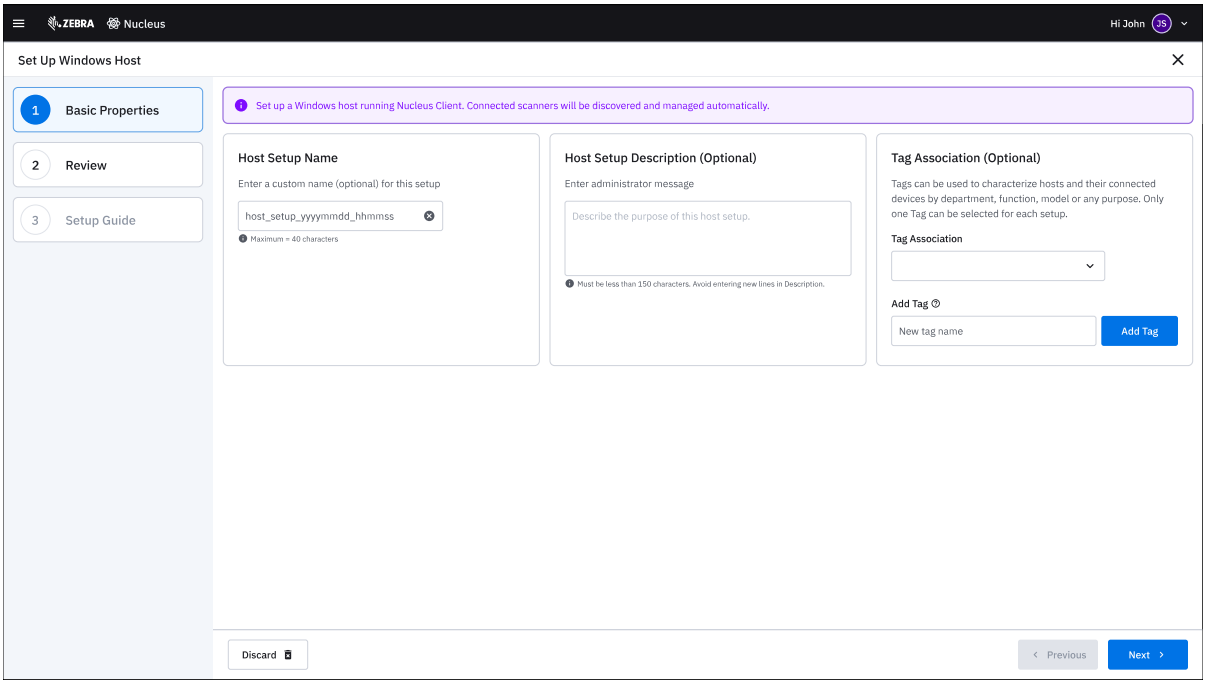
The preset appears on the**Wi-Fi Presets** screen. You can select the preset when configuring a new device or editing an existing device.

Setting up a Host

Host computers require basic configuration files to ensure they can communicate with Zebra Nucleus and your devices. Zebra Nucleus creates a setup that you distribute to all hosts.

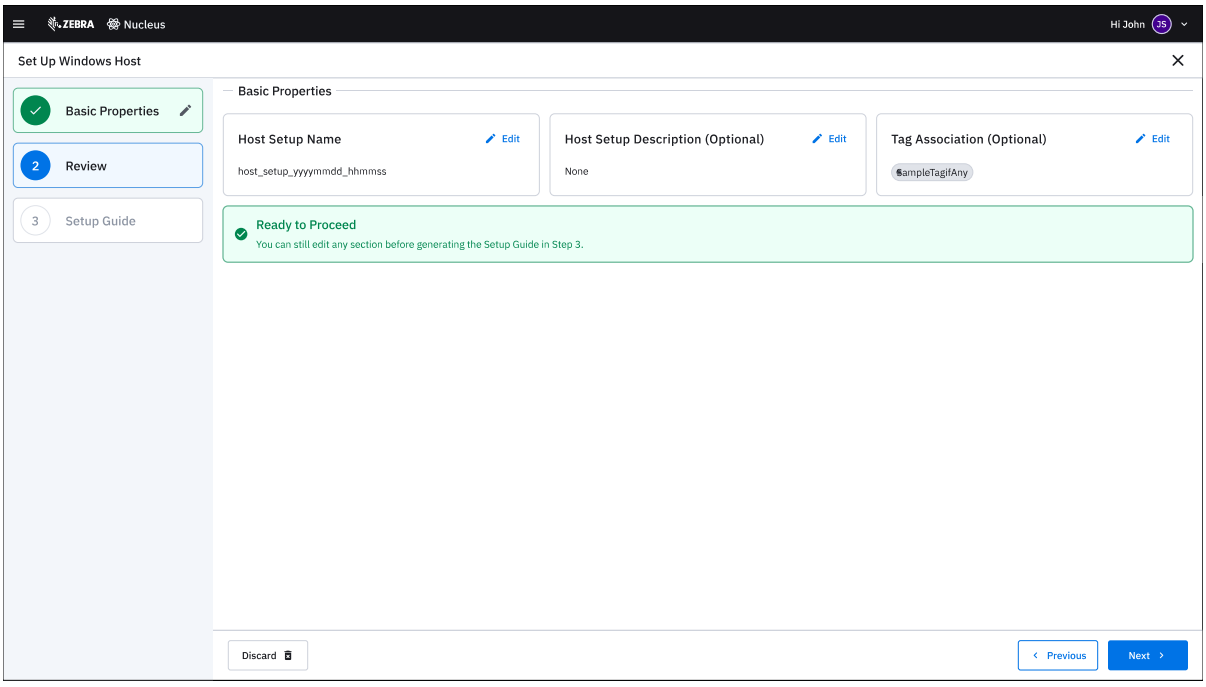
NOTE: This section provides instructions for setting up a host device using the user interface. You may also run an automated installation on multiple devices via Silent Installation process.

1. Click **Home** > **Connectivity** > **Hosts** > **Set up host** to display the **Set Up Hosts** screen.
2. Click **Set Up Windows Host** to display the **Set up Windows Host** wizard's **Basic Properties** screen.

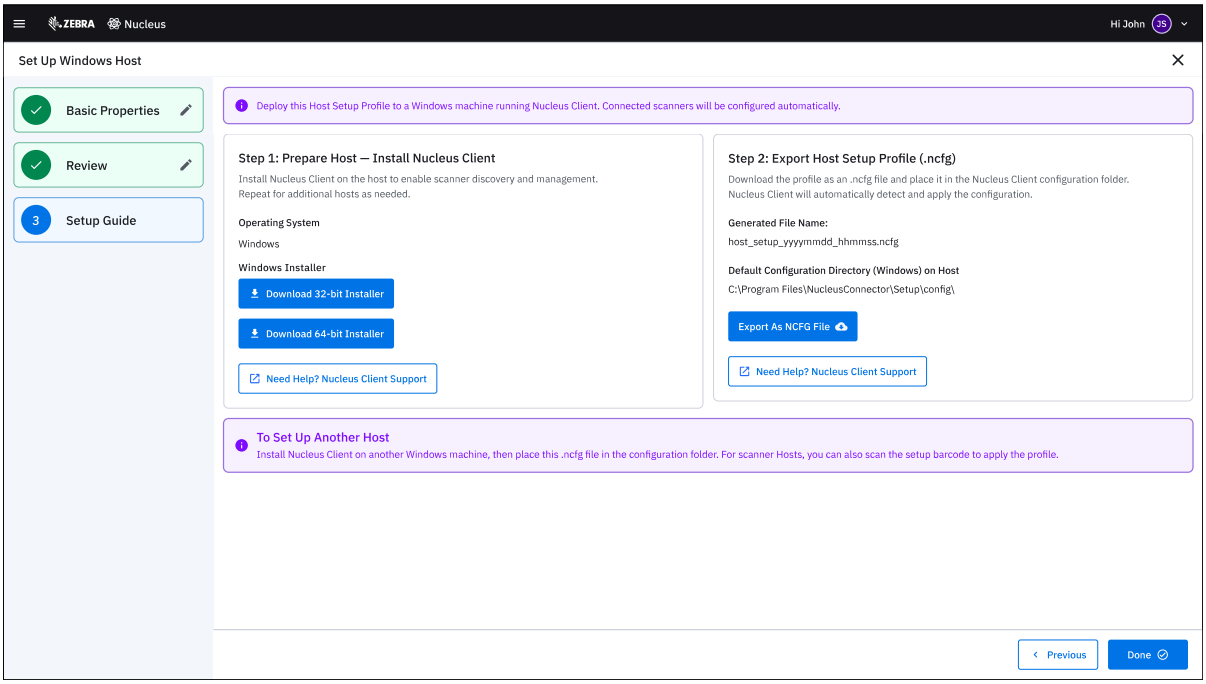


NOTE: The **Basic Properties** page allows you to enable encrypted communication between Zebra Nucleus and a secure host device.

3. Enter a Host Setup Name (optional).
4. Enter a description of the setup.
5. Select a tag from the drop-down menu, and then click **Next** to display the **Review** screen.



6. You can edit your host name, description, and tag association. Click **Next** to display the **Setup Guide** screen.



7. Click **Download 64-bit Installer**.

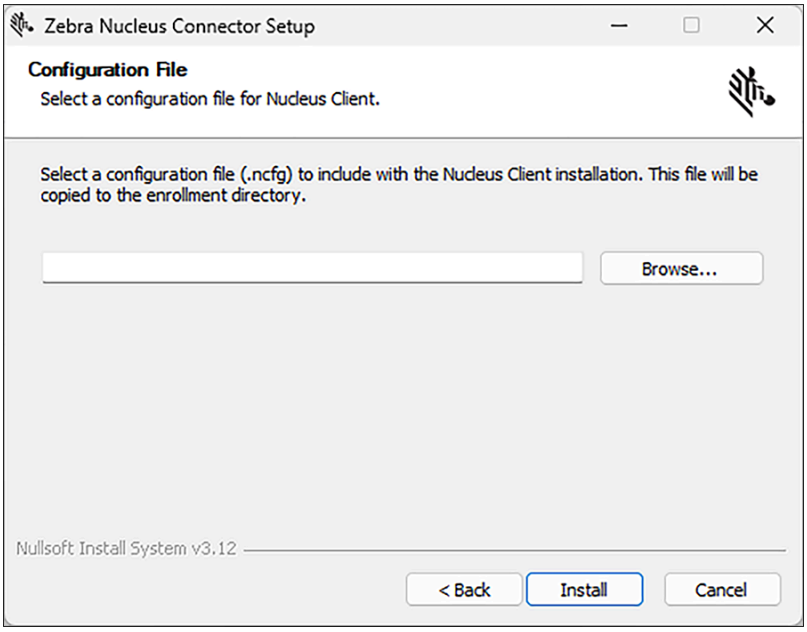
   This downloads the Zebra Nucleus client onto your computer and enables the computer to communicate with a connected scanner. You must download the Nucleus client on each computer that will communicate with scanners.

8. Click **Export as NCFG File**.

   The Zebra Nucleus configuration file downloads.

9. Run the **NucleusConnector.exe** and follow the prompts on the wizard.

   a) When the wizard prompts you to select a configuration file (.ncfg) to include with the Nucleus Client installation, click **Browse...** and select the `.ncfg` file you just downloaded.



10. Click **Install**.

    The Zebra Nucleus Connector Setup installs the necessary files and adds the computer to the Zebra Nucleus environment.

Host Device Profiles are now available in the **New Scanner Setup** and **Hosts** pages. You can log into Zebra Nucleus from any computer and download the Setup to allow that computer (host) to communicate with a device.

Silent Installation

The installer supports unattended deployment through System Center Configuration Manager (SCCM), Intune, a mobile data terminal (MDT), or any tool that can launch an executable as Administrator.

Syntax

Enter the following syntax into your tool:

```
NucleusConnector.exe /S /CONFIG=<path-to-ncfg> [/LOG=<log-path>] [/
D=<install-dir>]
```

Flags

Flag	Required	Description
`/S`	Yes	Silent mode; no user interface is shown.
`/CONFIG=<path>`	Yes	Path to the .ncfg enrollment file to deploy. Required in silent mode.
`/LOG=<path>`	No	Writes a transcript of install milestones to this path, including a success or failure marker at the end. Also valid in interactive mode.

Flag	Required	Description
`/D=<install-dir>`	No	Overrides the default install directory. Must be the last argument and must not be quoted, even if the path contains spaces (standard NSIS convention).
`/? or /HELP`	No	Displays a usage dialog and exits without installing. Auto-dismisses in silent mode.

Exit codes

Code	Meaning
0	Install succeeded.
2	Install was aborted mid-run (for example extraction failure, SDK install failure, or startup registration failure). Check the `/LOG=` transcript for the cause.
3	`/CONFIG=` was not provided in silent mode.
4	The path provided to `/CONFIG=` does not exist.

NOTE: Exit codes 3 and 4 are returned before the install starts and before the `/LOG=` file is opened, so no log entry is written for those cases. Use the exit code as the diagnostic.

Examples

```
NucleusConnector.exe /S /CONFIG=C:\Deploy\site-42.ncfg
NucleusConnector.exe /S /CONFIG=C:\Deploy\site-42.ncfg /LOG=C:\Deploy
\install.log
NucleusConnector.exe /S /CONFIG=C:\Deploy\site-42.ncfg /D=D:\Zebra\Nucleus
```

Troubleshooting

Use this reference to diagnose and resolve common installer and silent-installation issues.

Problem	Possible Solution
Administrator rights required message	Right-click NucleusConnector.exe and choose **Run as administrator**.
CoreScanner driver installation fails	Confirm the target machine meets the system requirements and that no other Zebra installer or scanner service is running.
Failed to extract Nucleus Client files message	Confirm the machine is running Windows 10 version 1803, Windows Server 2019, or later. The extraction step depends on a system utility added in that release.
Install fails after a previous install attempt	Stop any running Nucleus Client or CoreScanner services, then run the installer again. Locked files from a previous run can block reinstallation.
Silent install returns exit code 3	`/CONFIG=` was not supplied. Re-run with `/CONFIG=<path-to-ncfg>`.
Silent install returns exit code 4	The path supplied to `/CONFIG=` does not exist. Verify the file path is correct and accessible to the installer.
Silent install returns exit code 2	Inspect the `/LOG=` transcript to identify the failed step.

Computer Setup and Management

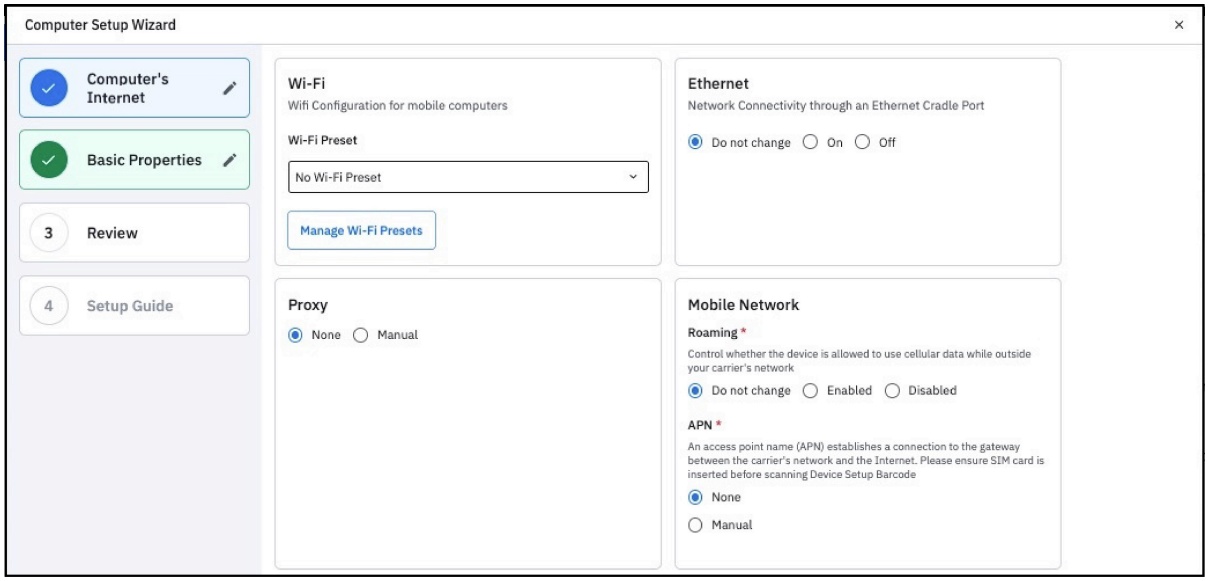
The Computers module contains sections for enrolling computers into the Zebra Nucleus system and performing basic management functions.

Creating a New Computer Enrollment Profile

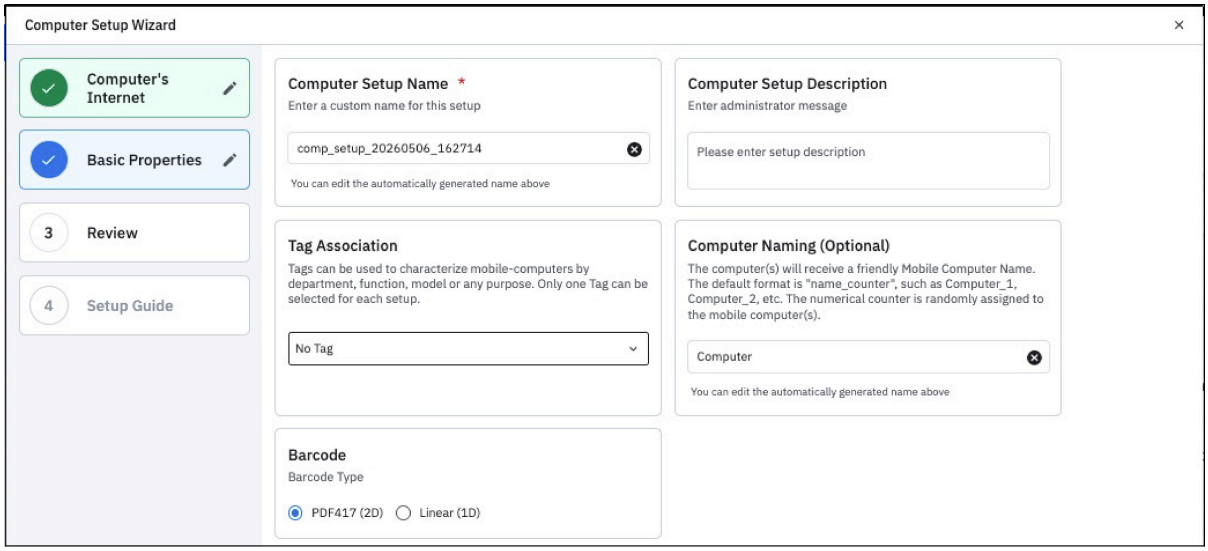
The **New Computer Setup** presents a wizard to enroll new computers into the system and configure them with the minimum settings necessary to connect them to the internet for further management. This process also installs the Zebra Nucleus client app on the device and enrolls it in Zebra Nucleus.

NOTE: Refer to the device's Product Reference Guide for details about the options you can select in the setup process.

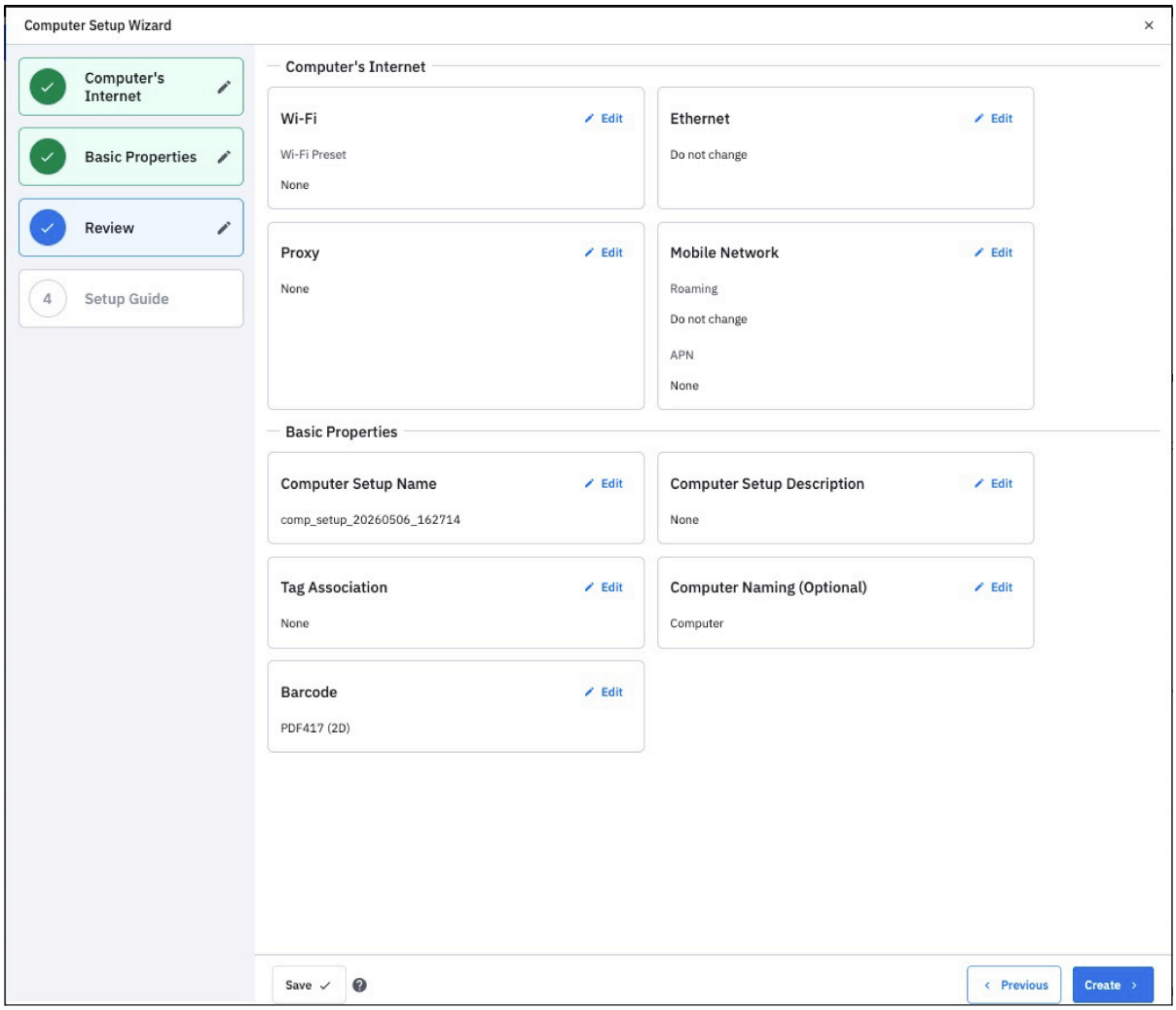
1. Click **Computers** > **Computer Management +** > **New Computer Setup** to display the **New Computer Setup** screen.
2. Click **Set Up Computers** to display the **Computer Setup** wizard.
3. Configure the computer's internet preferences and click **Next**.



4. You can edit your computer's name, description, tag association, and barcode type. Click **Next**.

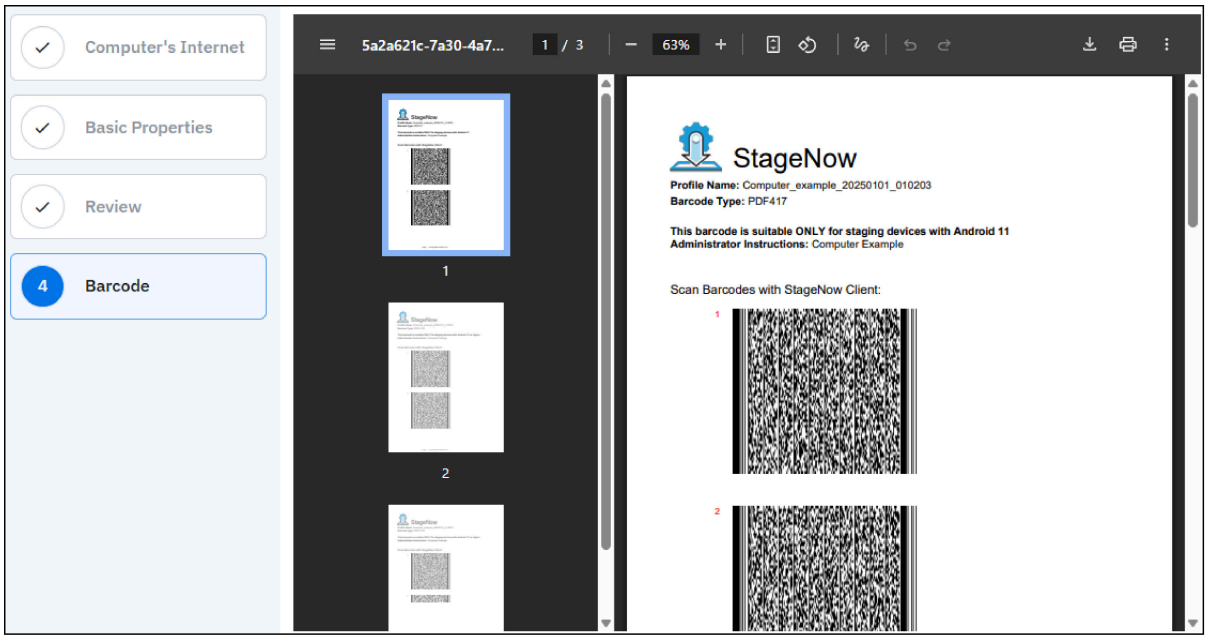


5. Review settings. Click **Edit** to modify any options, then click **Create**.



6. On the **Setup Guide** screen, StageNow barcodes display. Ensure your mobile computer is set to the factory default state and powered on, then scan the barcodes relevant to your Android version.

NOTE: Scan all the barcodes in the section relevant to your Android version. For example, if your device uses Android 13, scan the three barcodes in the Android 13 section.



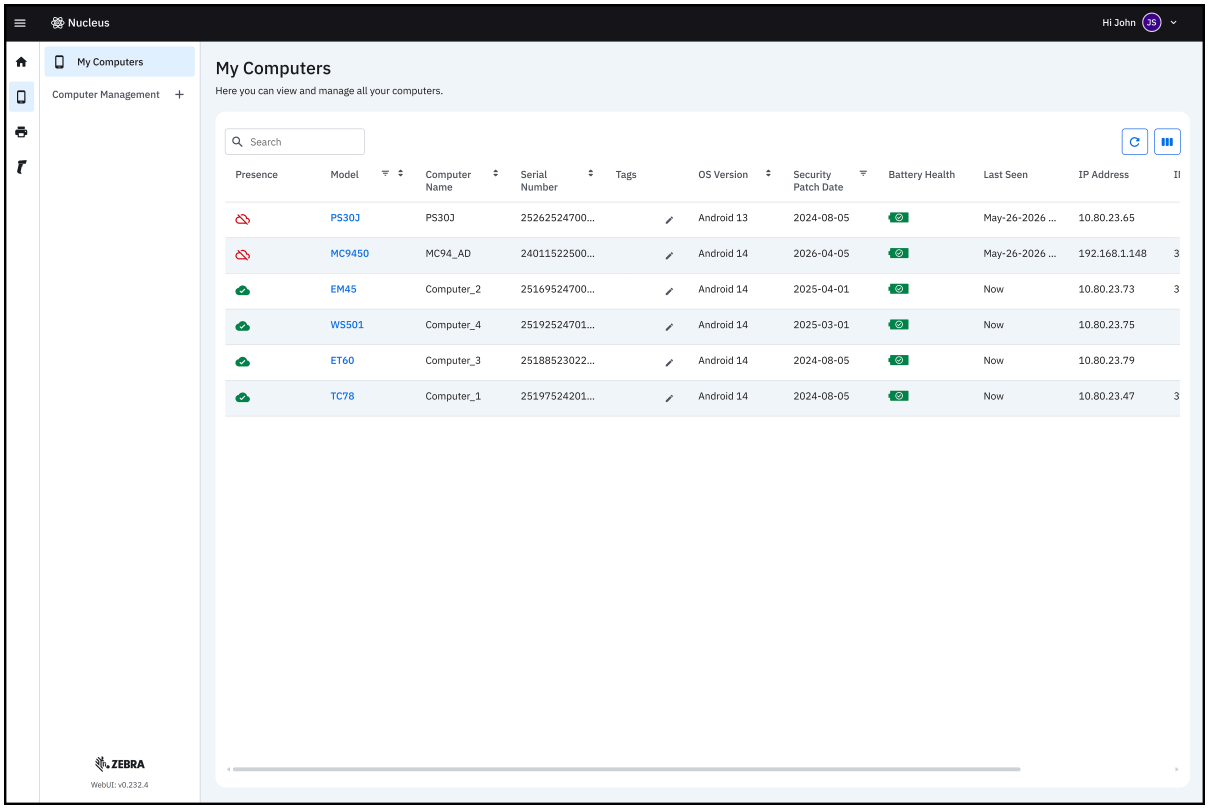
7. Click **Done** to return to the **New Computer Setup** screen.

The new computer enrollment profile displays in **My Computers** and the **Device Inventory**.

Managing My Computers

Computers in the Zebra Nucleus system are managed from the **My Computers** screen, which shows information about each enrolled computer. From here, the buttons in the **Actions** column reboot, lock, reset the passcode, submit XML, wipe and delete computers one-at-a-time. Additional information is available by clicking on a computer.

1. Click **Computers** > **My Computers** to display the **My Computers** screen.



2. Click the computer's model name in the **Model** column to display the **Computer Details** dialog.
3. Click ✎ in the tags column to display the **Edit Tags** dialog.
4. Select the appropriate tag from the drop-down menu and click **Done**.
5. Click the desired icon in the **Action** column to manage or delete the computer from Zebra Nucleus.

Printer Setup and Management

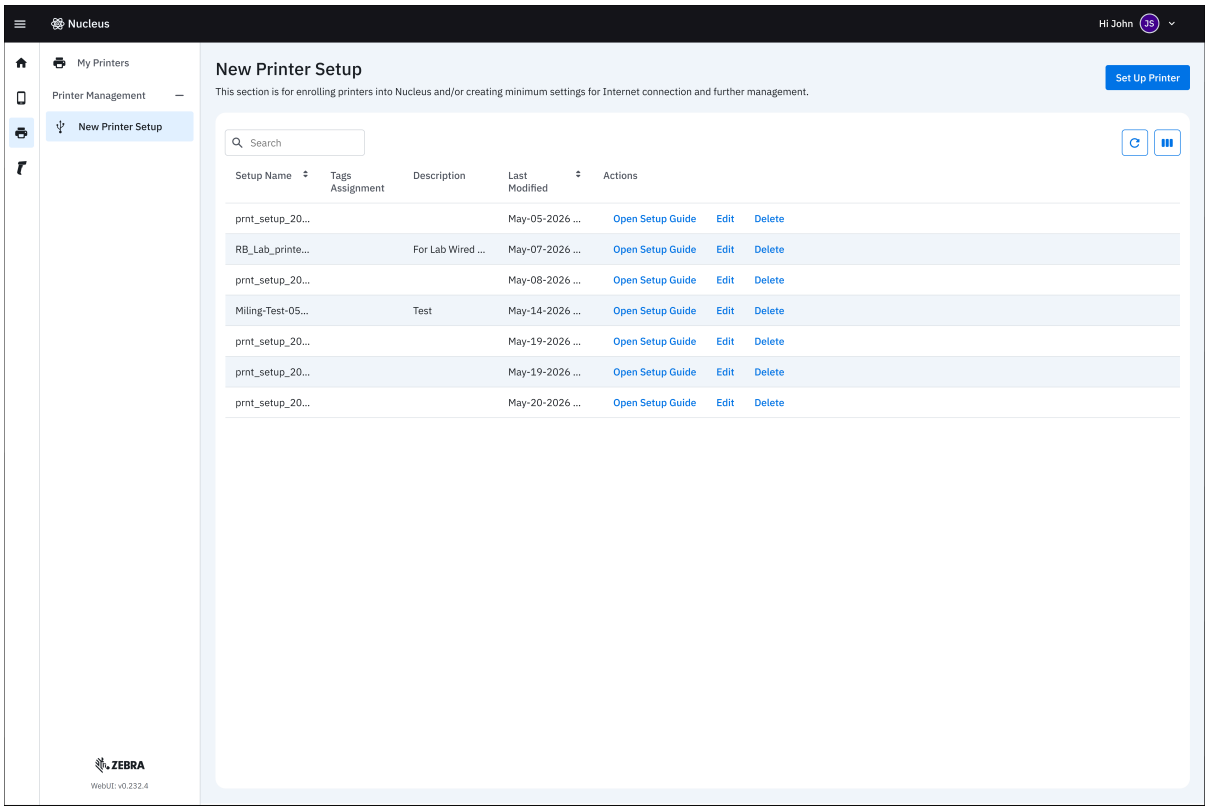
The Printers module contains sections for enrolling printers into the Zebra Nucleus system and performing basic management functions.

Creating a New Printer Enrollment Profile

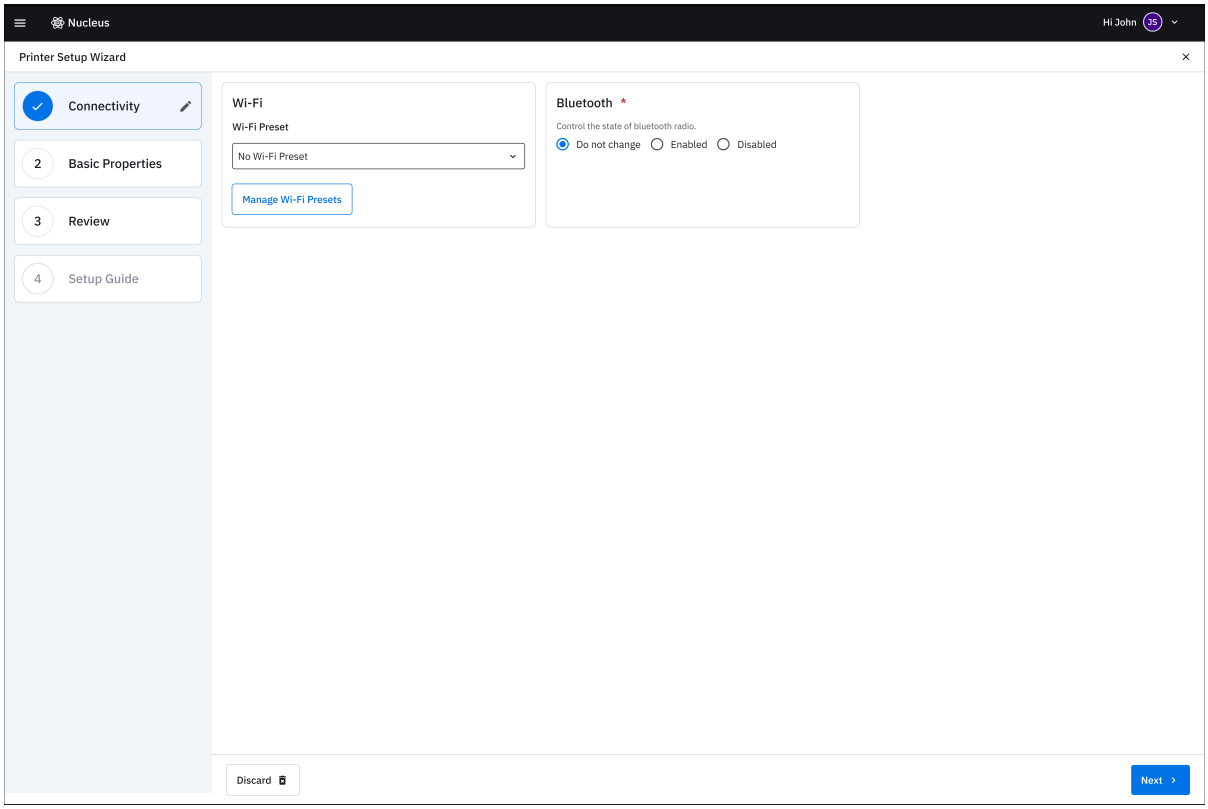
The **Printer Setup** wizard allows you to set up a new printer enrollment profile, presents the most common configuration parameters, and pre-selects the most common options.

NOTE: Refer to the device's Product Reference Guide for details about the options you can select in the setup process.

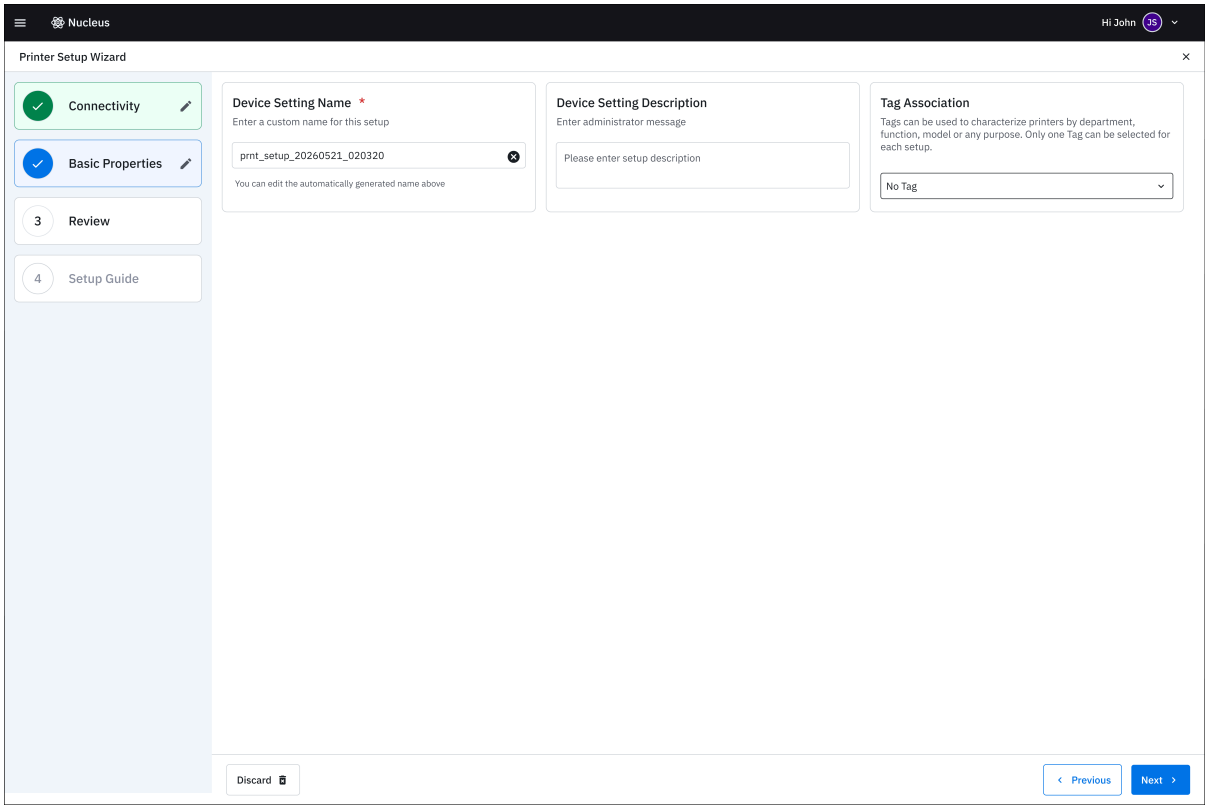
1. Click **Printers** > **Printer Management +** > **New Printer Setup** to display the **New Printer Setup** screen.
2. Click **Set Up Printer** to display the **Printer Setup Wizard** screen.



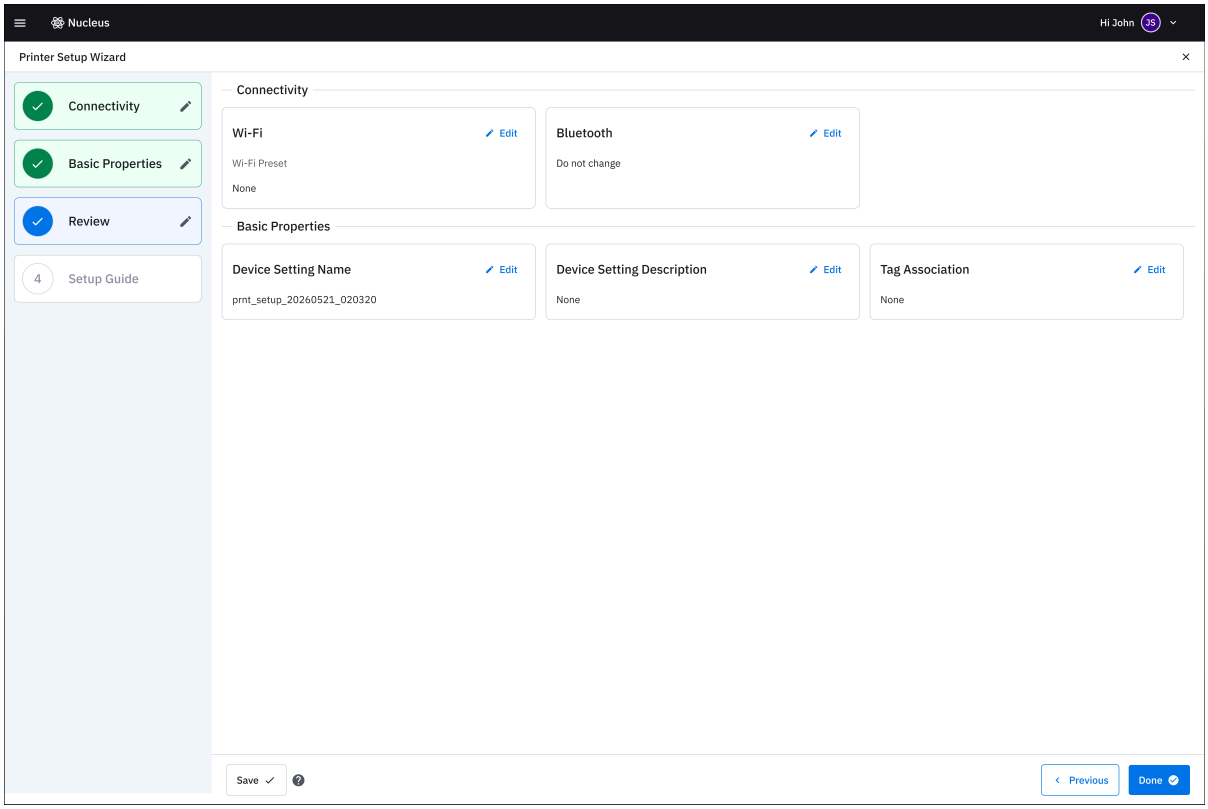
3. On the **Connectivity** page, select a Wi-Fi preset from the drop-down menu, and configure the Bluetooth radio settings. Click **Next**.



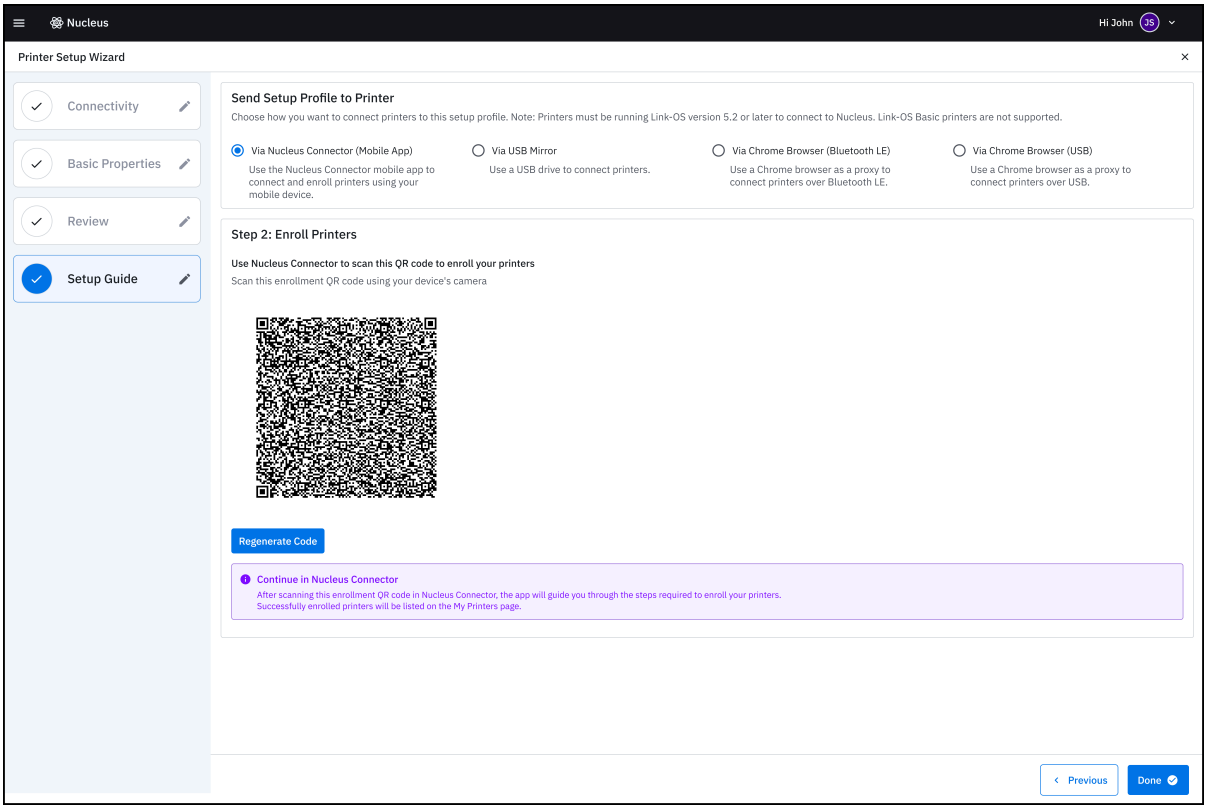
4. On the **Basic Properties** page, modify the default setup name if desired, and then enter a description for the device setting. Select a tag, and click **Next**.



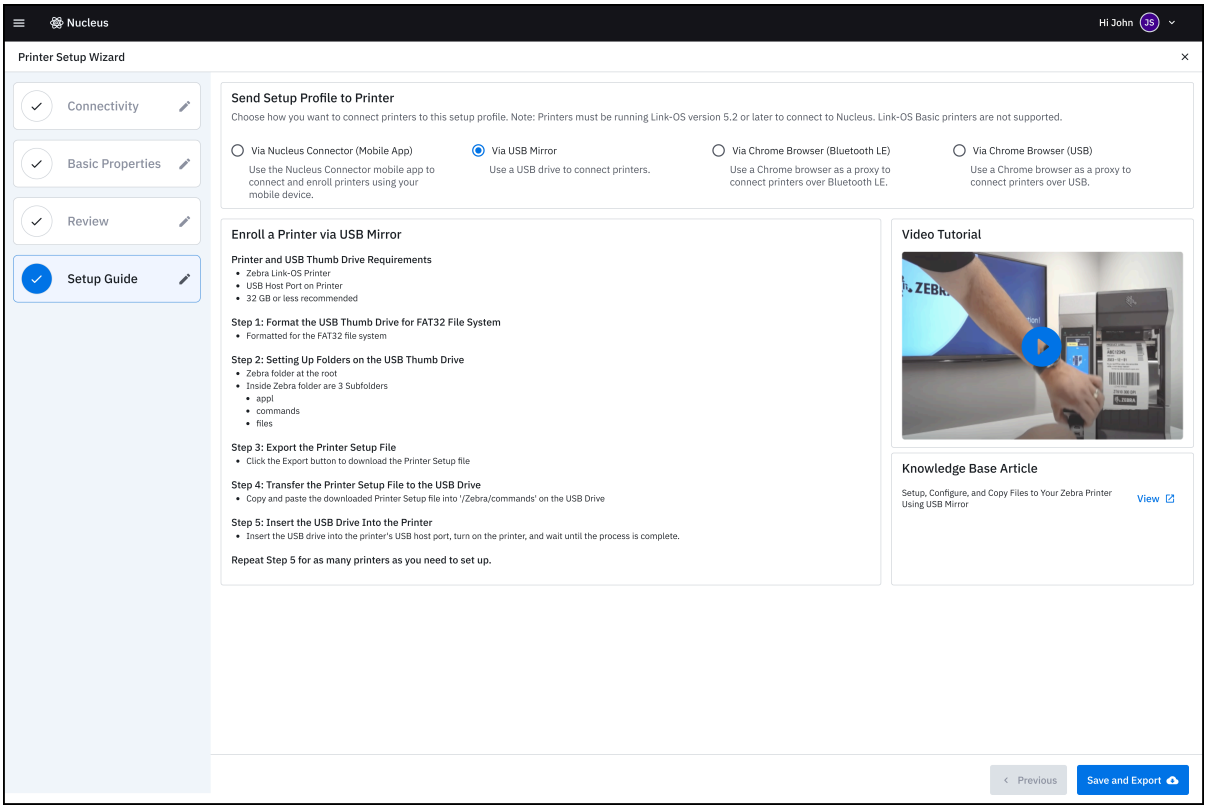
5. The **Review** page allows you to review your settings and make any needed edits. Click **Done** to save your profile and display the **Setup Guide**.



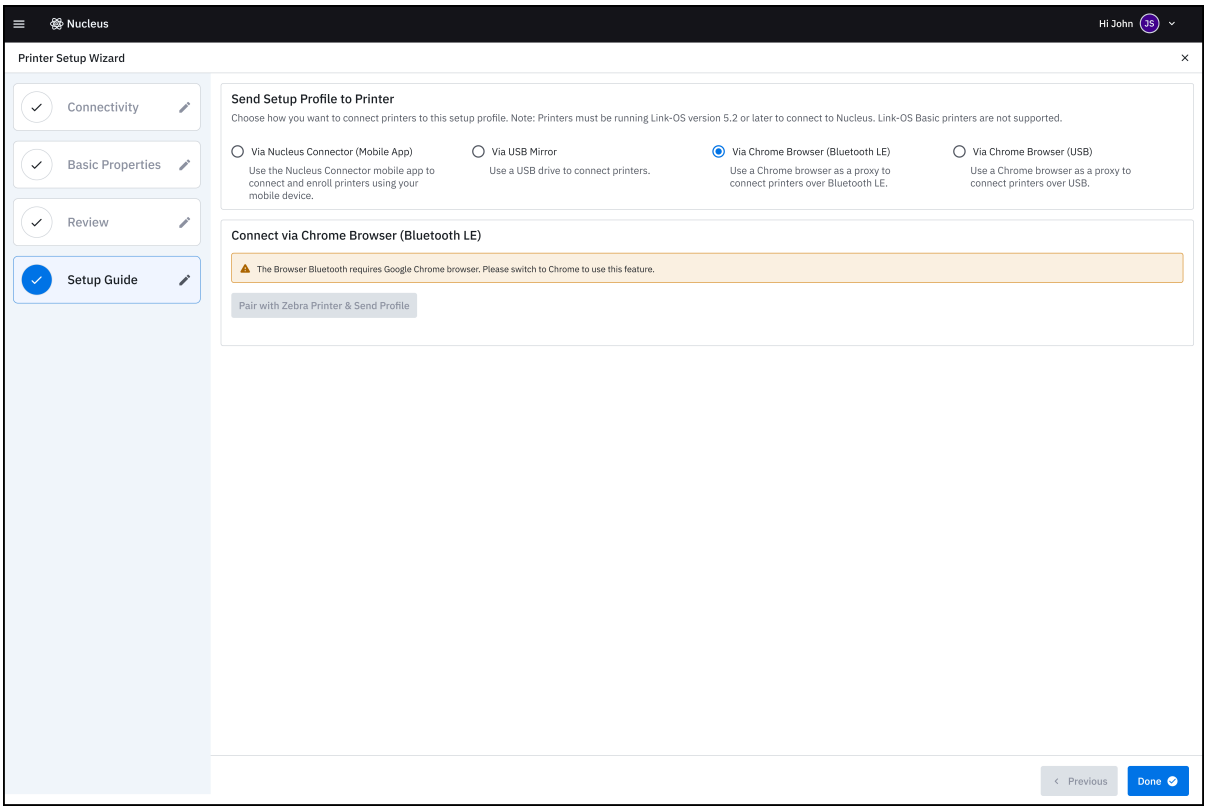
6. The **Setup Guide** page provides three methods for applying a setup profile to your printers.
   - **Nucleus Connector (Mobile App)**: Works with the Nucleus Connector App. You can scan the QR code on the screen to download the application, and then click **Next**.
     - Use the Nucleus Connector app to scan the **Enroll Printers** barcode. For more information about the Nucleus Connector app, refer to the Nucleus Connector User Guide.



- **USB Mirror**: Select this to save the profile to a USB drive, and then click **Save and Export**.

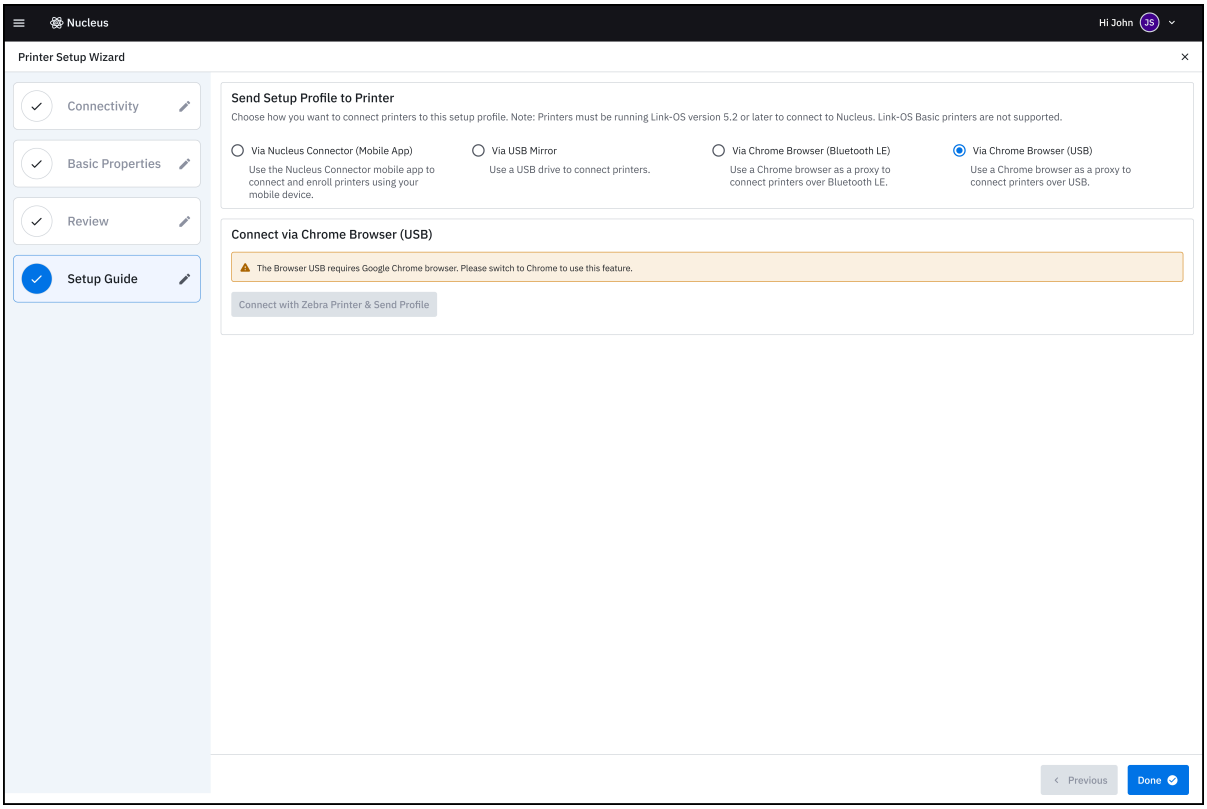


- **Chrome Browser (Bluetooth LE)**: Use your browser to connect over Bluetooth.
  - Click **Pair with Zebra Printer & Send Profile**, and then select your device from the dialog and click **Pair**.



- **Via Chrome Browser (USB)**: Use Chrome to connect via USB.

NOTE: This option is only available for macOS.



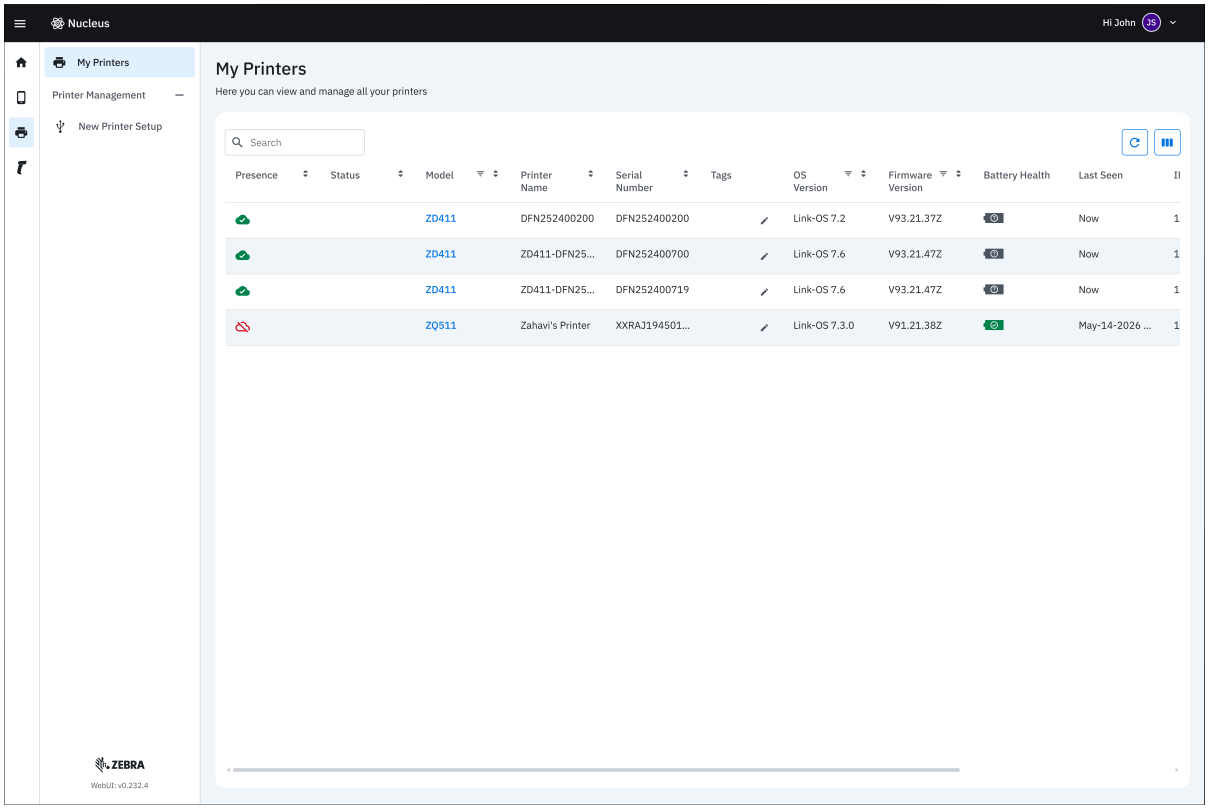
7. Click **Save and Export/Done** to save your profile.

The new printer profile appears in **My Printers** and the **Device Inventory**.

Managing My Printers

You can manage printers from the **My Printers** screen. From this screen, you can add tags, view printer information, locate, reboot, and remove the printer from Zebra Nucleus.

1. Click **Printers** > **My Printers** to display the **My Printers** screen.



2. Click the printer's Model name in the **Model** column.

   The **Printer Details** dialog displays.

3. Click ✎ in the **Tags** column.

   The **Edit Tags** dialog displays.

4. Select the appropriate tag from the drop-down menu and click **Done**.

5. Click the desired icon in the **Actions** column to manage or delete the printer from Zebra Nucleus.

Scanner Setup and Management

The Scanners module contains sections for enrolling scanners into the Zebra Nucleus system and performing basic management functions.

Scanners exchange data with a host computer. When you scan a barcode, the scanner sends the data to the host computer. The host computer sends configuration/firmware updates to the scanner, and Zebra Nucleus manages your scanners by communicating with host computers. To manage scanners with Zebra Nucleus:

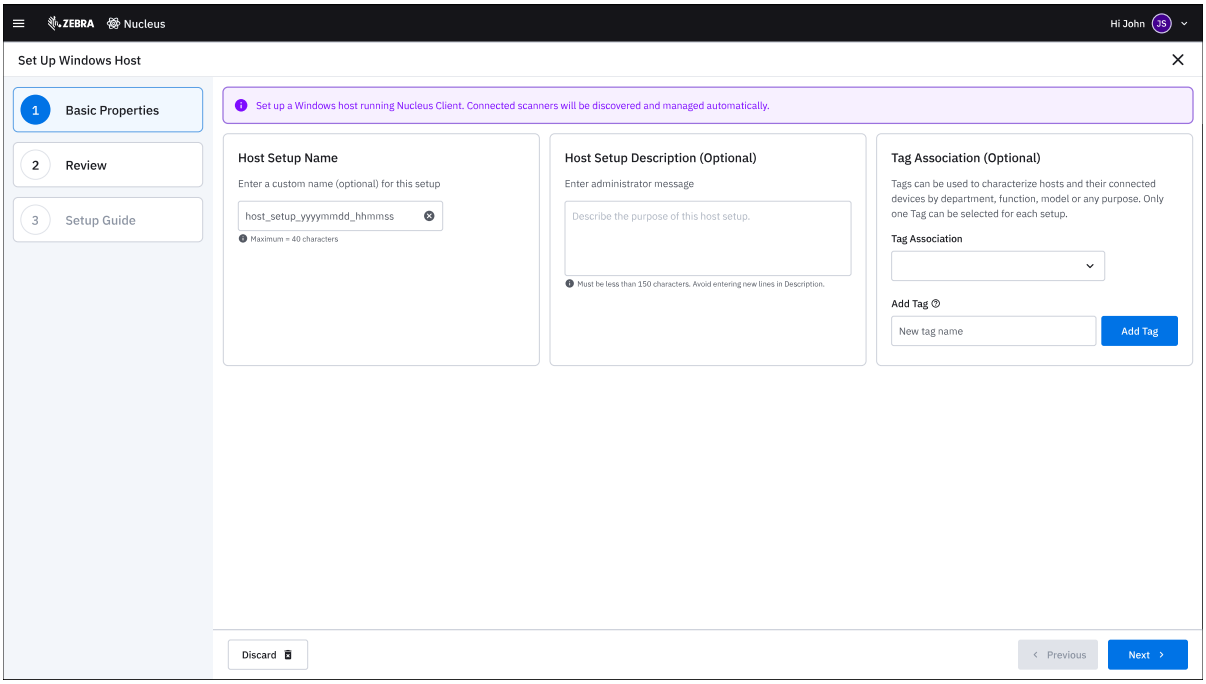
- Create a configuration file enabling Zebra Nucleus to communicate with your host device. Follow the instructions in Setting up a Host.
- Add the configuration file to every device that connects to your scanners.
- Connect your scanners to their host devices. The scanners automatically appear in the **My Scanners** and **Device Inventory** screens.
- Create scanner profiles with your desired scanner settings. Follow the instructions in Creating a New Scanner Profile.
- Apply profiles to your scanners. Follow the instructions in Deploying a Scanner Profile.

Setting up a Scanner Host

Host computers require basic configuration files to ensure they can communicate with Zebra Nucleus and your scanners. Zebra Nucleus creates a setup that you distribute to all hosts.

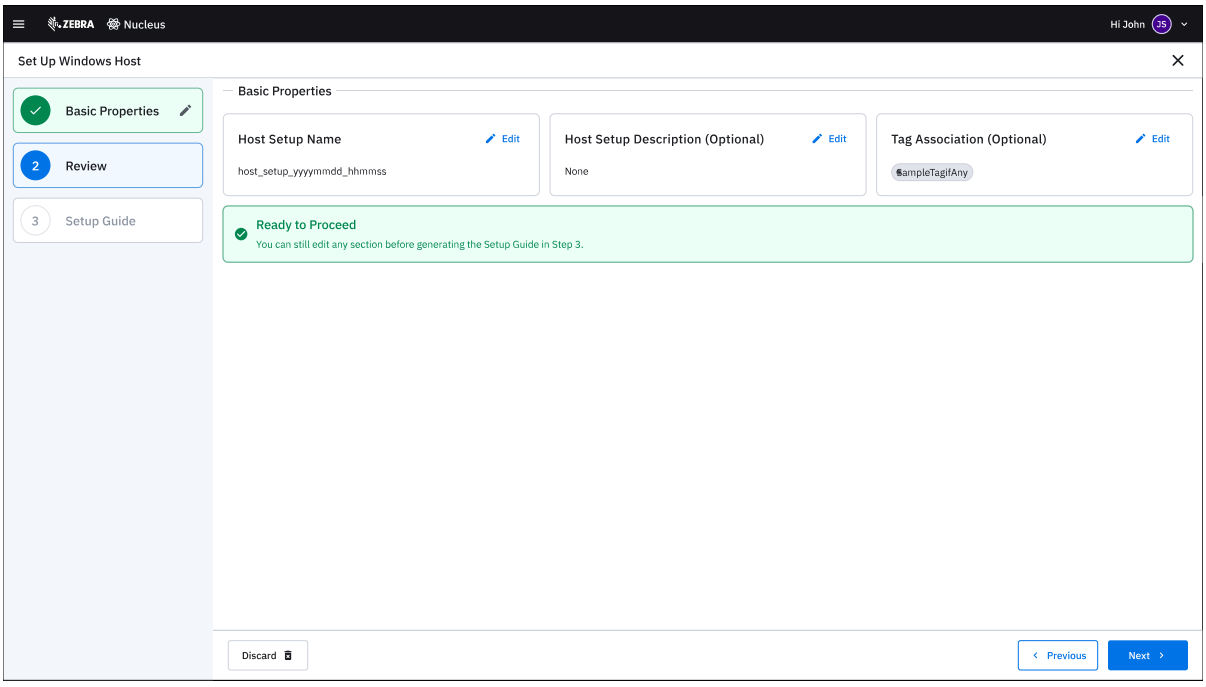
NOTE: This section provides instructions for setting up a host device using the user interface. You may also run an automated installation on multiple devices via Silent Installation process.

1. On the **New Scanner Setup** section, click **Set Up Hosts** to display the **Set Up Hosts** screen.
2. Click **Set Up Windows Host** to display the **Set up Windows Host** wizard's **Basic Properties** screen.

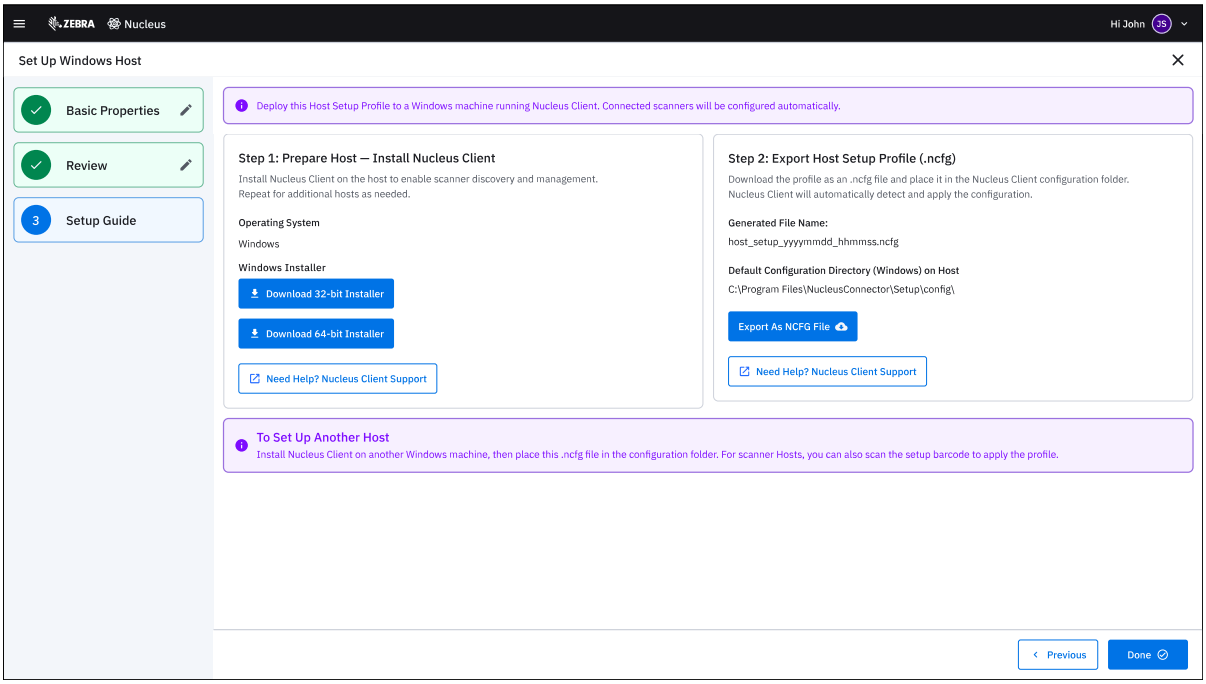


NOTE: The **Basic Properties** page allows you to enable encrypted communication between Zebra Nucleus and a secure host device.

3. Enter a Host Setup Name (optional).
4. Enter a description of the setup.
5. Select a tag from the drop-down menu, and then click **Next** to display the **Review** screen.



6. You can edit your host name, description, and tag association. Click **Next** to display the **Setup Guide** screen.



7. Click **Download 64-bit Installer**.

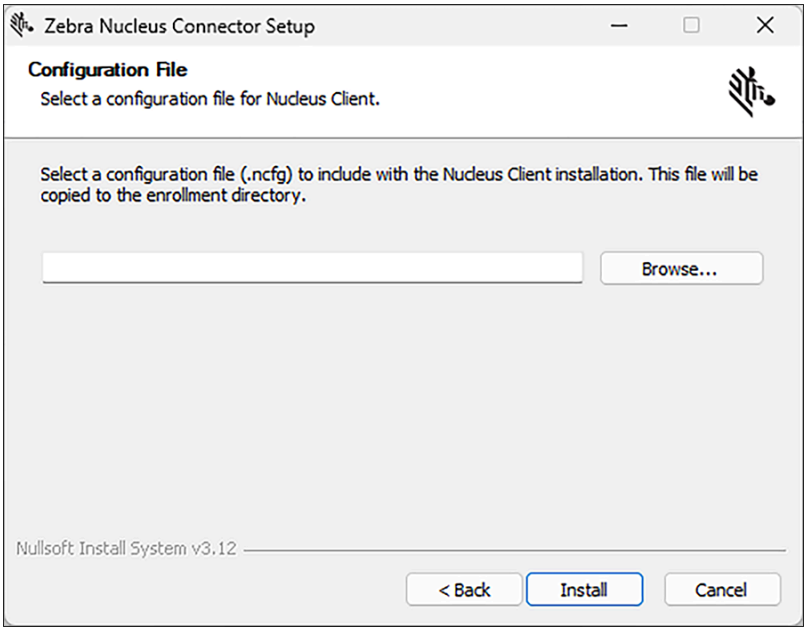
   This downloads the Zebra Nucleus client onto your computer and enables the computer to communicate with a connected scanner. You must download the Nucleus client on each computer that will communicate with scanners.

8. Click **Export as NCFG File**.

   The Zebra Nucleus configuration file downloads.

9. Run the **NucleusConnector.exe** and follow the prompts on the wizard.

   a) When the wizard prompts you to select a configuration file (.ncfg) to include with the Nucleus Client installation, click **Browse...** and select the `.ncfg` file you just downloaded.



10. Click **Install**.

    The Zebra Nucleus Connector Setup installs the necessary files and adds the computer to the Zebra Nucleus environment.

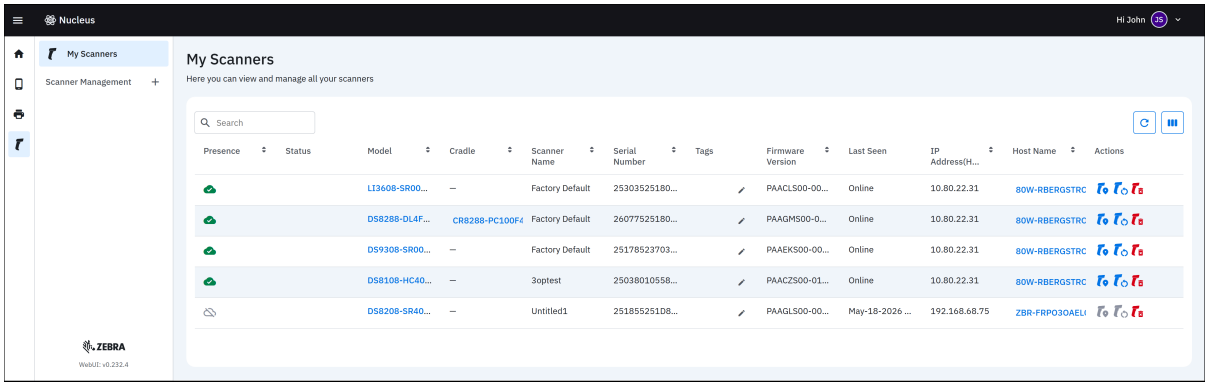
Host Device Profiles are now available in the **New Scanner Setup** and **Hosts** pages. You can log into Zebra Nucleus from any computer and download the 64-bit Installer and `.ncfg` files to allow that computer (host) to communicate with a scanner.

Managing My Scanners

You can manage scanners from the **My Scanners** screen. From this screen, you can add tags, view scanner information, locate, reboot, and remove the scanner from Zebra Nucleus.

To add a scanner to Zebra Nucleus, ensure the host computer is enrolled in the application and then connect your scanner(s) to the host (refer to Setting up a Host to connect your host device to Zebra Nucleus). Scanners automatically appear on the **My Scanners** and **Device Inventory** screens.

1. Click **Scanners** > **My Scanners** to display the **My Scanners** screen.



2. Click the scanner's model name in the **Scanner Model** column.

The **Scanner Details** dialog displays.

3. Click ✎ in the **Tags** column.

   The **Edit Tags** dialog displays.

4. Select the appropriate tag from the drop-down menu, and then click **Done**.
5. Click the host name in the **Host Name** column.

   The **Host Details** dialog displays.

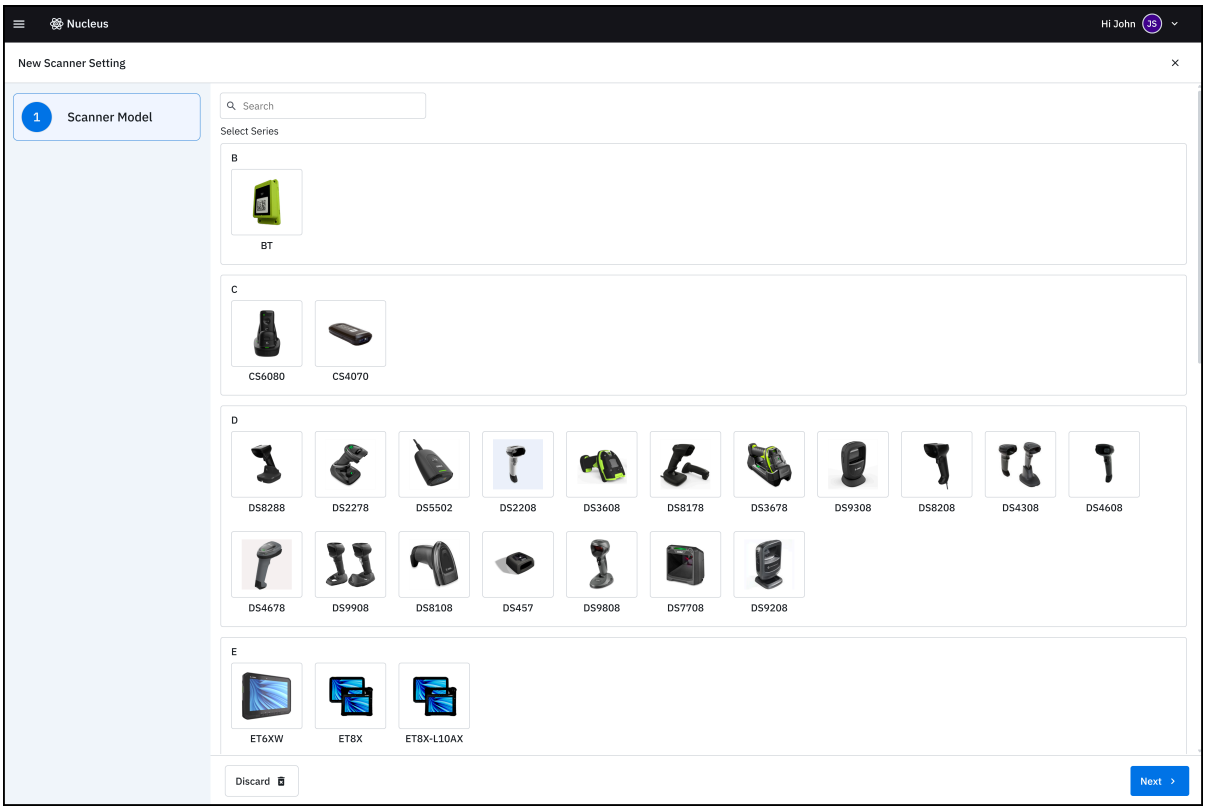
6. Click the desired icon in the **Actions** column to locate, reboot, or delete the scanner from Zebra Nucleus.

Creating a New Scanner Profile

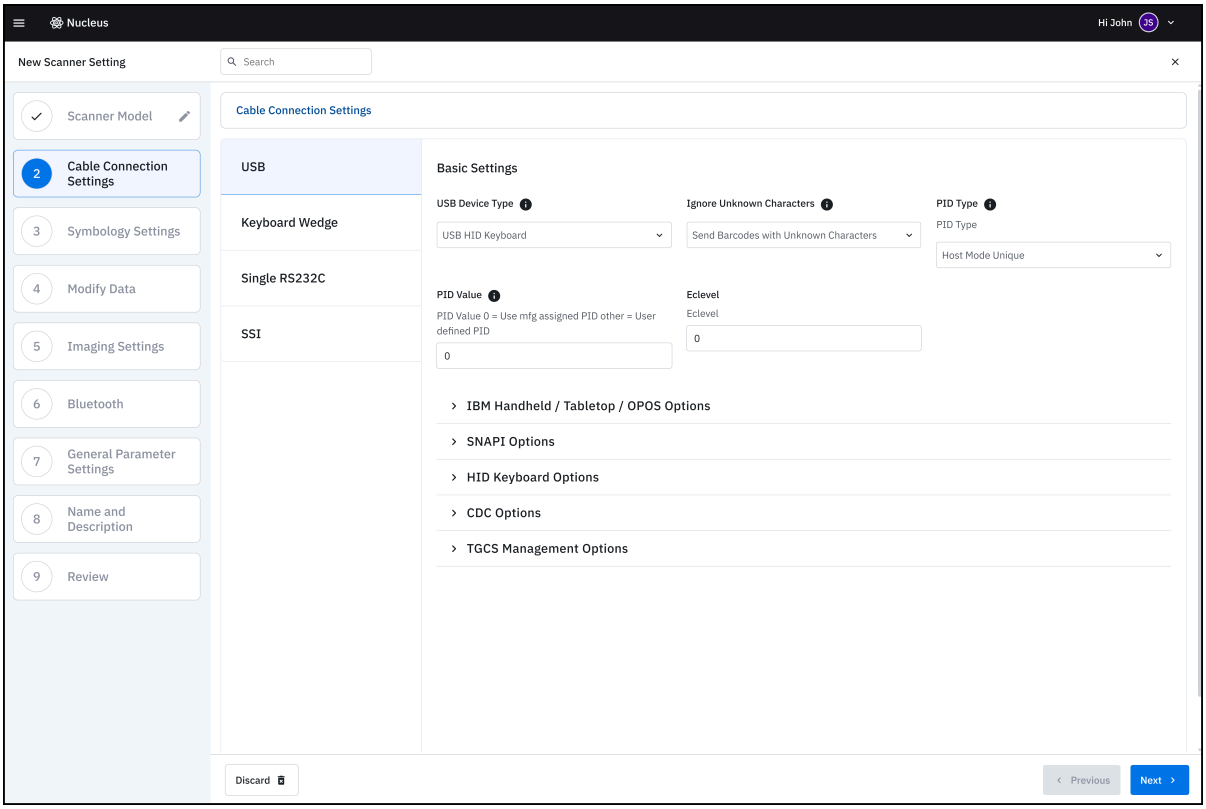
Scanner profiles define a scanner's abilities, settings, and behavior. This section describes the process of creating a new scanner profile.

NOTE: Refer to the device's Product Reference Guide for details about the options you can select in the setup process.

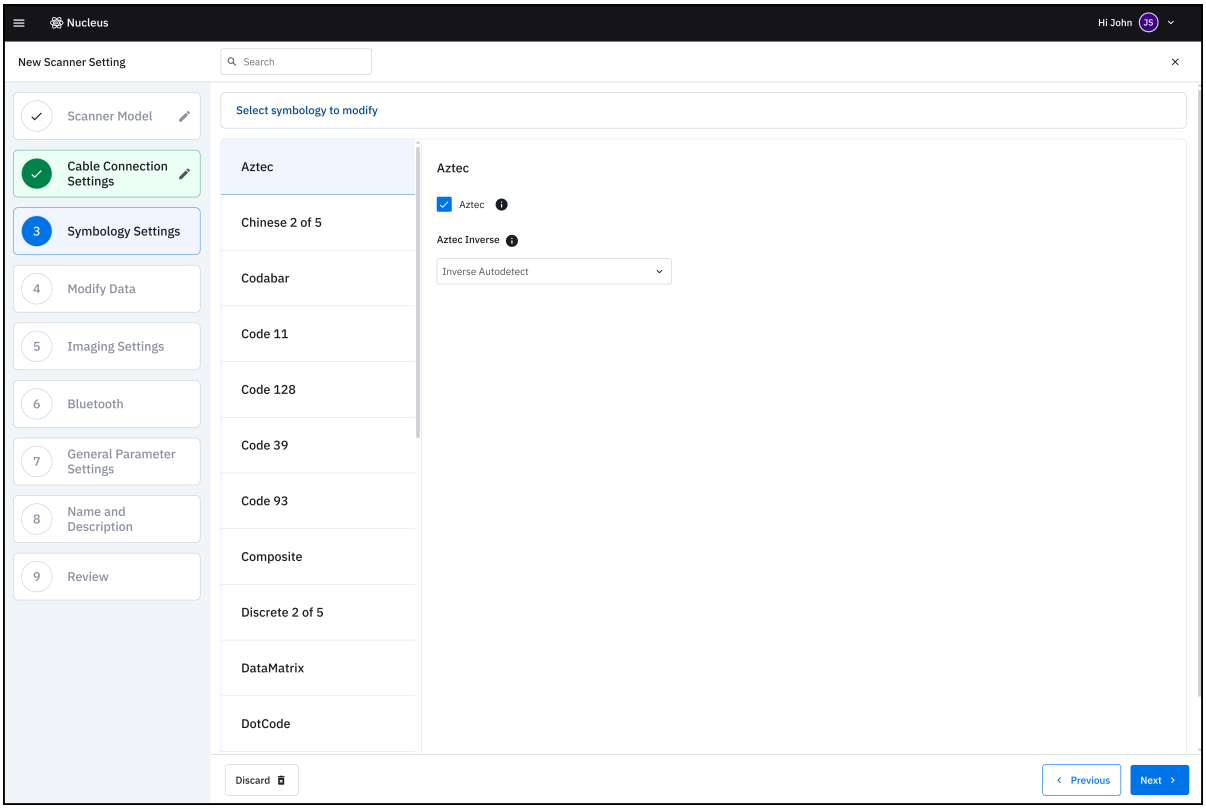
1. Click **Scanners** > **Scanner Management** > **Scanner Settings** > **New Scanner Settings** to display the **New Scanner Settings** wizard 's **Scanner Model** screen.



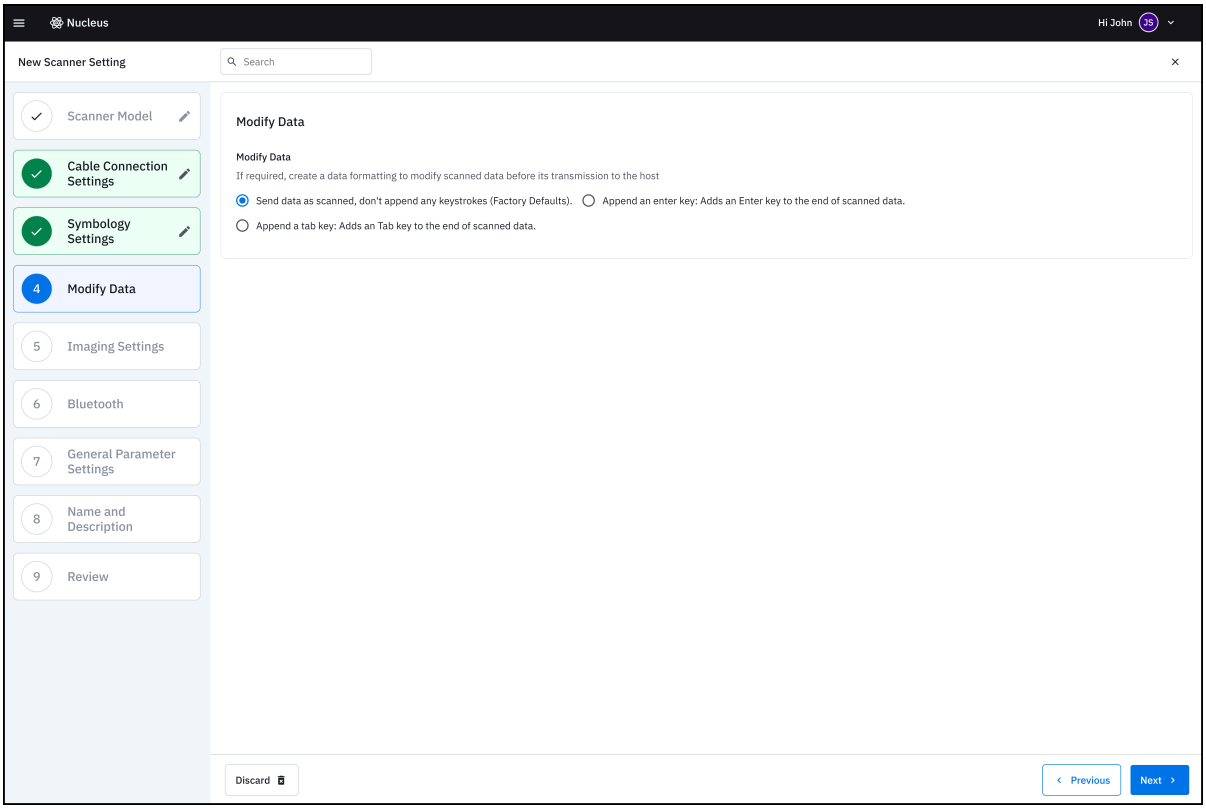
2. The **Scanner Model** screen contains all supported scanners. Click your scanner's series image, then click your model. Click **Next**.
3. The **Cable Connection Settings** screen contains a list of all available communication types. Select or deselect the communication method between the scanner and host device.



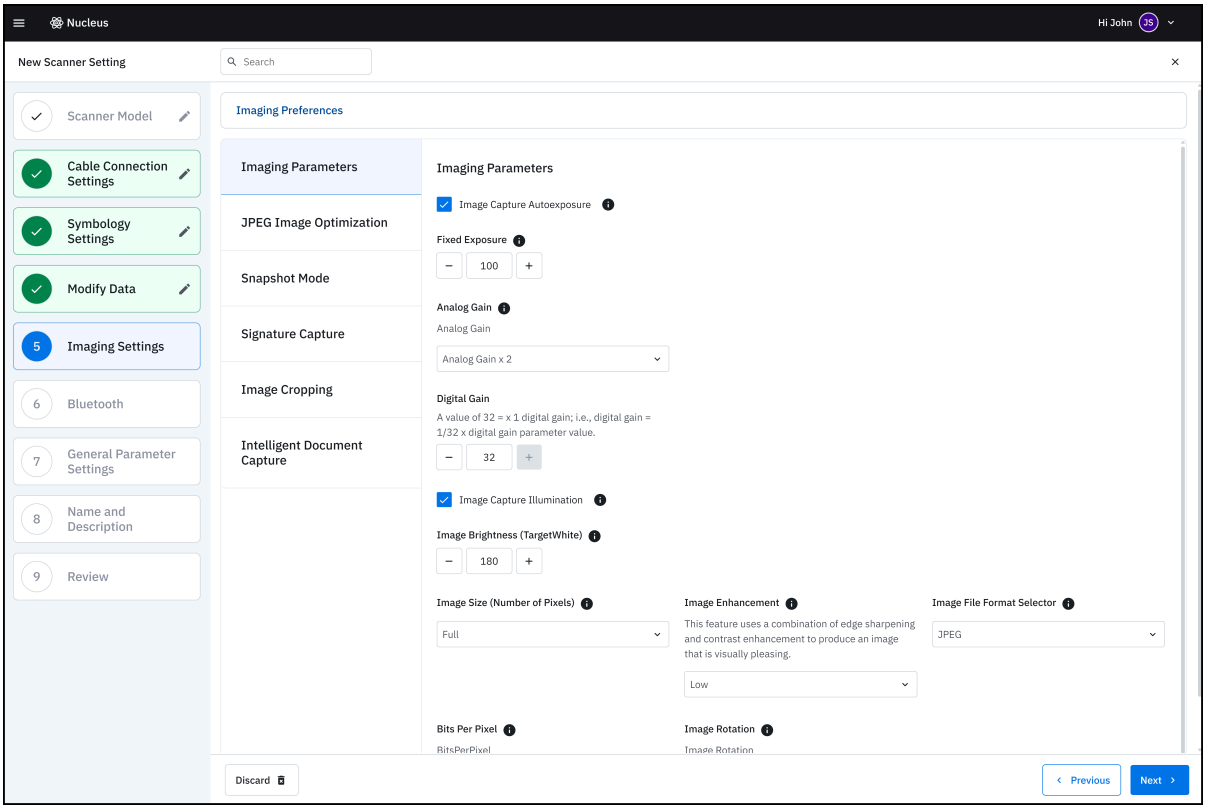
4. On the **Symbology Settings** screen, select or deselect the types of barcodes you want the scanner to be able to decode.



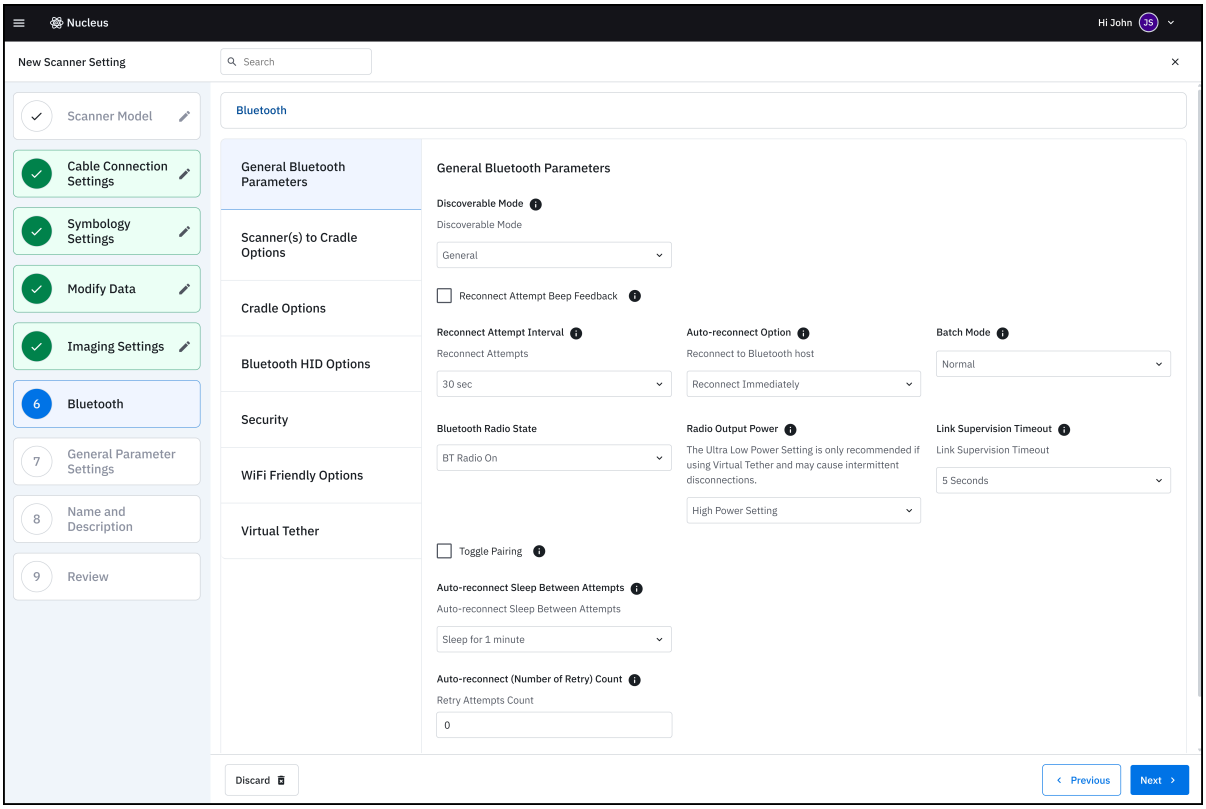
5. On the **Modify Data** screen, select the desired modification to the scanned data.



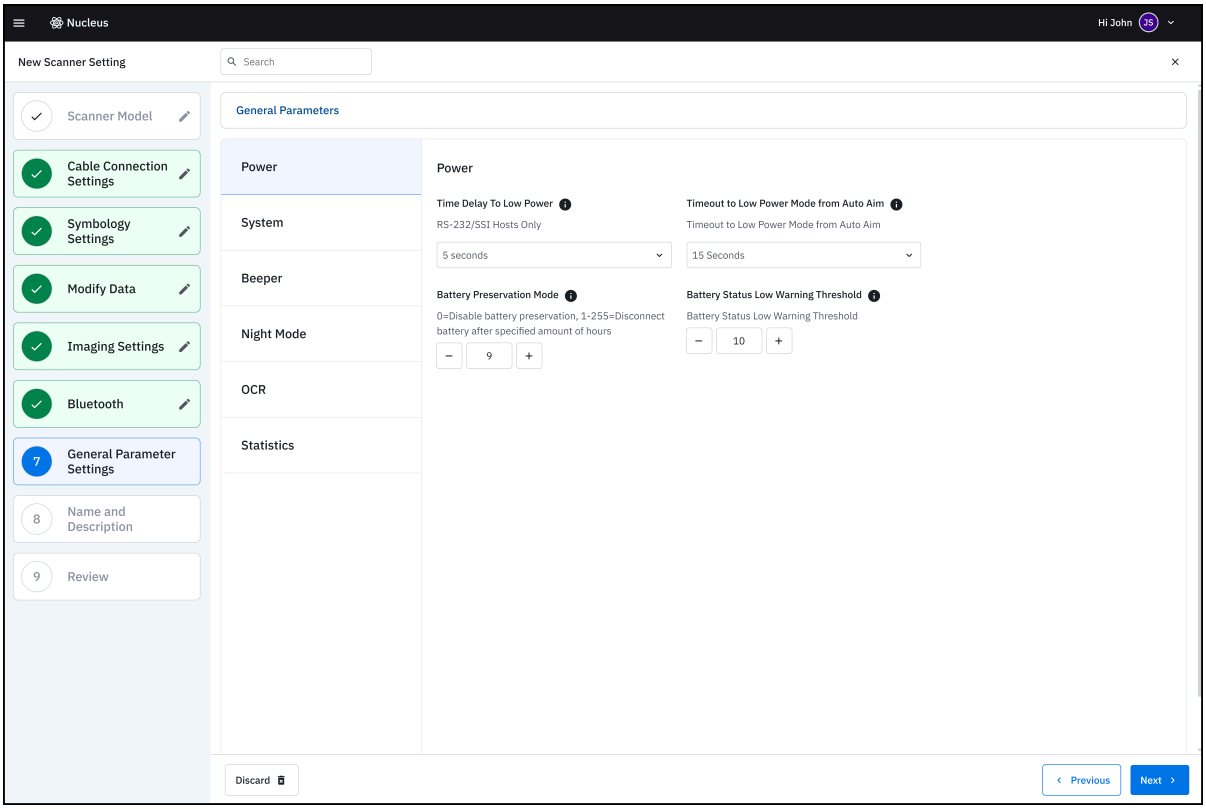
6. On the **Imaging Settings** screen, select the desired image behaviors. Click **Next**.



7. (Optional, for Bluetooth devices only.) On the **Bluetooth** screen, use the drop-down menus to define the scanner's behavior.

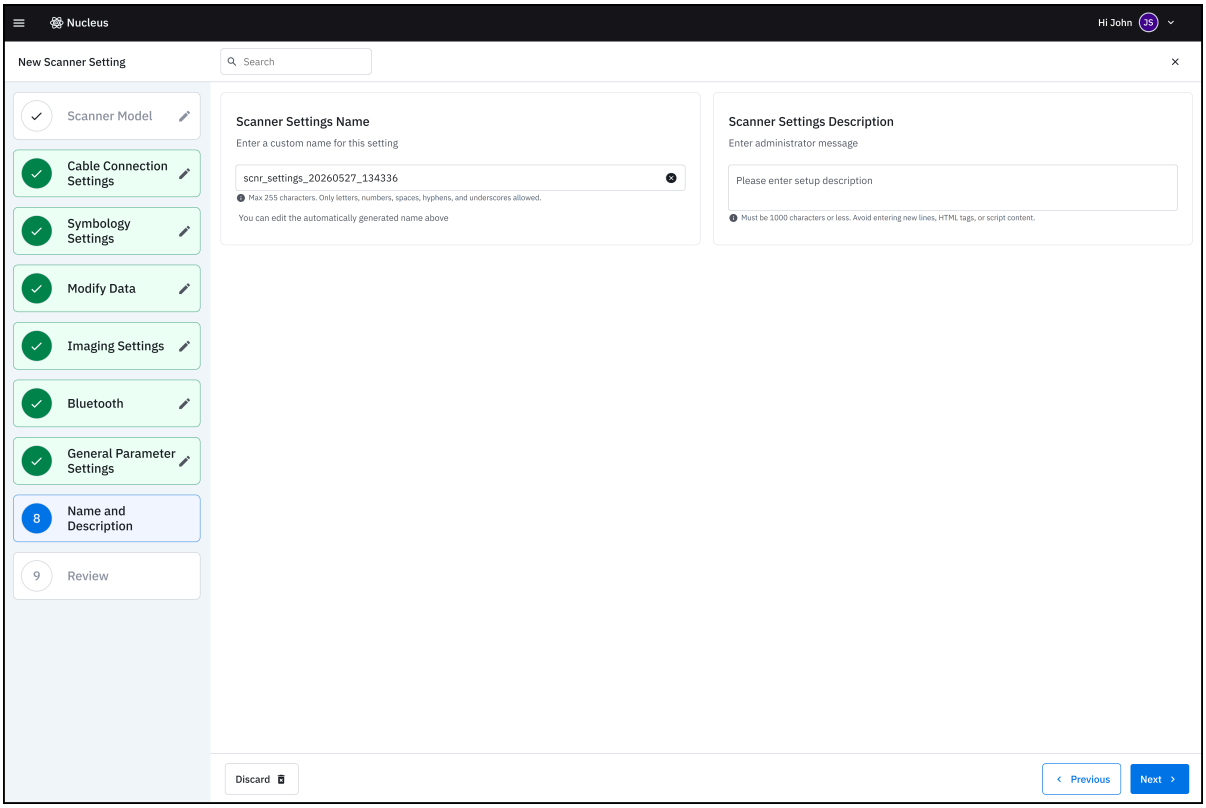


8. On the **General Parameter Settings** screen, use the drop-down menus to define the scanner's behavior.



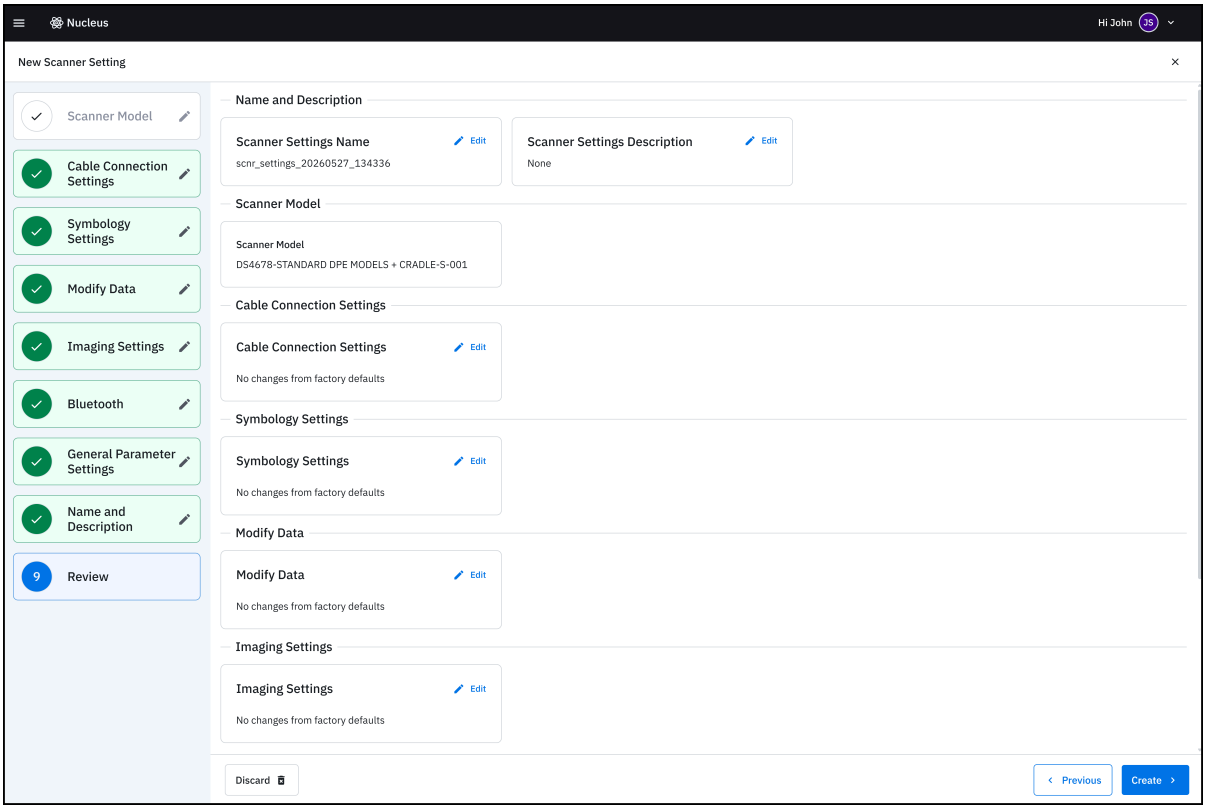
9. On the **Name and Description** screen, enter the device setting name.

IMPORTANT: Use a descriptive name for easy future reference.



10. Enter a description for the setting configuration to differentiate it from other settings, and click **Next**.
11. On the **Review** screen, review your setting updates. Click **Edit** to modify any option, then click **Create**.

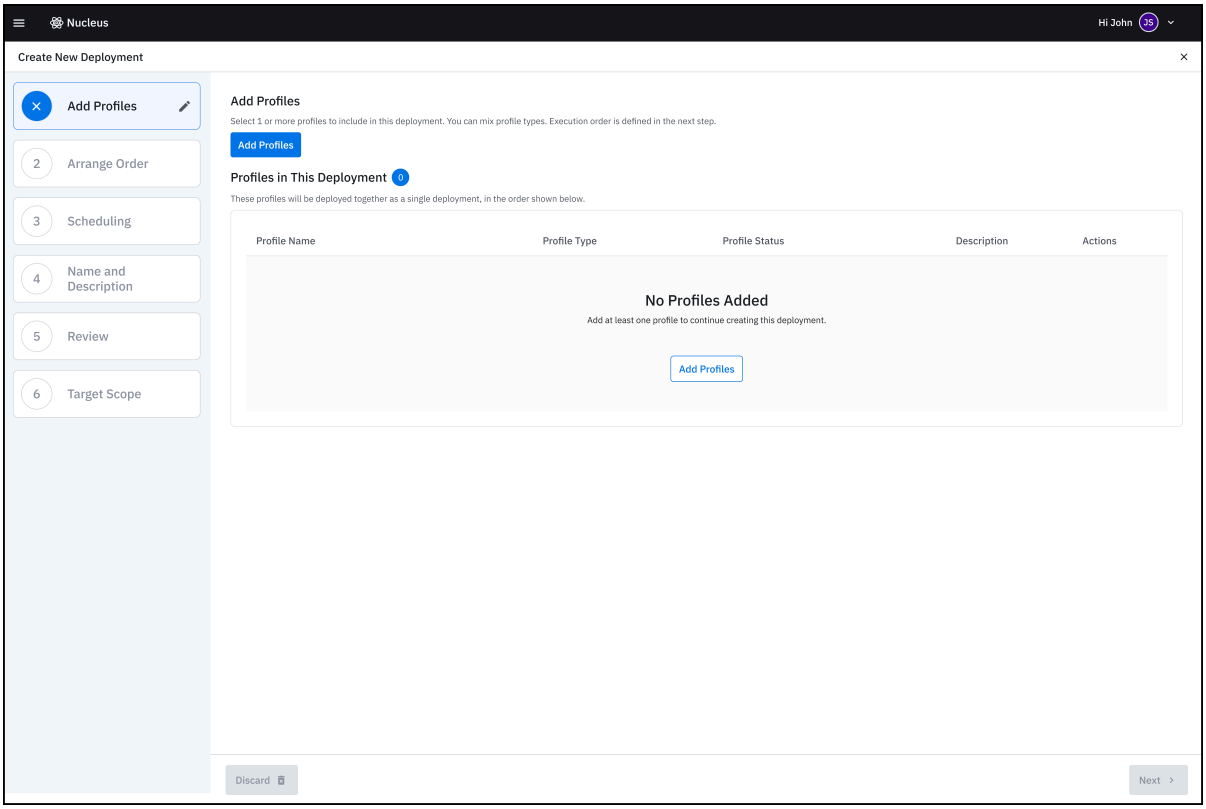
The setting is saved and appears in the **Scanner Settings** field columns.



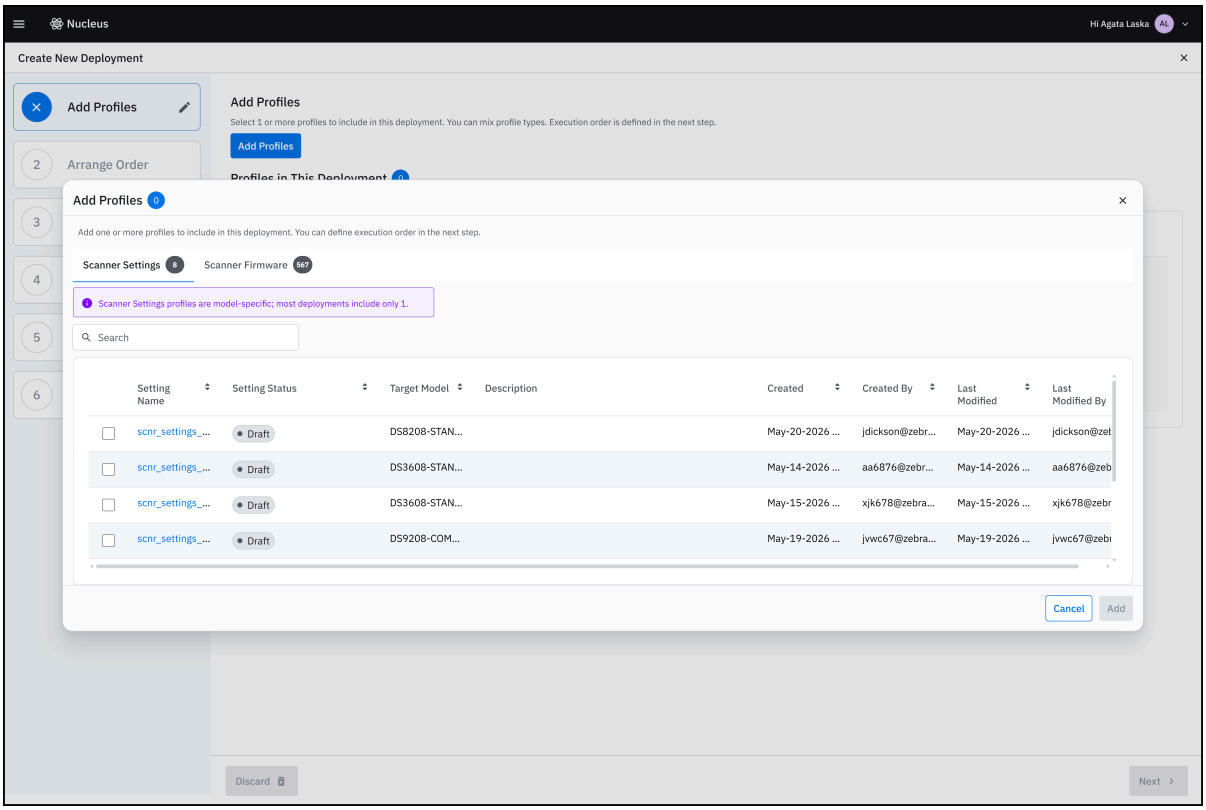
Deploying A Scanner Profile

Scanner profile deployments schedule when scanner settings are applied to scanners. Profile deployments can include multiple setting profiles.

1. Click **Scanners** > **Scanner Management** > **Profile Deployment** to display the **Profile Deployment** screen.
2. Click **New Deployment** to display the **Create New Deployment** screen.



3. Click **Add Profiles** to select the scanner profiles (scanner settings) you want to deploy.



4. Select the desired **Scanner Settings** and **Scanner Firmware** and click **Add**.

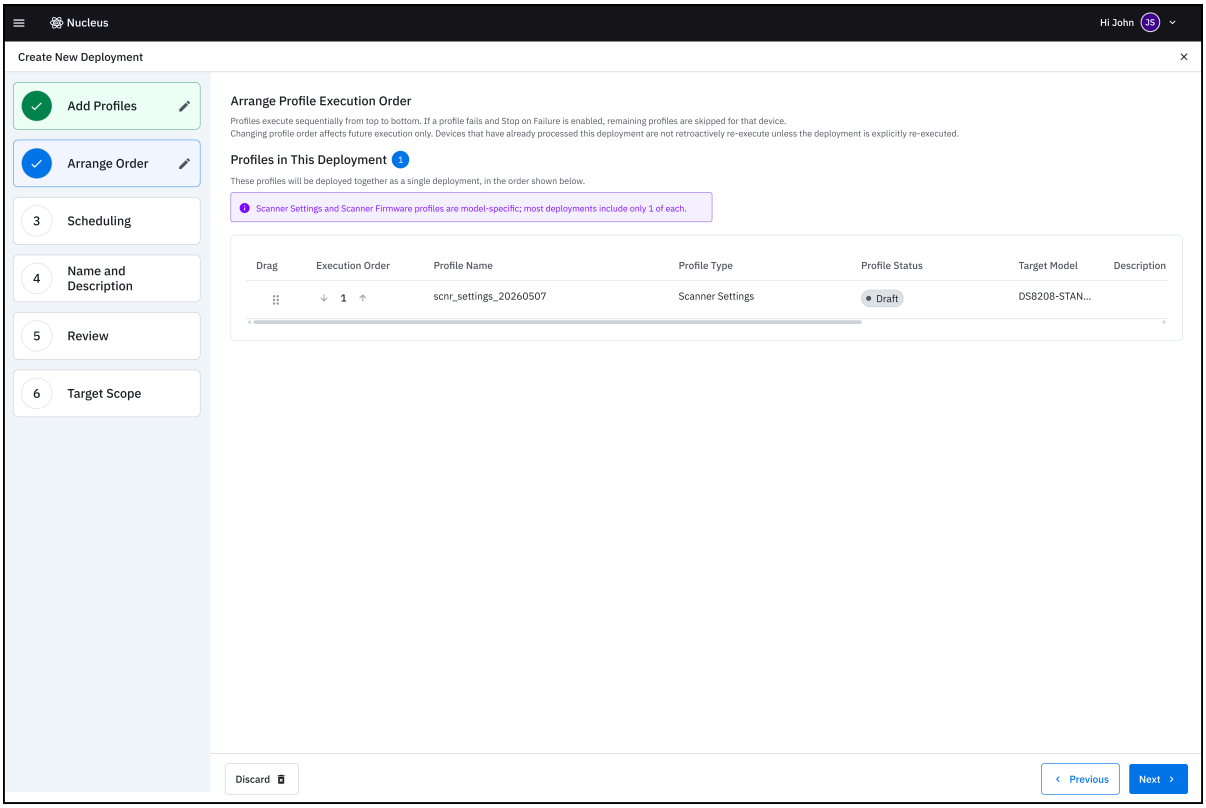
   NOTE: Most Profile Deployments include a single firmware version and a single setting profile.

   Your selections appear in the **Profiles in This Deployment** section.

5. Click **Next**.

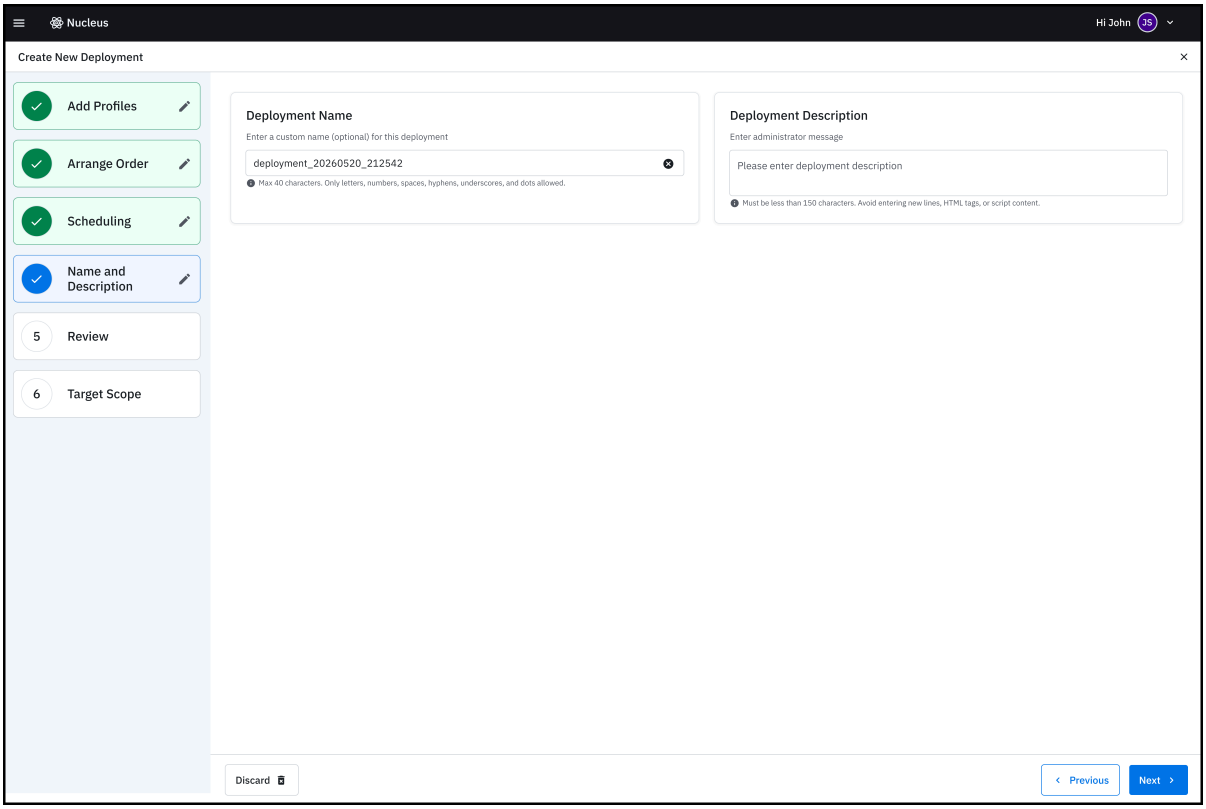
6. Arrange the order of profile executions and click **Next**.

   For example, if you added a firmware version and settings profile, you may want to update the firmware version first before applying the new settings.

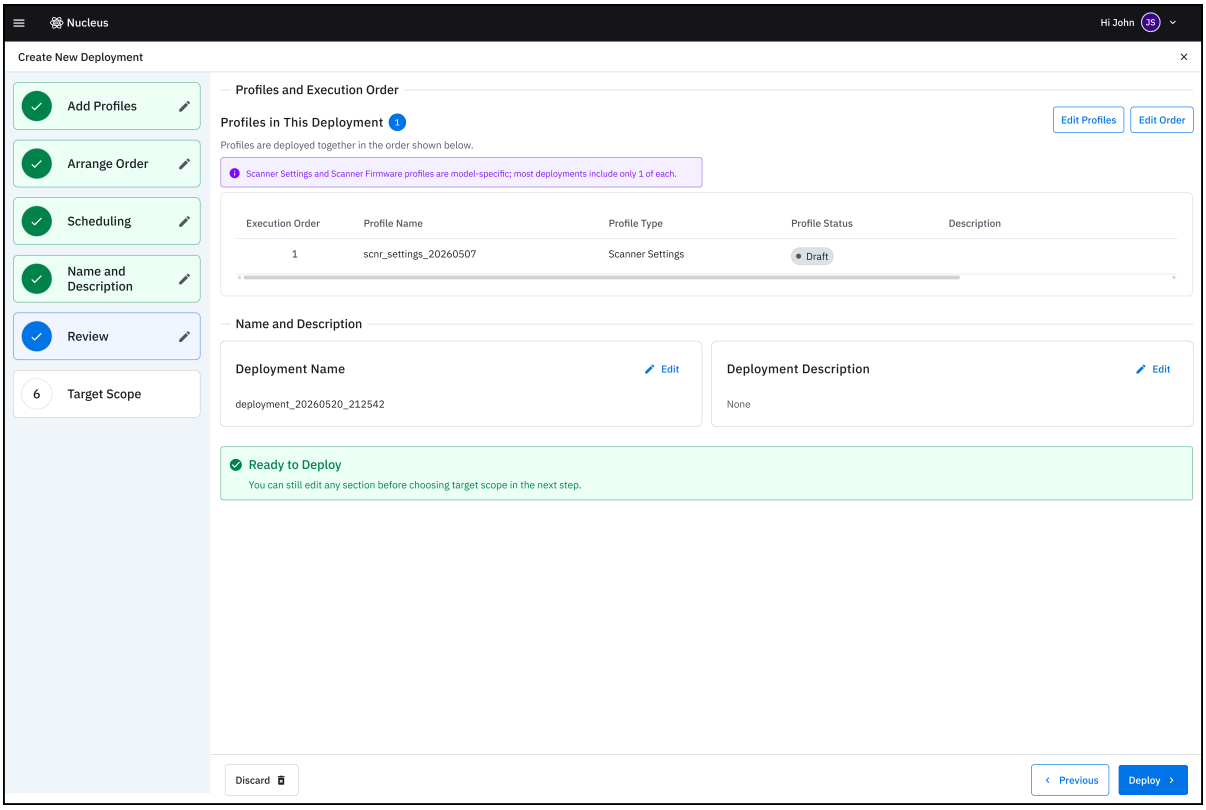


7. Select the desired **Scheduling** option and click **Next**.

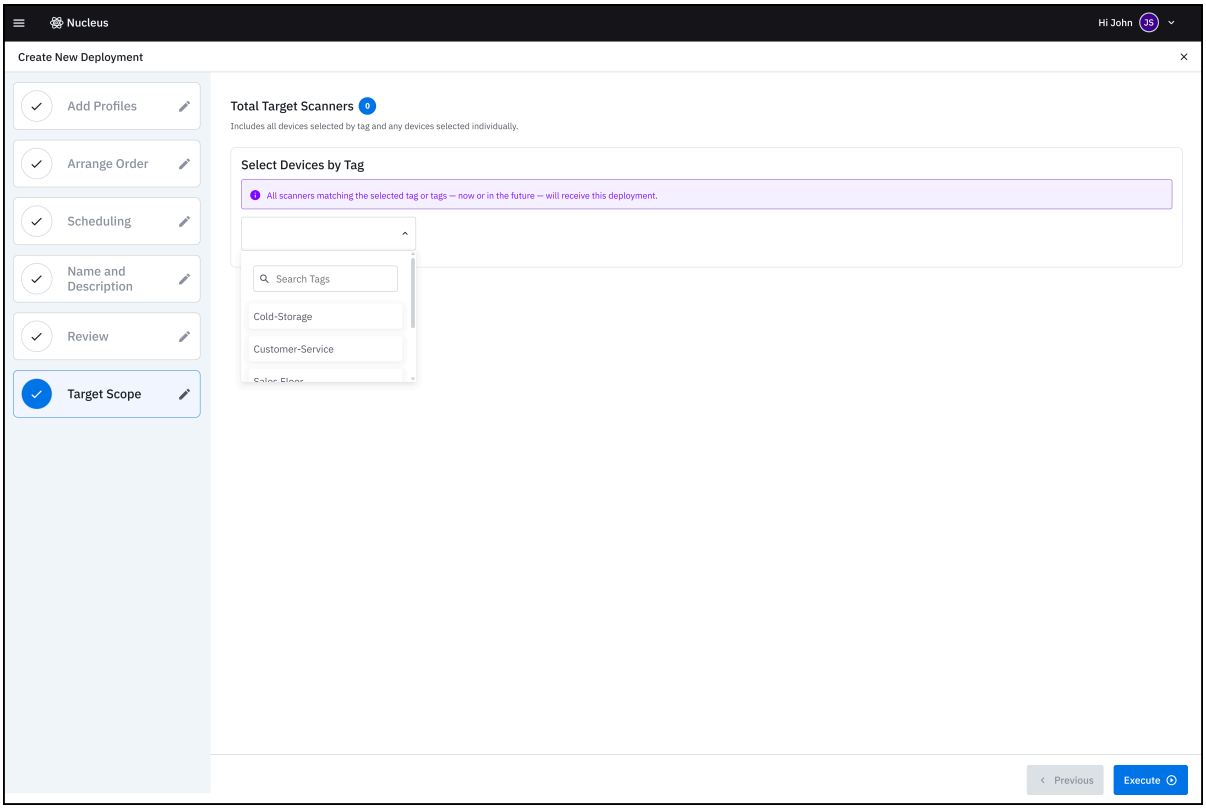
8. Enter a **Deployment Name** and **Description** and then click **Next**.



9. On the **Review** screen, review the profile deployment. Click **Edit** to modify any option, then click **Deploy**.



10. Select a tag from the drop-down menu and click **Execute**.



All devices associated with the selected tag will receive the specified profile deployment.

Frequently Asked Questions

Access a curated list of common questions about the software. This fast-track resource helps you understand key features without searching the entire guide.

Table 3 Mobile Computer Enrollment

Question	Answer
What do I do if my computer is not scanning barcodes on a monitor?	The ability to scan a barcode displayed on a monitor is subject to a number of factors. If you are unable to scan a barcode from the screen, try these changes to the display parameters: • Increase the screen brightness • Increase or decrease the display resolution • Increase the browser magnification (to enlarge the barcode)
Why did the device fail to enroll after scanning the enrollment barcode?	One potential cause is that the device was not in a factory-fresh state (reset) when you attempted to enroll it. • Perform a factory reset and try to enroll the device again. Enrollment failure sometimes occurs if network connectivity is down or the Zebra Nucleus server is temporarily unavailable when you scan the barcode. As a remedy, use a network diagnostics tool (for example, Ping) to verify internet connectivity and availability of the Zebra Nucleus server and scan again. If enrollment still fails, generate a new barcode and try scanning again. If enrollment continues to fail, one of the following might be the cause: • The Wi-Fi section of the enrollment Profile contains an invalid setting • The device is already in Device Owner mode • The Zebra LifeGuard Over-the-Air service is not installed or not running • GMS services are disabled or not present

Table 3 Mobile Computer Enrollment (Continued)

Question	Answer
After trying to enroll, why are the devices "greyed out" with an "Enrolling" status label?	Though rare, this issue can occur if the Enrollment Manager or a download or install step fails during enrollment. Device status changes to "Not Enrolled" after an extended period of time, possibly as many as five days. To clear the status immediately and attempt re-enrollment, perform an Enterprise Reset on the effected device(s).

Table 4 Mobile Computer Inventory

Question	Answer
I just installed Android 13 on my device. Why is it not it manageable anymore?	When first booting (or rebooting from either a cold boot or hard reset), all Zebra devices running Android 13 (or later) must be unlocked (using PIN, password, or pattern) before the Zebra Nucleus client app launches and enables device management. This issue also applies to some 6490-platform devices running Android 11.
Why are some devices shown with a *(!)* warning symbol?	The *(!)* icon appears next to devices that contain out-of-date Zebra Nucleus device software, or were enrolled using a barcode created with an older version of the Zebra Nucleus console. The remedy for either scenario is to select "Update Zebra Nucleus Client" for the affected devices.

Table 5 Using your Printers

Question	Answer
What do I do if my app crashed while communicating with the printer?	If you think the app is crashing because you are communicating to the printer: • The device may be unable to communicate because it is out of range or the printer is off, it throws an exception. Make sure all communication to the printer is in try/catch statements. • Verify you have the proper permissions to communicate . • Communicating to the printer can sometimes take time, sometimes seconds. Handle it as a long-running task. Always communicate to the printer on a thread other than the UI. If you are concerned the print jobs were not printed: • Check print status during printing. • Keep track of the odometer in the printer to check labels printed.

Table 6 Using you Scanners

Question	Answer
Why is my scanner not visible in **My Scanners** and **Device Inventory**?	It is possible your host computer is not connecting to Zebra Nucleus. • Check to confirm the Client is installed on the host computer. • Review the log and confirm you've established a connection between the host computer and Nucleus Client. • Ensure your devices meet the network requirements. • Re-enroll the host device using a new enrollment file.

Glossary

The Glossary contains definitions of terms. Definitions are listed alphabetically for quick reference and ease of use.

Admin (Role)
A default user role in Zebra Nucleus that has full write access to all domains, including device management, licensing, and user management.

Allocate
The action of assigning a purchased software license to a specific device within the Zebra Nucleus system.

Badge ID
A unique identifier provided by Zebra upon license purchase, used to add and activate product licenses within the Zebra Nucleus Licensing Manager.

Claim
The action of moving a purchased Zebra device license into the Zebra Nucleus platform so it can be allocated to a device.

Device Inventory
The central screen in Zebra Nucleus where you can view all devices enrolled in the system, tag them, and see their status and settings.

Device Owner mode
A state on an Android device that grants a management application, like Zebra Nucleus, the highest level of control. Devices must often be in a factory-fresh state to enter this mode correctly.

Enroll/Enrollment
The process of registering a device (such as a computer, printer, or scanner) with the Zebra Nucleus platform to enable centralized management and configuration.

Enrollment Profile
A set of configurations created in a wizard that defines the initial settings for a device upon enrollment, such as network connectivity and device name. This profile is often applied by scanning a barcode.

Host
A computer that communicates with and manages connected peripheral devices, such as scanners. The Zebra Nucleus client is installed on the host to enable communication with the Zebra Nucleus platform.

LifeGuard Over-the-Air
A Zebra service for deploying operating system and security updates to Android devices. It is a required component for proper enrollment and management in Zebra Nucleus.

Manager (Role)
A default user role in Zebra Nucleus with administrative access to devices, media, network, and services, but restricted from accessing the Licensing and User Management domains.

NCFG File
The Zebra Nucleus configuration file (.ncfg) that is exported from the platform and can be loaded into another Nucleus environment. This facilitates a simple computer configuration process.

Zebra Nucleus
A centralized platform designed to help manage, configure, and update all your Zebra devices, providing total visibility and control from a single interface.

Zebra Nucleus Client
A software application installed on a host computer that enables it to communicate with connected scanners and the main Zebra Nucleus platform for remote management. For IT and operations leaders, Zebra Nucleus simplifies how they set up, secure, manage, and optimize their device fleets by uniting Zebra's value-add DNA software ecosystem into a single platform

Profile
A collection of saved settings that define a device's abilities and behavior. Profiles can be created for device settings, application installations, and configurations.

StageNow
A Zebra utility used for staging devices. In Zebra Nucleus, it generates the enrollment barcodes that are scanned by a device to configure it and enroll it into the system.

Tag
A label used to group devices by category, such as location or function (for example, "warehouse," "New York retail"). Tags allow you to apply settings or software updates to many devices at once.

Tenant
Refers to an organization's specific, isolated instance within the Zebra Nucleus platform. Users are assigned as tenants within their organization.

Wi-Fi Preset
A saved configuration that defines the connectivity settings for a specific Wi-Fi network. You can apply this preset to all device types during setup to ensure they connect to the correct network.