

Cloudpath Enrollment System RUCKUS Legacy Dynamic Pre-Shared Key (DPSK) Configuration Guide, 5.9

Supporting Cloudpath Software Release 5.9

Copyright, Trademark and Proprietary Rights Information

© 2021 CommScope, Inc. All rights reserved.

No part of this content may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without written permission from CommScope, Inc. and/or its affiliates ("CommScope"). CommScope reserves the right to revise or change this content from time to time without obligation on the part of CommScope to provide notification of such revision or change.

Export Restrictions

These products and associated technical data (in print or electronic form) may be subject to export control laws of the United States of America. It is your responsibility to determine the applicable regulations and to comply with them. The following notice is applicable for all products or technology subject to export control:

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations.

Disclaimer

THIS CONTENT AND ASSOCIATED PRODUCTS OR SERVICES ("MATERIALS"), ARE PROVIDED "AS IS" AND WITHOUT WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED. TO THE FULLEST EXTENT PERMISSIBLE PURSUANT TO APPLICABLE LAW, COMMSCOPE DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, FREEDOM FROM COMPUTER VIRUS, AND WARRANTIES ARISING FROM COURSE OF DEALING OR COURSE OF PERFORMANCE. CommScope does not represent or warrant that the functions described or contained in the Materials will be uninterrupted or error-free, that defects will be corrected, or are free of viruses or other harmful components. CommScope does not make any warranties or representations regarding the use of the Materials in terms of their completeness, correctness, accuracy, adequacy, usefulness, timeliness, reliability or otherwise. As a condition of your use of the Materials, you warrant to CommScope that you will not make use thereof for any purpose that is unlawful or prohibited by their associated terms of use.

Limitation of Liability

IN NO EVENT SHALL COMMSCOPE, COMMSCOPE AFFILIATES, OR THEIR OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, SUPPLIERS, LICENSORS AND THIRD PARTY PARTNERS, BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER, EVEN IF COMMSCOPE HAS BEEN PREVIOUSLY ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER IN AN ACTION UNDER CONTRACT, TORT, OR ANY OTHER THEORY ARISING FROM YOUR ACCESS TO, OR USE OF, THE MATERIALS. Because some jurisdictions do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of liability for consequential or incidental damages, some of the above limitations may not apply to you.

Trademarks

ARRIS, the ARRIS logo, COMMSCOPE, RUCKUS, RUCKUS WIRELESS, the Ruckus logo, the Big Dog design, BEAMFLEX, CHANNELFLY, FASTIRON, ICX, SMARTCELL and UNLEASHED are trademarks of CommScope, Inc. and/or its affiliates. Wi-Fi Alliance, Wi-Fi, the Wi-Fi logo, Wi-Fi Certified, the Wi-Fi CERTIFIED logo, Wi-Fi Protected Access, the Wi-Fi Protected Setup logo, Wi-Fi Protected Setup, Wi-Fi Multimedia and WPA2 and WMM are trademarks or registered trademarks of Wi-Fi Alliance. All other trademarks are the property of their respective owners.

Contents

Overview of Ruckus Legacy DPSK Configuration.....	4
Configuring a DPSK WLAN on a Ruckus ZoneDirector Controller.....	4
Obtaining Information about the ZoneDirector Controller.....	10
Configuring a DPSK WLAN on a Ruckus SmartZone Controller.....	11
Obtaining Information about the SmartZone Controller.....	17
Configuring DPSK on Cloudpath to Integrate with ZoneDirector.....	18
Adding a DPSK Plugin to the Workflow.....	18
Adding a Device Configuration to the Workflow.....	25
Testing the DPSK User Experience.....	27
Troubleshooting Tips.....	28
Configuring DPSK on Cloudpath to Integrate with SmartZone.....	29
Adding a DPSK Plugin to the Workflow.....	29
Adding a Device Configuration to the Workflow.....	35
Testing the DPSK User Experience.....	37
Troubleshooting Tips.....	38

Overview of Ruckus Legacy DPSK Configuration

Ruckus Legacy DPSK creates dynamic pre-shared keys on the Ruckus WLAN controller. The controller creates a unique 63-byte encryption key for each user upon accessing the wireless LAN for the first time and then automatically configures end devices with the requisite wireless settings, such as SSID and unique passphrase, without manual intervention.

Ruckus Legacy DPSK is one of several encryption methods you can use with Cloudpath.

This guide provides the basic configuration steps you need to set up your Ruckus wireless controller (ZoneDirector or SmartZone) and Cloudpath system with Ruckus Legacy DPSK.

If you will be using a Ruckus ZoneDirector controller to set up DPSK, follow the procedures in these sections:

1. [Configuring a DPSK WLAN on a Ruckus ZoneDirector Controller](#) on page 4
2. [Configuring DPSK on Cloudpath to Integrate with ZoneDirector](#) on page 18

If you will be using a Ruckus SmartZone controller to set up DPSK, follow the procedures in these sections:

1. [Configuring a DPSK WLAN on a Ruckus SmartZone Controller](#) on page 11
2. [Configuring DPSK on Cloudpath to Integrate with SmartZone](#) on page 29

Configuring a DPSK WLAN on a Ruckus ZoneDirector Controller

You can configure a DPSK WLAN on a Ruckus Wireless ZoneDirector controller so that you can then use DPSK as one method of onboarding users to Cloudpath.

Follow these steps to configure a DPSK WLAN on a Ruckus ZoneDirector controller.

NOTE

The procedure shown in this section is based on the user interface of a ZoneDirector controller version 10.0. Different versions of ZoneDirector may have minor differences in terms of which configuration options appear in what sections of a screen.

1. Log in to your Ruckus ZoneDirector controller.
2. Navigate to **Configure > WLANs**.

- Under the WLAN List section, click **Create New**.
The **Create New** section of the screen is displayed.

FIGURE 1 Create New WLAN on ZoneDirector

The screenshot shows the 'Create New' configuration window for a WLAN. It includes the following sections and options:

- General Options:** Name/ESSID* (New Name), ESSID (New Name), and Description.
- WLAN Usages:** Type (Standard Usage, Guest Access, Hotspot Service (WISPr), Hotspot 2.0, Autonomous, Social Media).
- Authentication Options:** Method (Open, 802.1x EAP, MAC Address, 802.1x EAP + MAC Address), Fast BSS Transition (Enable 802.11r FT Roaming).
- Encryption Options:** Method (WPA2, WPA Mixed, WEP-64 (40 bit), WEP-128 (104 bit), None).
- Options:** Web Authentication (Enable captive portal/Web authentication), Authentication Server (Local Database, Create New), Wireless Client Isolation (Isolate wireless client traffic from other clients on the same AP, Isolate wireless client traffic from all hosts on the same VLAN/subnet, No WhiteList, Create New), Zero-IT Activation™ (Enable Zero-IT Activation), Priority (High, Low).

Buttons for 'OK' and 'Cancel' are located at the top right and bottom right of the window.

NOTE

Unless otherwise specified in the remaining steps, you do not have to change default values. The procedure described here is specific to Cloudpath; for information about any fields that are not described here, refer to your controller documentation.

Configuring a DPSK WLAN on a Ruckus ZoneDirector Controller

- Complete the General Options section:

FIGURE 2 General Options Section of Creating a New WLAN

General Options	
Name/ESSID*	<input type="text" value="dpsk test"/> ESSID <input type="text" value="dpsk test"/>
Description	<input type="text"/>

- Name: Enter a meaningful name for the DPSK WLAN you are creating.
 - ESSID: When you click in this field, the name you entered in the Name field also appears in this field.
- In the WLAN Usages section, use the default selection of Standard Usage.

FIGURE 3 WLAN Usage section of Creating a New WLAN

WLAN Usages	
Type	<input checked="" type="radio"/> Standard Usage (For most regular wireless network usages.)
	<input type="radio"/> Guest Access (Guest access policies and access control will be applied.)
	<input type="radio"/> Hotspot Service (WISPr)
	<input type="radio"/> Hotspot 2.0
	<input type="radio"/> Autonomous
	<input type="radio"/> Social Media

- In the Authentication Options section, be sure that the default selection of Open is selected.

FIGURE 4 Authentication Options section of Creating a New WLAN

Authentication Options	
Method	<input checked="" type="radio"/> Open <input type="radio"/> 802.1x EAP <input type="radio"/> MAC Address <input type="radio"/> 802.1x EAP + MAC Address
Fast BSS Transition	<input type="checkbox"/> Enable 802.11r FT Roaming <small>(Recommended to enable 802.11k Neighbor-list Report for assistant.)</small>

- In the Encryption Options section, choose WPA2 for the Method. When you choose WPA2, the Encryption Options section expands:

FIGURE 5 Encryptions Options section after choosing WPA2 as the Method

Encryption Options	
Method	<input checked="" type="radio"/> WPA2 <input type="radio"/> WPA-Mixed <input type="radio"/> WEP-64 (40 bit) <input type="radio"/> WEP-128 (104 bit) <input type="radio"/> None
Algorithm	<input checked="" type="radio"/> AES <input type="radio"/> Auto (TKIP+AES)
Passphrase*	<input type="text"/>
802.11w MFP	<input checked="" type="radio"/> Disabled <input type="radio"/> Optional <input type="radio"/> Required

- In the Algorithm field in the Encryption Options section shown above, be sure that the default value of AES is selected.
- In the Passphrase field in the Encryption Options section shown above, enter a passphrase for the DPSK WLAN that you are creating, and make note of this passphrase. The minimum length is eight characters.

10. The Options section appears as follows in its default state, which is prior to you enabling Zero-IT Activation:

FIGURE 6 Options Section Before Enabling Zero-IT Activation

Options	
Web Authentication	<input type="checkbox"/> Enable captive portal/Web authentication (Users will be redirected to a Web portal for authentication before they can access the WLAN.)
Authentication Server	Local Database <input type="button" value="Create New"/>
Wireless Client Isolation	<input type="checkbox"/> Isolate wireless client traffic from other clients on the same AP. <input type="checkbox"/> Isolate wireless client traffic from all hosts on the same VLAN/subnet. No WhiteList <input type="button" value="Create New"/> (Requires whitelist for gateway and other allowed hosts.)
Zero-IT Activation™	<input type="checkbox"/> Enable Zero-IT Activation (WLAN users are provided with wireless configuration installer after they log in.)
Priority	<input checked="" type="radio"/> High <input type="radio"/> Low

a) Check the Enable Zero-IT Activation box.

The Options screen expands to add Dynamic PSK:

FIGURE 7 Dynamic PSK Added When You Enable Zero-IT Activation

Dynamic PSK™	<input type="checkbox"/> Enable Dynamic PSK with <input type="text" value="62"/> character passphrase <input checked="" type="radio"/> Secure D-PSK (The key will include nearly all printable ASCII characters.) <input type="radio"/> Mobile Friendly D-PSK (The key will include numbers, lower case and upper case letters.)
--------------	--

b) Check the Enable Dynamic PSK box, and enter the number of characters you want to be required for the passphrase. Make sure that the value you select complies with the security policy of your company. The default is 62.

When you select the Enable Dynamic PSK checkbox, the Secure D-PSK option is automatically selected, and the Expire D-PSK and Limit D-PSK options appear.

FIGURE 8 Enabling Dynamic PSK

Dynamic PSK™	<input checked="" type="checkbox"/> Enable Dynamic PSK with <input type="text" value="10"/> character passphrase
	<input checked="" type="radio"/> Secure D-PSK (The key will include nearly all printable ASCII characters.) <input type="radio"/> Mobile Friendly D-PSK (The key will include numbers, lower case and upper case letters.)
Expire D-PSK	Set when the D-PSK should expire <input type="text" value="Unlimited"/>
	Validity Period: <input checked="" type="radio"/> Effective from first use <input type="radio"/> Effective from creation time
Limit D-PSK	<input type="checkbox"/> Limit D-PSK generation per user to <input type="text" value="1"/> devices (Currently allow 1~4 devices per user.)
Priority	<input checked="" type="radio"/> High <input type="radio"/> Low

- c) You can keep the Secure D-PSK option selected, or you can choose Mobile Friendly D-PSK instead, based on the security policy of your company.
- d) For the Expire D-PSK and Limit D-PSK options, you can again keep the default values or change them, based on the security policy of your company.

11. In the Advanced Options section, there are many fields (not shown here), but you can also use all the default values.

12. Click **OK**.

Your newly created DPSK WLAN should now appear in the WLAN List at the top of the WLANs screen, "dpsk test" in this example:

FIGURE 9 Newly Created WLAN Appears in WLAN List

WLAN List						
This table lists your current WLANs and provides basic details about them. Click Create New to add another WLAN, or click Edit to make changes to an existing WLAN.						
<input type="checkbox"/>	Name	ESSID	Description	Authentication	Encryption	Actions
<input type="checkbox"/>	dpsk test	dpsk test		Open	WPA2	Edit Clone
<input type="checkbox"/>	HQ1-Jeff	HQ1-Jeff	HQ1-Jeff	802.1x EAP	WPA2	Edit Clone
<input type="checkbox"/>	Jeff PSK	Jeff PSK		Open	WPA2	Edit Clone

To review the completed configuration or to make any configuration changes, click the **Edit** button.

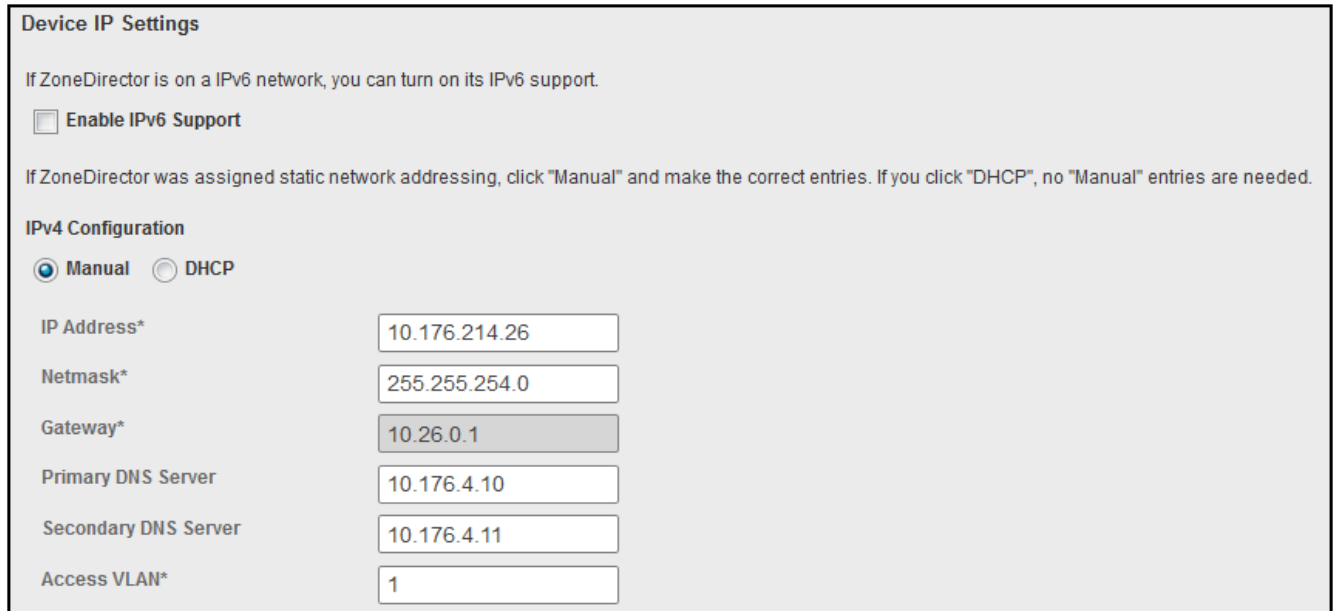
Before you configure your Cloudpath system to use the DPSK WLAN you just created, you need to obtain some information about the ZoneDirector controller that you will need when you perform configuration on your Cloudpath system. Refer to the following section.

Obtaining Information about the ZoneDirector Controller

You will need the following information when you perform the necessary configuration in Cloudpath.

- Obtain the local device IP address of your ZoneDirector controller. Navigate to **Configure > System**. In the Device IP Settings section of the screen, shown below, locate the IP address, which is 10.176.214.26 in the screen below. Be sure to write down this IP address because you will need it for the configuration in Cloudpath.

FIGURE 10 Obtaining the Local Device IP Address of the ZoneDirector



The screenshot shows the 'Device IP Settings' configuration page. At the top, there is a section for IPv6 support with an unchecked checkbox labeled 'Enable IPv6 Support'. Below this is a note: 'If ZoneDirector was assigned static network addressing, click "Manual" and make the correct entries. If you click "DHCP", no "Manual" entries are needed.' Under the 'IPv4 Configuration' section, the 'Manual' radio button is selected. Below the radio buttons are several input fields: 'IP Address*' with the value '10.176.214.26', 'Netmask*' with '255.255.254.0', 'Gateway*' with '10.26.0.1', 'Primary DNS Server' with '10.176.4.10', 'Secondary DNS Server' with '10.176.4.11', and 'Access VLAN*' with '1'.

- Enable Northbound Portal Interface Support. Navigate to **Configure > System**. Scroll down until you locate the "Network Management" section of the screen, then click on it to expand it.

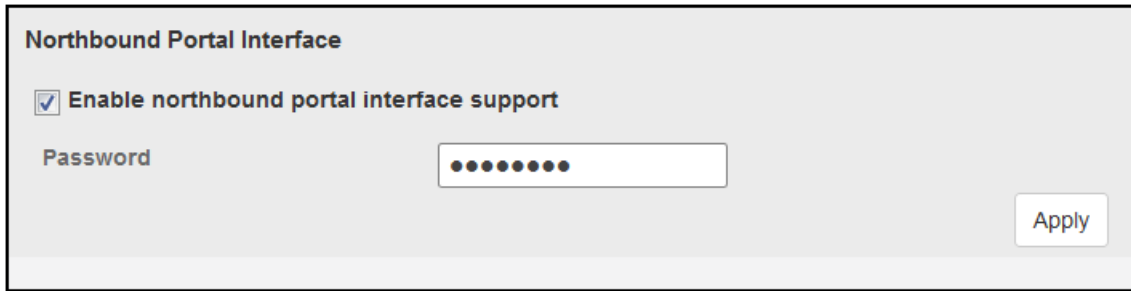
Then, scroll up until you locate the Northbound Portal Interface section, shown in the illustration below.

Check the box to enable Northbound Portal Interface Support, then create a Password. Click **Apply**.

NOTE

Be sure to write down the password you create for the Northbound Interface because you will need it when you perform the corresponding configuration on your Cloudpath system.

FIGURE 11 Enabling Northbound Portal Interface Support on ZoneDirector



Now, proceed to [Configuring DPSK on Cloudpath to Integrate with ZoneDirector](#) on page 18.

Configuring a DPSK WLAN on a Ruckus SmartZone Controller

You can configure a DPSK WLAN on a Ruckus Wireless SmartZone controller so that you can then use DPSK as one method of onboarding users to Cloudpath.

Follow these steps to configure a DPSK WLAN on a Ruckus SmartZone controller.

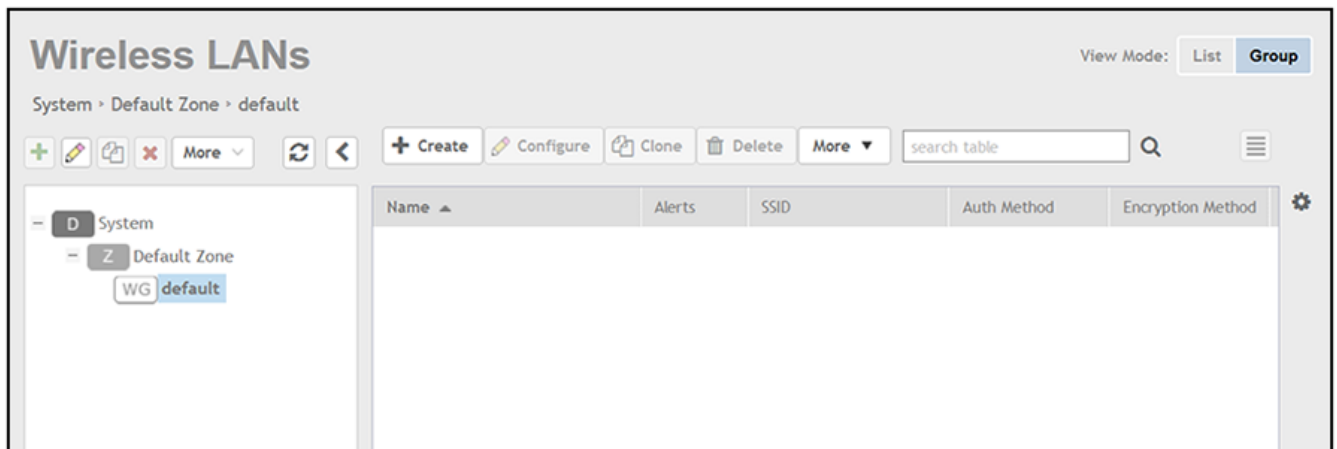
NOTE

The procedure shown in this section is based on the user interface of a SmartZone controller version 3.5.1. Different versions of SmartZone may have minor differences in terms of which configuration options appear in what sections of a screen.

1. Log in to your Ruckus SmartZone controller.
2. Click the **Wireless LANs** tab.

The following screen appears:

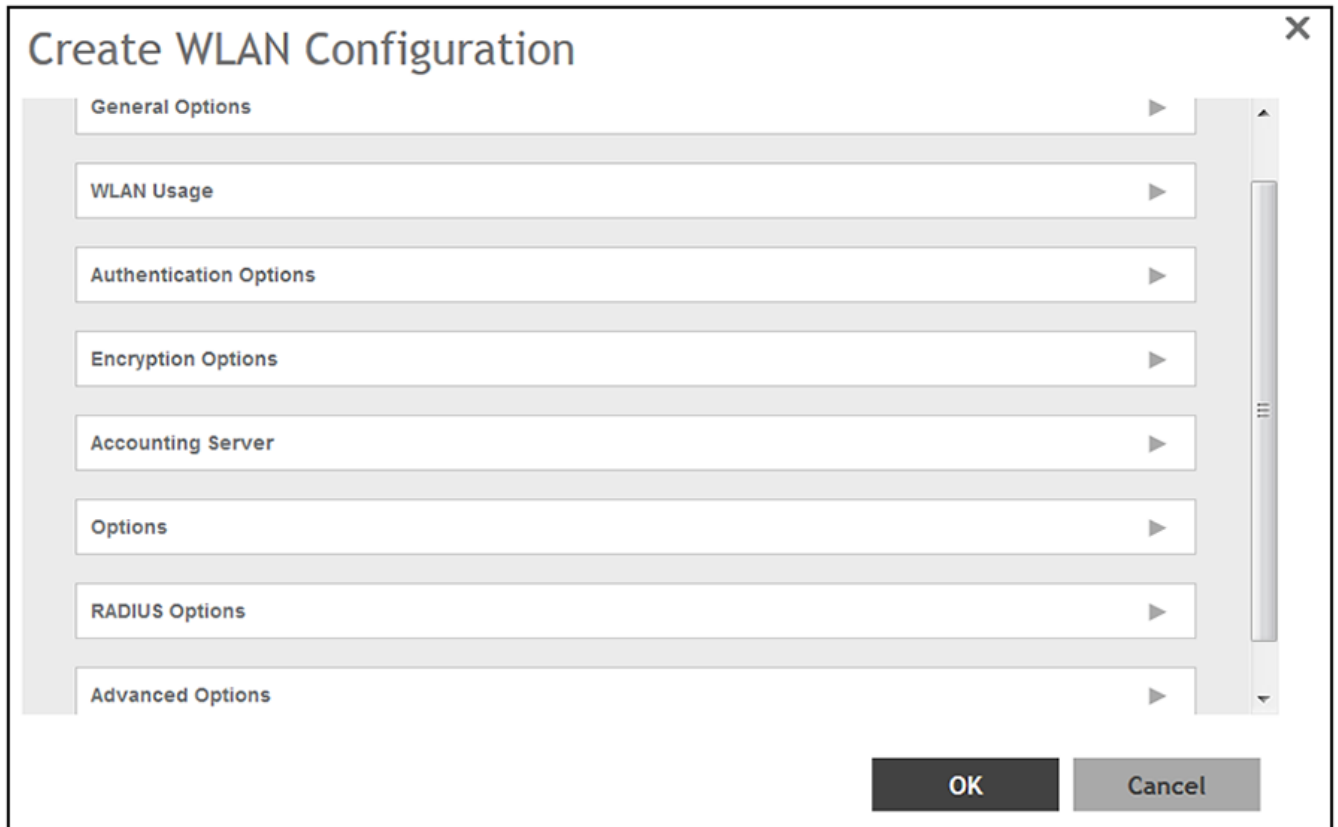
FIGURE 12 Wireless LANs Screen



3. On the Wireless LANs screen, click the **+ Create** button.

The Create WLAN Configuration appears. This screen is shown below (with each area of the screen in a collapsed view):

FIGURE 13 Create WLAN Configuration Screen on SmartZone



NOTE

Unless otherwise specified in the remaining steps, you do not have to change default values. The procedure described here is specific to Cloudpath; for information about any fields that are not described here, refer to your controller documentation.

- Complete the General Options section of the screen:

FIGURE 14 General Options Section of the Create WLAN Configuration Screen

The screenshot shows the 'General Options' section of the configuration screen. It contains the following fields and controls:

- Name:** A text input field containing 'DPSK vSZ 351'.
- SSID:** A text input field containing 'DPSK vSZ 351'.
- Description:** An empty text input field.
- Zone:** A dropdown menu with 'Z Default Zone' selected.
- WLAN Group:** A dropdown menu with 'default' selected.
- Create:** A button with a plus sign and the text '+ Create'.

- Name: Enter a meaningful name for the DPSK WLAN you are creating.
 - SSID: When you click in this field, the name you entered above also appears in this field.
 - Zone: From the drop-down list, select the zone in which the DPSK WLAN will reside. This can be the default zone.
- In the WLAN Usage section of the screen, use the default selection of Standard usage.

FIGURE 15 WLAN Usage section of the Create WLAN Configuration Screen

The screenshot shows the 'WLAN Usage' section of the configuration screen. It contains the following options:

- Access Network:** A checkbox labeled 'Tunnel WLAN traffic through Ruckus GRE' which is currently unchecked.
- Authentication Type:** A group of radio buttons with 'Standard usage (For most regular wireless networks)' selected.
- Other Authentication Methods:** Radio buttons for 'Hotspot (WISPr)', 'Guest Access', 'Web Authentication', 'Hotspot 2.0 Access', 'Hotspot 2.0 Secure Onboarding (OSEN)', and 'WeChat', all of which are currently unselected.

- In the Authentication Options section of the screen, be sure that the default selection of Open is selected.

FIGURE 16 Authentication Options section of the Create WLAN Configuration Screen

The screenshot shows the 'Authentication Options' section of the configuration screen. It contains the following options:

- Method:** A group of radio buttons with 'Open' selected.
- Other Methods:** Radio buttons for '802.1x EAP' and 'MAC Address', both of which are currently unselected.

7. In the Encryptions Options section of the screen, you must select "WPA2," which expands the section as follows:

FIGURE 17 Encryption Options Section After Selecting WPA2 Method

Encryption Options

* Method: WPA2 WPA-Mixed WEP-64 (40 bits) WEP-128 (104 bits) None

* Algorithm: AES AUTO

Passphrase: Show

802.11r Fast Roaming: Enable 802.11r Fast BSS Transition

* 802.11w MFP: Disabled Capable Required

* Dynamic PSK: Disable Internal External

NOTE

The Dynamic PSK field may appear in a different section of the screen on other versions of SmartZone.

- a) The Algorithm field must be AES, which is the default.
- b) In the Passphrase field, enter a passphrase for the DPSK WLAN that you are creating, and make note of this passphrase. The minimum length is eight characters.
- c) In the Dynamic PSK field, select **Internal**. Once you make this selection, DPSK is enabled, and the screen expands again, allowing you to complete the configuration of this section of the screen:

FIGURE 18 Encryptions Options Expanded After Enabling DPSK

Encryption Options

- * Method: WPA2 WPA-Mixed WEP-64 (40 bits) WEP-128 (104 bits) None
- * Algorithm: AES AUTO
- Passphrase: Show
- 802.11r Fast Roaming: Enable 802.11r Fast BSS Transition
- * 802.11w MFP: Disabled Capable Required
- * Dynamic PSK: Disable Internal External
- * DPSK Length: characters passphrase
- * DPSK Type: Secure DPSK (The key will use a mixture of nearly all printable ASCII characters)
 Keyboard-Friendly DPSK (The key will use letters and number only and avoid unclear characters)
 Numbers only DPSK (The key will use numbers only)
- * DPSK Expiration:

- In the DPSK Length field, enter a value that complies with the security policy of your company. The default is 62.
 - For DPSK Type, choose the option that complies with the security policy of your company. The default is Secure DPSK.
 - For DPSK Expiration, use the drop-down menu to select a value that complies with the security policy of your company. The default value is Unlimited.
8. In the Accounting Server section, you can use the drop-down list to select an already-configured AAA accounting server, or you can use the **+ Create** button to create one.

FIGURE 19 Accounting Server Section of the Create WLAN Configuration Screen

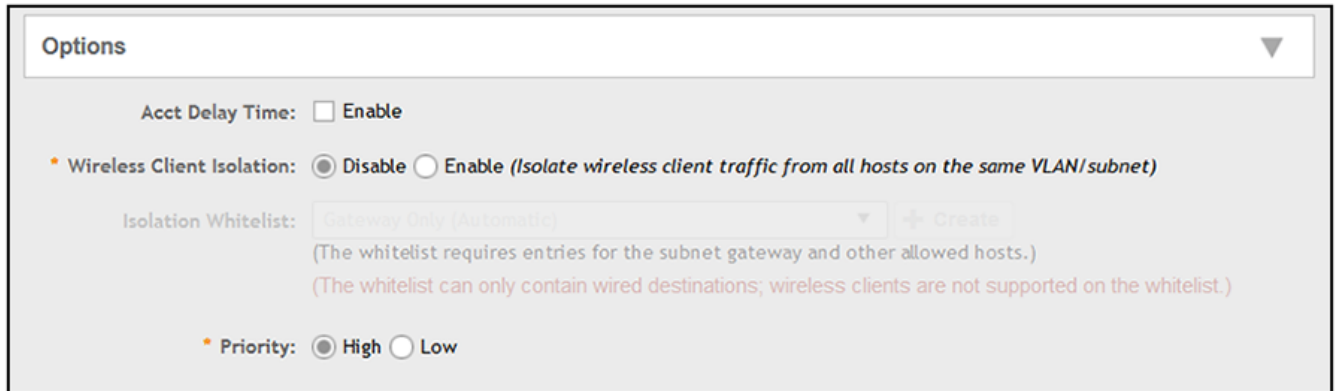
Accounting Server

Accounting Server: Use the Controller as Proxy Send interim update every Minutes (0-144)

Configuring a DPSK WLAN on a Ruckus SmartZone Controller

9. In the Options section, you can use the default values, shown below:

FIGURE 20 Options Section of the Create WLAN Configuration Screen

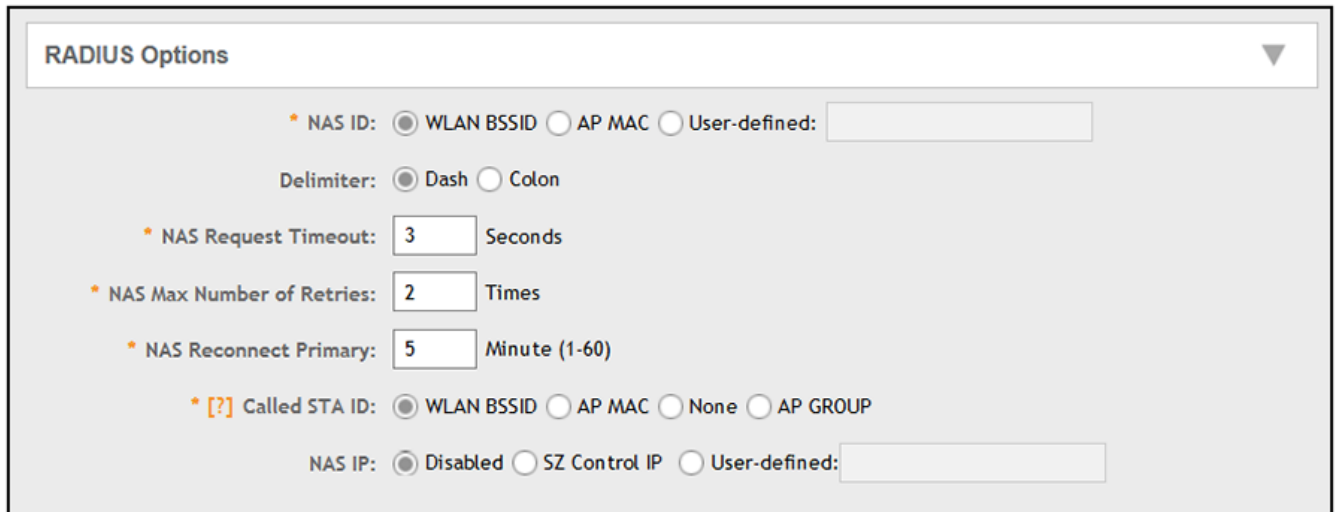


The screenshot shows the 'Options' section of the configuration interface. It includes the following settings:

- Acct Delay Time:** Enable
- Wireless Client Isolation:** Disable Enable (*Isolate wireless client traffic from all hosts on the same VLAN/subnet*)
- Isolation Whitelist:** Gateway Only (Automatic) [dropdown] + Create
(The whitelist requires entries for the subnet gateway and other allowed hosts.)
(The whitelist can only contain wired destinations; wireless clients are not supported on the whitelist.)
- Priority:** High Low

10. In the RADIUS Options section, you can use the default values, shown below:

FIGURE 21 RADIUS Options section



The screenshot shows the 'RADIUS Options' section of the configuration interface. It includes the following settings:

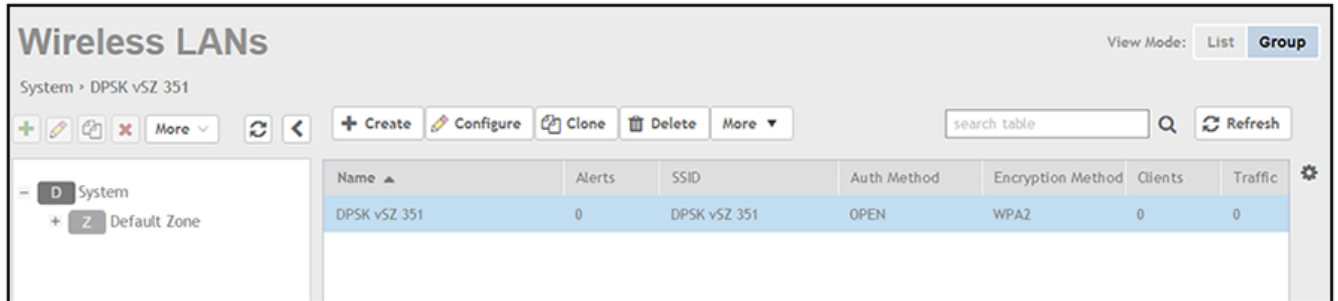
- NAS ID:** WLAN BSSID AP MAC User-defined: [text box]
- Delimiter:** Dash Colon
- NAS Request Timeout:** [3] Seconds
- NAS Max Number of Retries:** [2] Times
- NAS Reconnect Primary:** [5] Minute (1-60)
- Called STA ID:** WLAN BSSID AP MAC None AP GROUP
- NAS IP:** Disabled SZ Control IP User-defined: [text box]

11. In the Advanced Options section, there are many fields (not shown here), but you can also use all the default values.

- Click **OK** to create the Wireless LAN with DPSK enabled.

Your Wireless LAN is created. To review the completed configuration or to make any configuration changes, click the **Configure** tab when the Wireless LAN is highlighted.

FIGURE 22 Click the Configure Tab to View or Edit the Wireless LAN Configuration



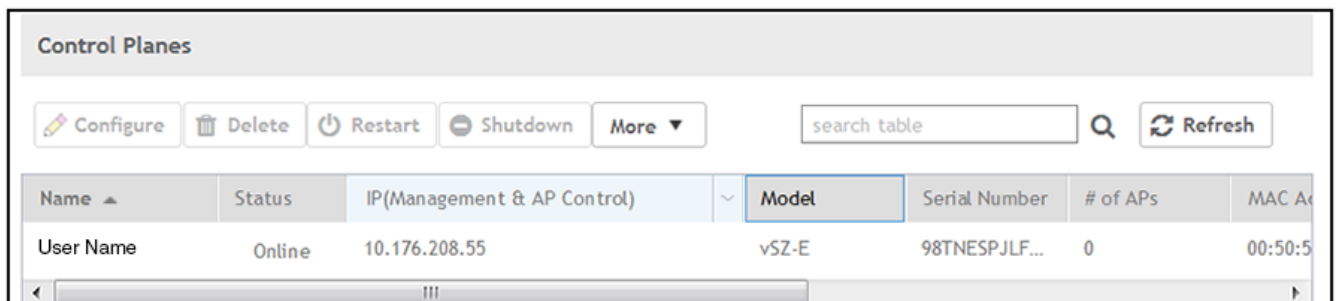
Before you configure your Cloudpath system to use the DPSK WLAN you just created, you need to obtain some information about the SmartZone controller that you will need when you perform configuration on your Cloudpath system. Refer to the following section.

Obtaining Information about the SmartZone Controller

You will need the following information when you perform the necessary configuration in Cloudpath.

- Obtain the Management IP address. Navigate to **System > Cluster**. In the Control Planes section of the screen, shown below, locate the IP address under "IP (Management and AP Control)." Be sure to write down this IP address because you will need it during configuration on your Cloudpath system.

FIGURE 23 Obtaining the Management IP Address on SmartZone



- Enable Northbound Portal Interface Support. Navigate to **Systems > General Settings**.

In the Northbound Interface tab, shown below, check the box to enable Northbound Portal Interface Support, then be sure to enter the same User Name and Password that you used for the administrator credentials of the SmartZone Controller. Click **OK**.

NOTE

You will need the these credentials when you perform corresponding configuration on your Cloudpath system.

FIGURE 24 Enabling Northbound Portal Interface Support on SmartZone

Set the northbound portal interface password. 3rd party applications use the northbound portal interface to authenticate users and to retrieve user information during the UE association.

Enable Northbound Portal Interface Support

* User Name:

* Password:

Now, proceed to [Configuring DPSK on Cloudpath to Integrate with SmartZone](#) on page 29.

Configuring DPSK on Cloudpath to Integrate with ZoneDirector

Once you configure a DPSK WLAN on your controller, you need to add a corresponding DPSK configuration to a workflow on your Cloudpath system.

This procedure in this section includes steps for:

- Adding a DPSK Plugin to the Workflow

NOTE

The concept of workflows and how to create one is described in detail in the *Cloudpath Enrollment System Administration Guide* and the *Cloudpath Enrollment System Quick Start Guide*. Therefore, the purpose of the procedure in this section is to demonstrate how to add a DPSK branch (with a DPSK plugin) to an existing workflow. The same steps included below could also be used to create a new workflow with a DPSK plugin.

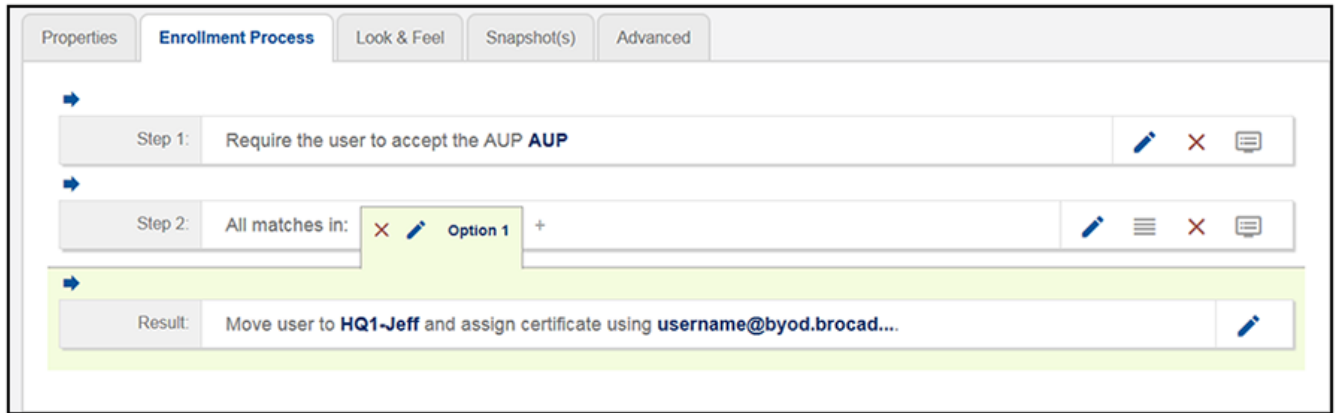
- [Adding a Device Configuration to the Workflow](#) on page 25
- [Testing the DPSK User Experience](#) on page 27
- [Troubleshooting Tips](#) on page 28

Adding a DPSK Plugin to the Workflow

1. Log in to the Cloudpath user interface.
2. Go to **Configuration > Workflows**.

3. Click on a workflow to which you want to add a DPSK branch. An example of a very simple workflow before adding a DPSK branch is shown below:

FIGURE 25 Workflow Before Adding DPSK Branch



Configuring DPSK on Cloudpath to Integrate with ZoneDirector

Adding a DPSK Plugin to the Workflow

4. Click the + button to create a new branch in your workflow.

The Webpage Display Information screen is displayed, as shown below, and you add the necessary information.

FIGURE 26 Webpage Display Information Screen is Displayed When You Add a Branch to a Workflow

Webpage Display Information

Sample User Display:

Short Name: DPSK

Display Title: DPSK

Display Text:

Enabled:

Icon File: Default: Using default file. [↓](#)
Upload: No file selected.

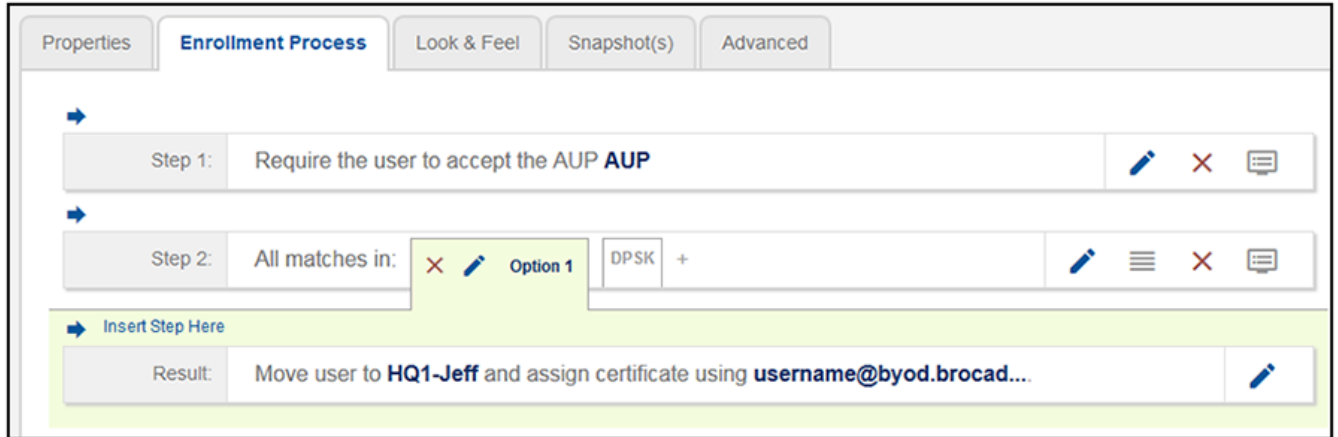
[> Filters & Restrictions](#)

Enter a Short Name and Display Title, and, optionally, Display Text, then click **Save**.

5. You are presented with a screen called **Configuration > Workflows > Modify Step** that shows the branch options. Click **Done** if the display is correct.

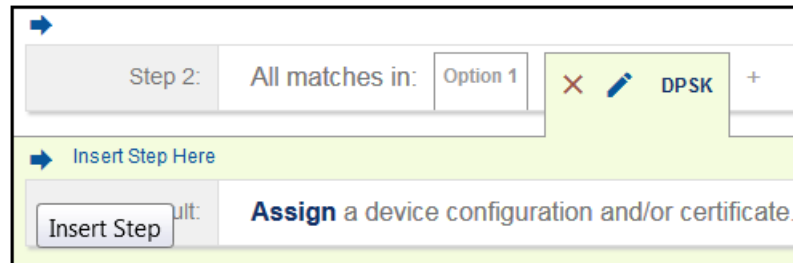
6. Check that your newly named branch ("DPSK" in this example) now appears in your workflow, as shown below:

FIGURE 27 New Branch Name ("DPSK") Appears in Workflow



7. Highlight the newly added "DPSK" branch in your workflow, and insert a step below it, as shown in the following figure:

FIGURE 28 Adding a Step Below the New DPSK Branch of the Workflow

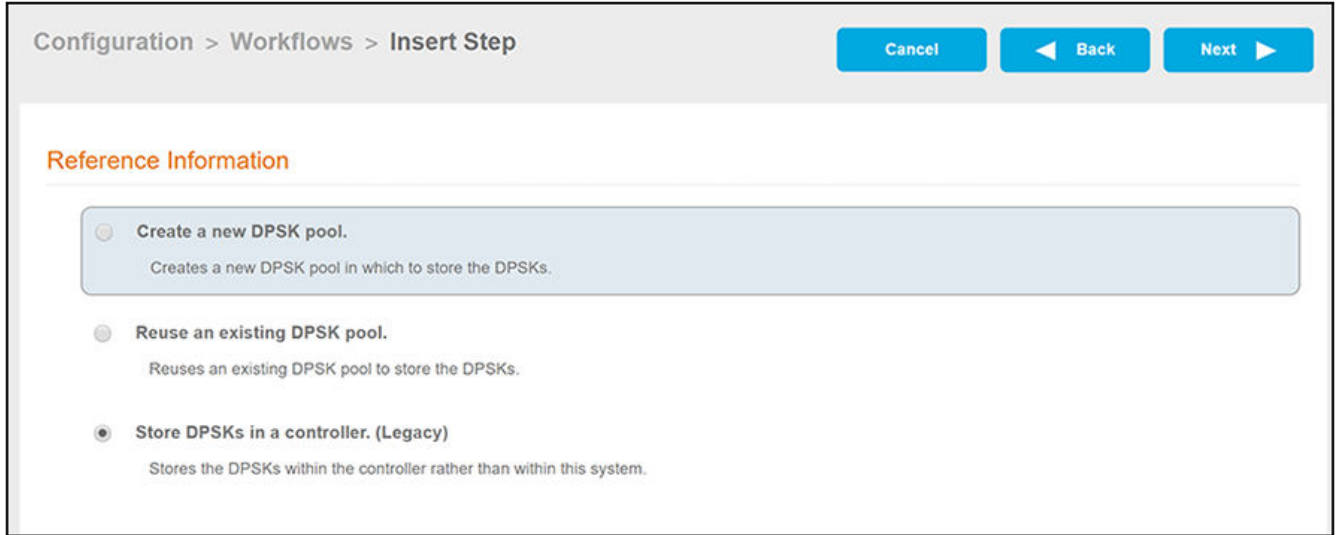


8. You are presented with a list of plugins. Scroll down toward the bottom of the list and click the "Generate a Ruckus DPSK" button.

Configuring DPSK on Cloudpath to Integrate with ZoneDirector
Adding a DPSK Plugin to the Workflow

9. On the next screen, because this manual is for how to use legacy DPSK, choose that option (shown below), then click **Next**.

FIGURE 29 Store DPSKs in a controller (Legacy) Option



10. On the ensuing "What DPSK configuration do you want to use?" screen, the default is to create a new configuration. For the purposes of this example, the default setting is used. Click **Next** at the top of the screen.

11. The Create Controller-Based DPSK screen is displayed. The required fields are described after the following illustration:

FIGURE 30 Create Controller-Based DPSK Screen With ZoneDirector As Controller

Create Controller-Based DPSK

Display Name: Test JR DPSK *

Description:

DPSK Information

Controller Type: ZoneDirector ▼

WLAN IP/DNS: 10.176.214.26 *

API Password:

Key Length: 8

SSID: dpsk test *

VLAN ID: 10

Notification

Send Email?

Email Subject: PSK Assignment

Email Template: The following PSK has been assigned to you:

 \${DPSK}

- **Display Name:** Enter a descriptive name for your DPSK configuration. This can be any name you wish.
- **Controller Type:** Select ZoneDirector from the drop-down list.
- **WLAN IP/DNS:** This is the local device IP address of the ZoneDirector controller where you configured the DPSK WLAN you are using. For information on how to obtain this IP address, refer to [Figure 10](#) on page 10.
- **API Password:** This is the Northbound Portal Interface password that you set on ZoneDirector. For information about where you created that password, refer to [Figure 11](#) on page 11.
- **Key Length:** Enter the same value that you configured in the "Enable Dynamic PSK With ..." field in [Figure 8](#) on page 9.
- **SSID:** This is the SSID that you configured for the DPSK WLAN when you created it on ZoneDirector. For more information about where you created this SSID, refer to [Figure 2](#) on page 6.

Configuring DPSK on Cloudpath to Integrate with ZoneDirector

Adding a DPSK Plugin to the Workflow

- VLAN ID: Enter the ID of the VLAN in which users will be placed upon successfully migrating to the DPSK SSID.
- Notification area: You can enable the "Send Email" field to send the pre-shared key (PSK) to the user. You can also edit the Email Subject and Email Template fields as desired.

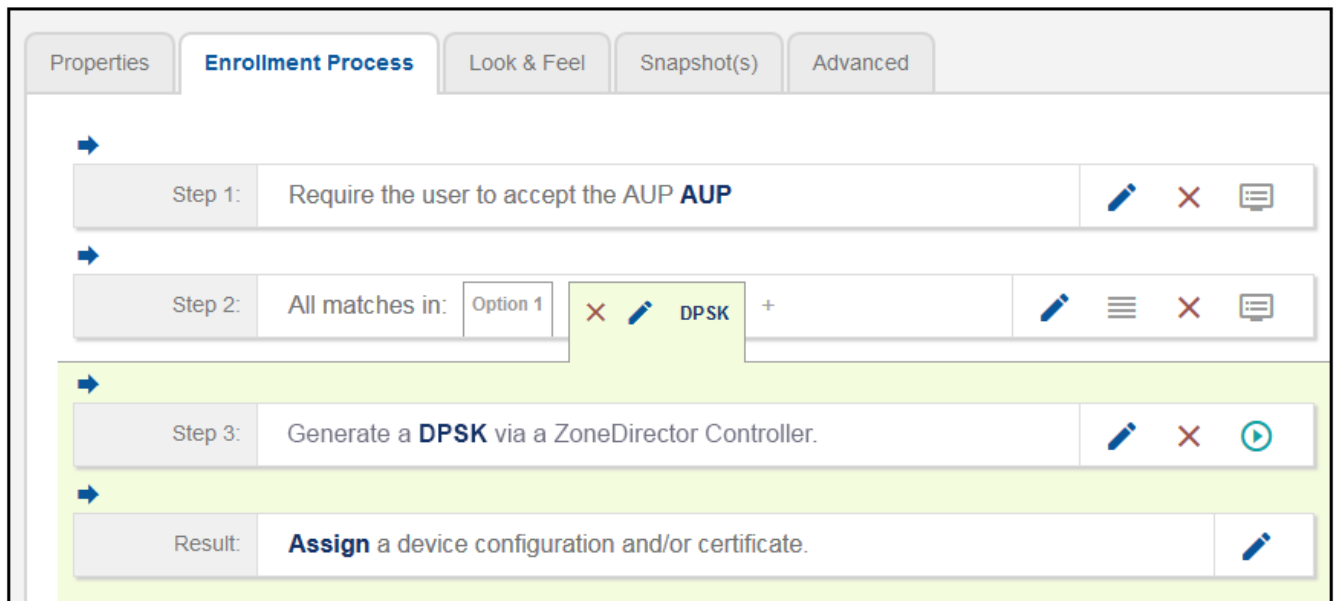
When you have completed filling out the fields, click **Save** at the top of the screen.

NOTE

The configuration will not save unless the connectivity between Cloudpath and the controller is correctly set.

You are returned to the workflow, and the new "Generate a DPSK via a ZoneDirector Controller" step has been added, as shown in the following screen:

FIGURE 31 Workflow After DPSK Step for ZoneDirector has been Added

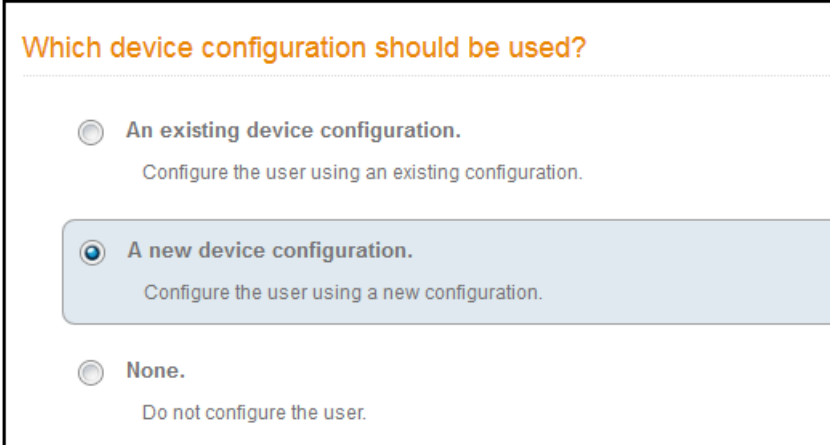


Adding a Device Configuration to the Workflow

1. In the workflow, click the pencil icon to the right of the Result called "Assign a device configuration and/or certificate."

The following screen appears:

FIGURE 32 Device Configuration Selection Screen



Which device configuration should be used?

An existing device configuration.
Configure the user using an existing configuration.

A new device configuration.
Configure the user using a new configuration.

None.
Do not configure the user.

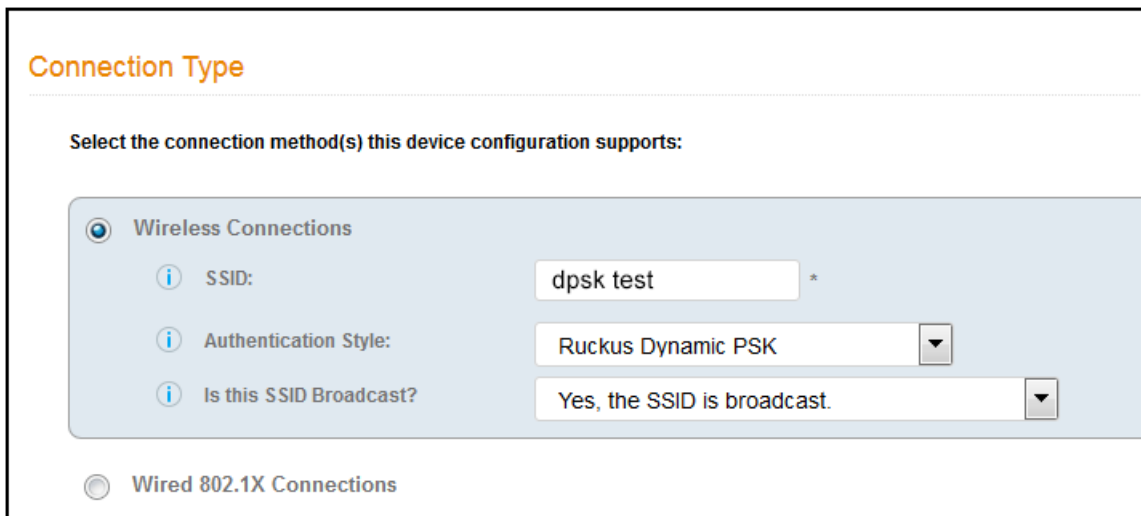
Configuring DPSK on Cloudpath to Integrate with ZoneDirector

Adding a Device Configuration to the Workflow

2. Select "A new device configuration," then click **Next**.

The Connection Type screen is displayed. Required fields are described below the screen.

FIGURE 33 Connection Type Screen



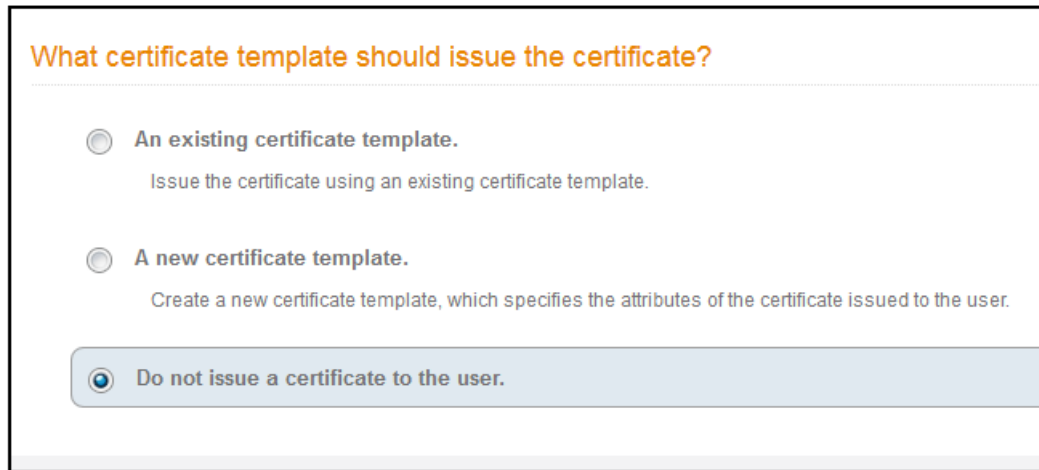
The screenshot shows a web-based configuration screen titled "Connection Type". Below the title is a section header: "Select the connection method(s) this device configuration supports:". There are two main options: "Wireless Connections" (selected with a radio button) and "Wired 802.1X Connections" (unselected). Under "Wireless Connections", there are three fields: "SSID:" with a text input containing "dpsk test" and an asterisk; "Authentication Style:" with a dropdown menu showing "Ruckus Dynamic PSK"; and "Is this SSID Broadcast?" with a dropdown menu showing "Yes, the SSID is broadcast.".

- The Wireless Connections button must be selected.
- SSID: This name must match the DPSK WLAN exactly. It is the name configured in [Figure 2](#) on page 6
- Authentication Style: Select Ruckus Dynamic PSK from the drop-down list.
- Is this SSID Broadcast?: Leave the default value of Yes, the SSID is broadcast.

Click **Next**.

- For the screens you are presented with next, you can keep all the default values and continue to click **Next** to progress through the screens, until you get to the following screen:

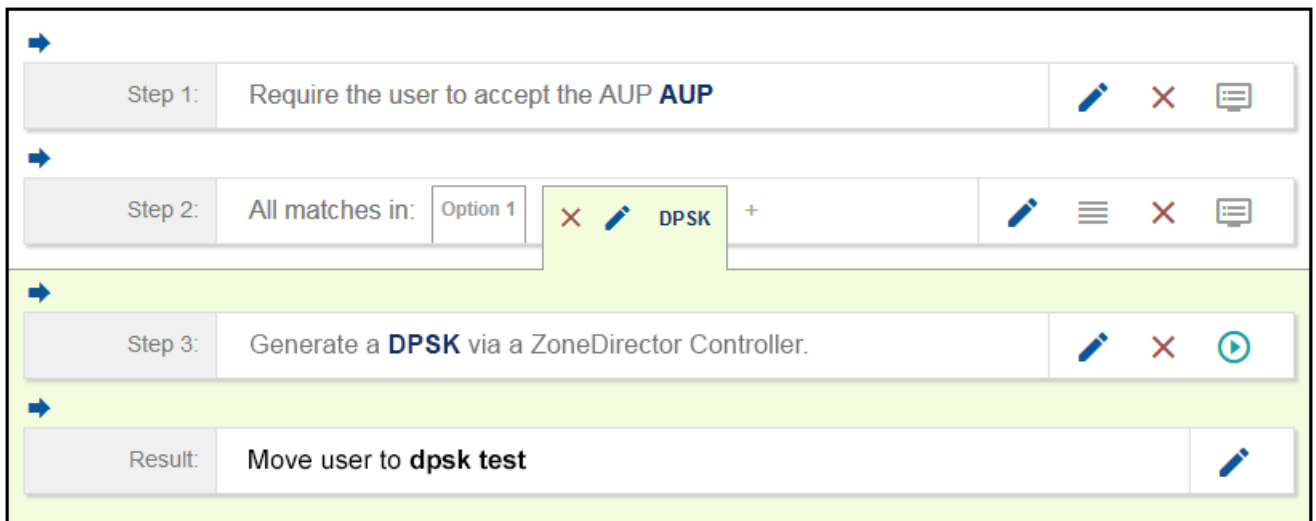
FIGURE 34 Certificate Template Screen



It is recommended to choose the "Do not issue a certificate to the user" option for DPSK configuration. After selecting this option, click **Next**.

- You are returned to the workflow. Make sure the Result step has been added successfully, as shown below:

FIGURE 35 Workflow After Completing the Device Configuration "Result"



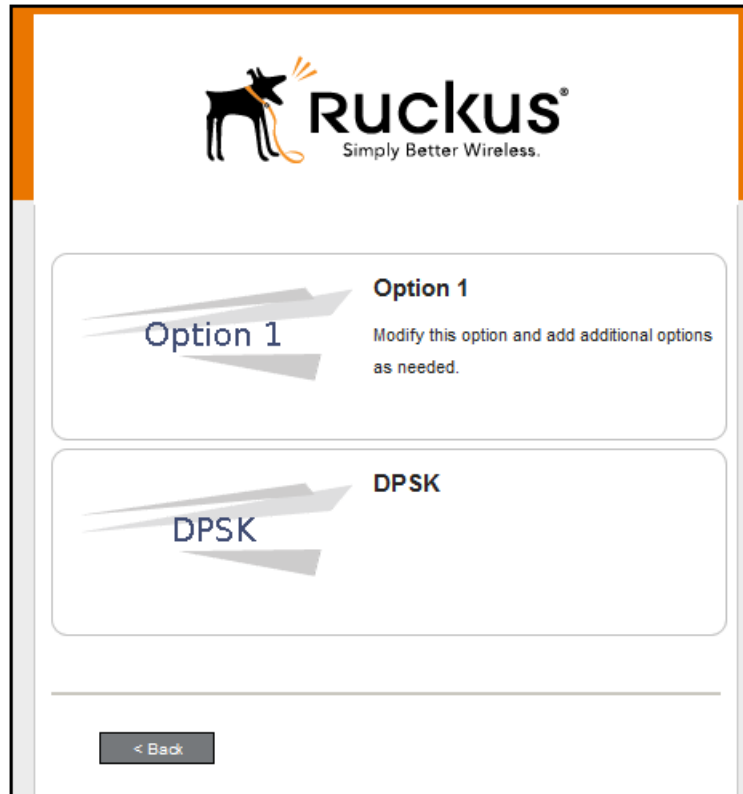
Publish the workflow by clicking the **Publish** icon to the left of the workflow name at the top of the **Configuration > Workflows** screen.

Testing the DPSK User Experience

- Test the Enrollment process by clicking on the enrollment portal URL for the workflow at the top of the **Configuration > Workflows** screen.

2. When you presented with the with the Welcome screen, click **Start**.
3. When you are presented with various branches of your workflow, click the "DPSK" branch:

FIGURE 36 Testing the Workflow - DPSK Branch



4. Proceed with the enrollment. If enrollment is successful, you will receive some status screens indicating the following status as the process is in progress:
 - "Configuring this device"
 - "Attempting to connect to the network"
 - "Congratulations! You are now connected to the network."

Troubleshooting Tips

If an error occurs during the workflow-publishing or enrollment process, check the following:

- Make sure that your DPSK WLAN configuration settings on Cloudpath match what you configured on the controller.
- Make sure that your Northbound Interface administrative username and password are identical on Cloudpath and the controller.
- Make sure that you have selected **Ruckus Dynamic PSK** as the Authentication Style in the Cloudpath Connection Type screen.
- Make sure that you have added the correct Cloudpath DPSK SSID to the final result step in your workflow.

Configuring DPSK on Cloudpath to Integrate with SmartZone

Once you configure a DPSK Wireless LAN on your controller, you need to add a corresponding DPSK configuration to a workflow on your Cloudpath system.

This procedure in this section includes steps for:

- Adding the DPSK plugin to a workflow

NOTE

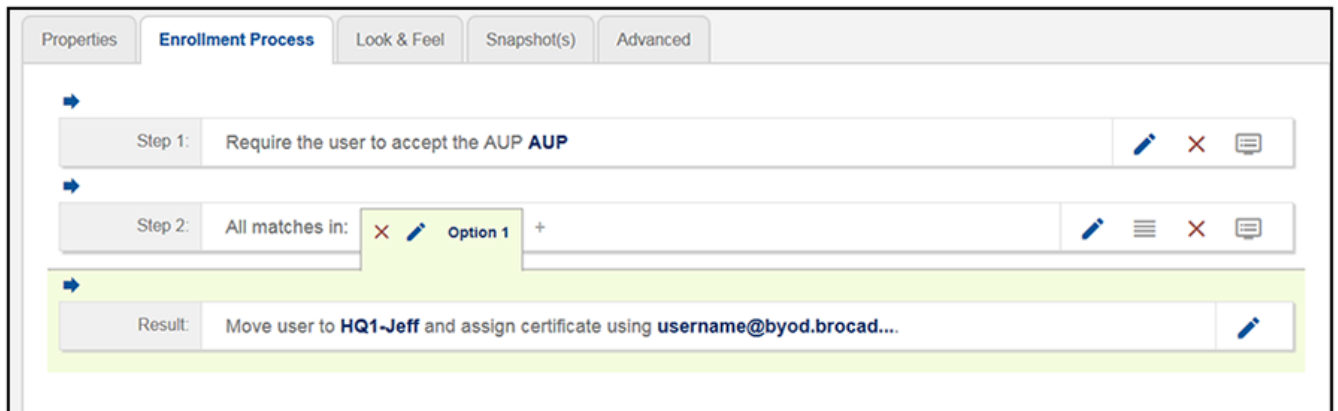
The concept of workflows and how to create one is described in detail in the *Cloudpath Enrollment System Administration Guide* and the *Cloudpath Enrollment System Quick Start Guide*. Therefore, the purpose of the procedure in this section is to demonstrate how to add a DPSK branch (with a DPSK plugin) to an existing workflow. The same steps included below could also be used to create a new workflow with a DPSK plugin.

- [Adding a Device Configuration to the Workflow](#) on page 35
- [Testing the DPSK User Experience](#) on page 37
- [Troubleshooting Tips](#) on page 38

Adding a DPSK Plugin to the Workflow

1. Log in to the Cloudpath user interface.
2. Go to **Configuration > Workflows**.
3. Click on a workflow to which you want to add a DPSK branch. An example of a very simple workflow before adding a DPSK branch is shown below:

FIGURE 37 Workflow Before Adding DPSK Branch



Configuring DPSK on Cloudpath to Integrate with SmartZone

Adding a DPSK Plugin to the Workflow

4. Click the + button to create a new branch in your workflow.

The Webpage Display Information screen is displayed, as shown below, and you add the necessary information.

FIGURE 38 Webpage Display Information Screen is Displayed When You Add a Branch to a Workflow

Webpage Display Information

Sample User Display:

Short Name: DPSK

Display Title: DPSK

Display Text:

Enabled:

Icon File: Default: Using default file. [↓](#)
Upload: No file selected.

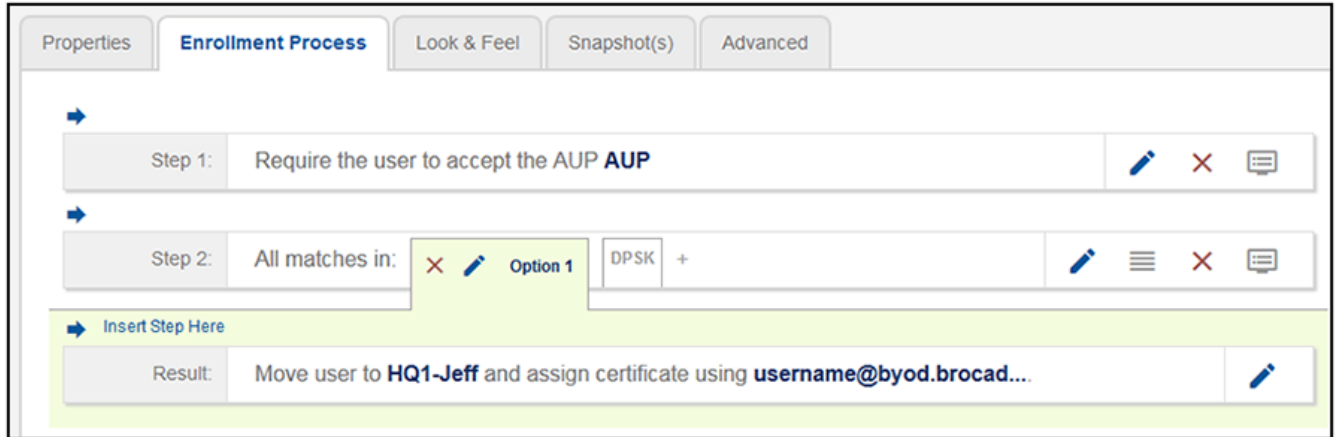
[> Filters & Restrictions](#)

Enter a Short Name and Display Title, and, optionally, Display Text, then click **Save**.

5. You are presented with a screen called **Configuration > Workflows > Modify Step** that shows the branch options. Click **Done** if the display is correct.

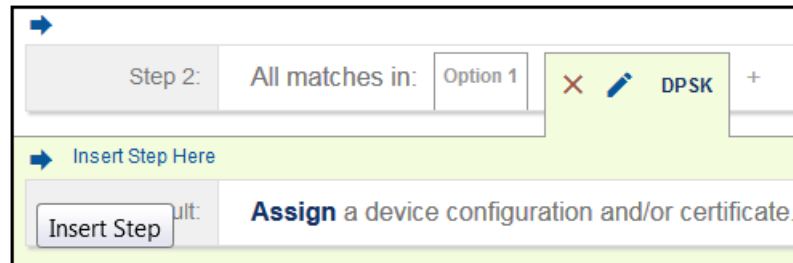
6. Check that your newly named branch ("DPSK" in this example) now appears in your workflow, as shown below:

FIGURE 39 New Branch Name ("DPSK") Appears in Workflow



7. Highlight the newly added "DPSK" branch in your workflow, and insert a step below it, as shown in the following figure:

FIGURE 40 Adding a Step Below the New DPSK Branch of the Workflow

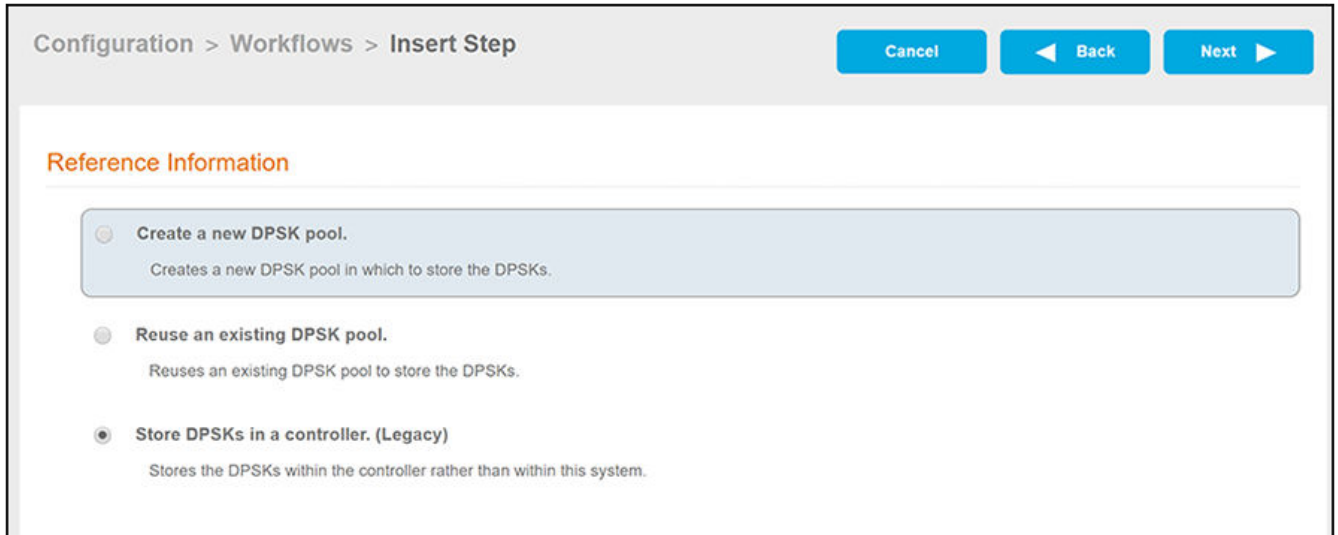


8. You are presented with a list of plugins. Scroll down toward the bottom of the list and click the "Generate a Ruckus DPSK" button.

Configuring DPSK on Cloudpath to Integrate with SmartZone
Adding a DPSK Plugin to the Workflow

9. On the next screen, because this manual is for how to use legacy DPSK, choose that option (shown below), then click **Next**.

FIGURE 41 Store DPSKs in a controller (Legacy) Option



10. On the ensuing "What DPSK configuration do you want to use?" screen, the default is to create a new configuration. For the purposes of this example, the default setting is used. Click **Next** at the top of the screen.

11. The Create Controller-Based DPSK screen is displayed. The required fields are described after the following illustration:

FIGURE 42 Create Controller-Based DPSK Screen With SmartZone As Controller

Create Controller-Based DPSK

Display Name: JR DPSK

Description:

DPSK Information

Controller Type: SmartZone

WLAN IP/DNS: 10.176.208.55

SmartZone Version: 3.5.1 (API v5.1)

Username: testuser

Password:

Zone Name: Default Zone

SSID: DPSK VSZ 351

Role: [ex. Employee]

Is Group DPSK?

VLAN ID: 10

Notification

Send Email?

Email Subject: PSK Assignment

Email Template: The following PSK has been assigned to you:

 \${DPSK}

- Display Name: Enter a descriptive name for your DPSK configuration. This can be any name you wish.
- Controller Type: Select SmartZone from the drop-down list.
- WLAN IP/DNS: This is the IP address of the SmartZone controller where you configured the DPSK Wireless LAN you are using. For information on how to obtain this IP address, refer to [Figure 23](#) on page 17.
- SmartZone Version: Select the applicable version of SmartZone from the drop-down list.
- Username: This is the Northbound Portal Interface username that you set on SmartZone. For information about where you created that username, refer to [Figure 24](#) on page 18.
- Password: This is the Northbound Portal Interface password that you set on SmartZone. For information about where you created that password, refer to [Figure 24](#) on page 18.

Configuring DPSK on Cloudpath to Integrate with SmartZone

Adding a DPSK Plugin to the Workflow

- **Zone Name:** This is the name of the zone that the SmartZone controller belongs to. If the controller belongs to the default zone, leave this field blank.
- **SSID:** This is the SSID that you configured for the DPSK Wireless LAN when you created it on SmartZone. For more information about where you created this SSID, refer to [Figure 14](#) on page 13.
- **VLAN ID:** Enter the ID of the VLAN in which users will be placed upon successfully migrating to the DPSK SSID.
- **Notification area:** You can enable the "Send Email" field to send the pre-shared key (PSK) to the user. You can also edit the Email Subject and Email Template fields as desired.

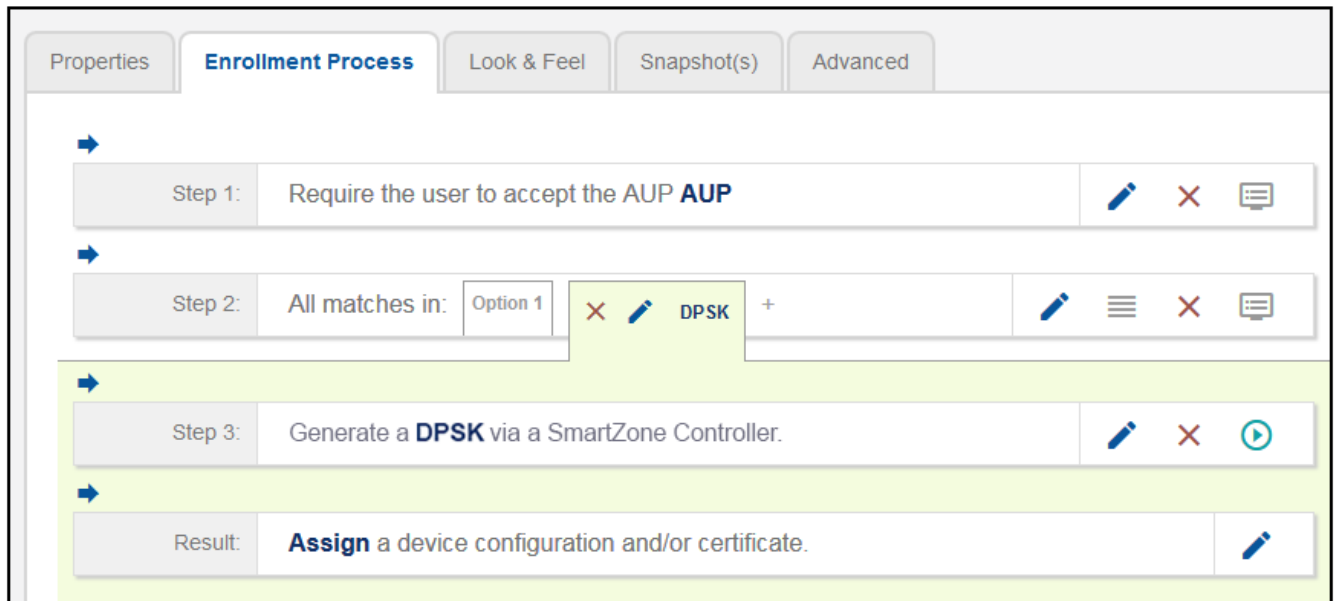
When you have completed filling out the fields, click **Save** at the top of the screen.

NOTE

The configuration will not save unless the connectivity between Cloudpath and the controller is correctly set.

You are returned to the workflow, and the new "Generate a DPSK via Ruckus Controller" step has been added, as shown in the following screen:

FIGURE 43 Workflow After DPSK Step for SmartZone has been Added

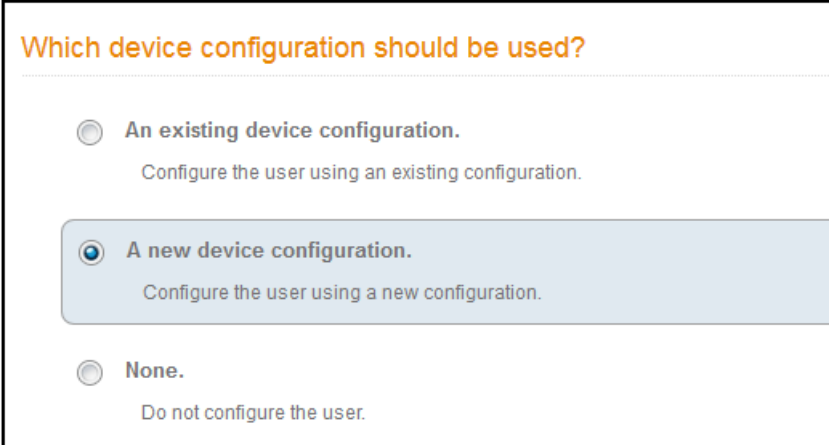


Adding a Device Configuration to the Workflow

1. In the workflow, click the pencil icon to the right of the Result called "Assign a device configuration and/or certificate."

The following screen appears:

FIGURE 44 Device Configuration Selection Screen



Which device configuration should be used?

- An existing device configuration.**
Configure the user using an existing configuration.
- A new device configuration.**
Configure the user using a new configuration.
- None.**
Do not configure the user.

Configuring DPSK on Cloudpath to Integrate with SmartZone Adding a Device Configuration to the Workflow

2. Select "A new device configuration," then click **Next**.

The Connection Type screen is displayed. Required fields are described below the screen.

FIGURE 45 Connection Type Screen

Connection Type

Select the connection method(s) this device configuration supports:

Wireless Connections

Wired 802.1X Connections

Wireless Connections

SSID: DPSK vSZ 351 *

Authentication Style: Ruckus Dynamic PSK

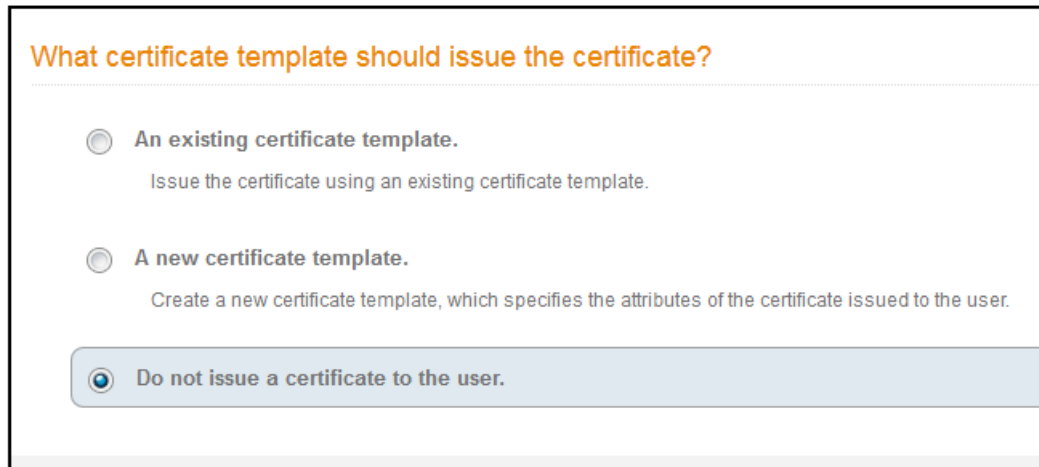
Is this SSID Broadcast?: Yes, the SSID is broadcast.

- The Wireless Connections button must be selected.
- SSID: This name must match the DPSK WLAN exactly. It is the name configured in [Figure 14](#) on page 13.
- Authentication Style: Select Ruckus Dynamic PSK from the drop-down list.
- Is this SSID Broadcast?: Leave the default value of Yes, the SSID is broadcast.

Click **Next**.

- For the screens you are presented with next, you can keep all the default values and continue to click **Next** to progress through the screens, until you get to the following screen:

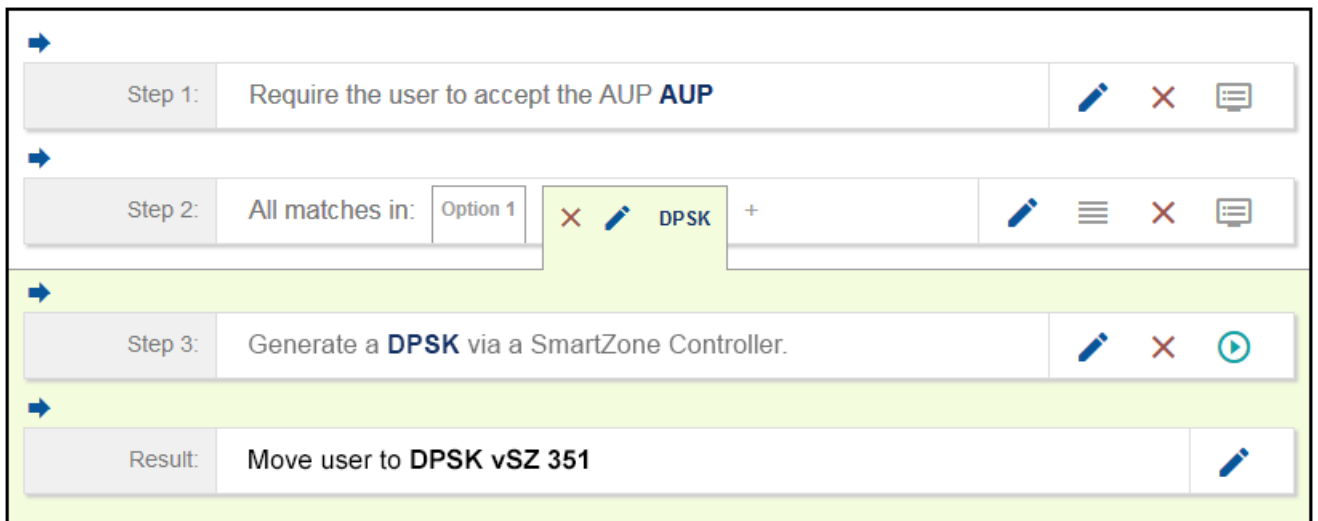
FIGURE 46 Certificate Template Screen



It is recommended to choose the "Do not issue a certificate to the user" option for DPSK configuration. After selecting this option, click **Next**.

- You are returned to the workflow. Make sure the Result step has been added successfully, as shown below:

FIGURE 47 Workflow After Completing the Device Configuration "Result"



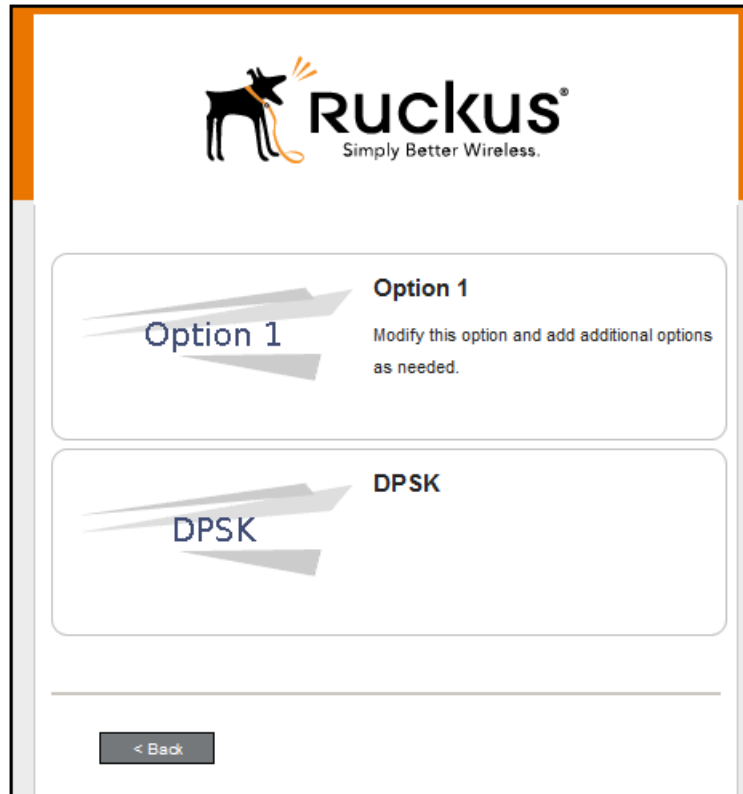
Publish the workflow by clicking the **Publish** icon to the left of the workflow name at the top of the **Configuration > Workflows** screen.

Testing the DPSK User Experience

- Test the Enrollment process by clicking on the enrollment portal URL for the workflow at the top of the **Configuration > Workflows** screen.

2. When you presented with the with the Welcome screen, click **Start**.
3. When you are presented with various branches of your workflow, click the "DPSK" branch:

FIGURE 48 Testing the Workflow - DPSK Branch



4. Proceed with the enrollment. If enrollment is successful, you will receive some status screens indicating the following status as the process is in progress:
 - "Configuring this device"
 - "Attempting to connect to the network"
 - "Congratulations! You are now connected to the network."

Troubleshooting Tips

If an error occurs during the workflow-publishing or enrollment process, check the following:

- Make sure that your DPSK WLAN configuration settings on Cloudpath match what you configured on the controller.
- Make sure that your Northbound Interface administrative username and password are identical on Cloudpath and the controller.
- Make sure that you have selected **Ruckus Dynamic PSK** as the Authentication Style in the Cloudpath Connection Type screen.
- Make sure that you have added the correct Cloudpath DPSK SSID to the final result step in your workflow.

COMMScope®
RUCKUS®

© 2021 CommScope, Inc. All rights reserved.
350 West Java Dr., Sunnyvale, CA 94089 USA
<https://www.commscope.com>