

Configuring vWLAN and ProCloud Analytics

This document describes how to configure a (virtual wireless local area network) vWLAN for ProCloud Analytics and how to set up ProCloud Analytics once the vWLAN has been properly configured. This guide includes instructions using the web-based graphical user interface (GUI).

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Prior to Analytics Configuration

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- Step 2: Enable the Redirect to Hostname Option on page 2
- Step 3: Enable the AP to Look Up the vWLAN Name on page 3
- Step 4: Add a PTR Record in the DNS Server on page 3

vWLAN Configuration

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- Step 2: Configuring RADIUS Server Authentication on page 7
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Prior to Analytics Configuration

Step 1: Purchase/Install a Registered Hostname Certificate

Refer to <u>Installing and Renewing an SSL Certificate in vWLAN</u> on the ADTRAN Support Forum for more details on this process.

Step 2: Enable the Redirect to Hostname Option

The *Redirect to Hostname* option allows users to be redirected to the hostname for which the IP of the vWLAN resolves. From the **Configuration** tab select the **Platform** tab and then **System > Settings**. Select **Redirect to Hostname**.



This menu option is only visible in platform administrator accounts.



Choose Enabled from the drop down menu and select Update Platform Setting.

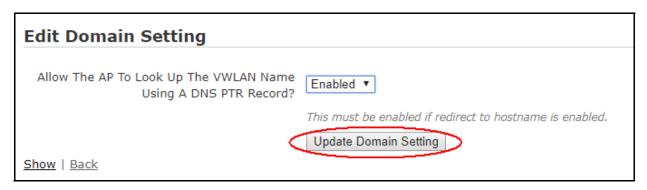


Step 3: Enable the AP to Look Up the vWLAN Name

After Redirect to Hostname has been enabled, the AP needs to be allowed to look up the vWLAN name using a Domain Name Server (DNS) Pointer (PTR) record. From the Configuration tab select System > Settings. Select Allow the AP to look up the vWLAN name using a DNS PTR record..



Choose Enabled from the drop down menu and select Update Domain Setting.





This step needs to be performed for each domain.

Step 4: Add a PTR Record in the DNS Server

Add a PTR record for the hostname of the primary and secondary servers (if applicable) in the DNS server the vWLAN is using.

vWLAN Configuration

To properly configure vWLAN for ProCloud Analytics, you must configure vWLAN exactly as shown in this document.

Accessing the vWLAN Interface

Before you begin, make sure you have your account credentials provided by ADTRAN ProServices. This information includes: user name, password, accounting server IP address and shared secret, and RADIUS server IP address and shared secret.



If you are configuring this device as a wireless local area network (WLAN) appliance (not a part of ProCloud Services), then the default username is **root@adtran.com** and the default password is **blueblue**.

To access the vWLAN interface, follow these steps:

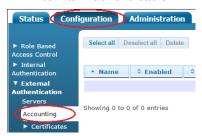
- Enter the IP address of the vWLAN into a browser window in the format: https://<vWLANipaddress>:3000
- 2. Log in with the user name and password provided by ProServices.



Step 1: Configuring Accounting Servers

Use the steps in this section to configure vWLAN to use the RADIUS accounting servers for ProCloud Analytics.

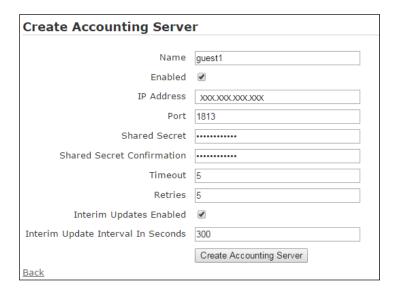
1. From the Configuration tab, select External Authentication > Accounting.



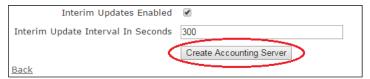
2. Select **Create Accounting Server** at the bottom of this menu.



Parameter	Setting
Name	guest1
Enabled	Checked
IP Address	Provided by ProServices
Port	1813
Shared Secret	Provided by ProServices
Shared Secret Confirmation	Re-enter the shared secret as above.
Timeout	5
Retries	5
Interim Updates Enabled	Checked
Interim Update Interval	300



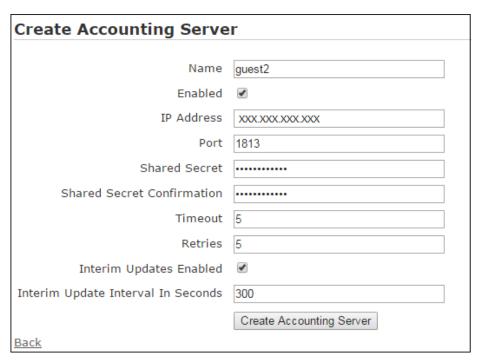
4. Select **Create Accounting Server** to create the server. A confirmation displays indicating that the server has been created.



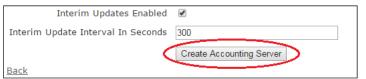
5. Select Create.



Parameter	Setting
Name	guest2
Enabled	Checked
IP Address	Provided by ProServices
Port	1813
Shared Secret	Provided by ProServices
Shared Secret Confirmation	Re-enter the shared secret as above.
Timeout	5
Retries	5
Interim Updates Enabled	Checked
Interim Update Interval	300



7. Select **Create Accounting Server** to create the server. A confirmation displays indicating that the server has been created.



Step 2: Configuring RADIUS Server Authentication

Use the steps in this section to define the method of authentication used by the remote authentication dial-in user services (RADIUS) accounting servers configured in *Step 1: Configuring Accounting Servers on page 4*.

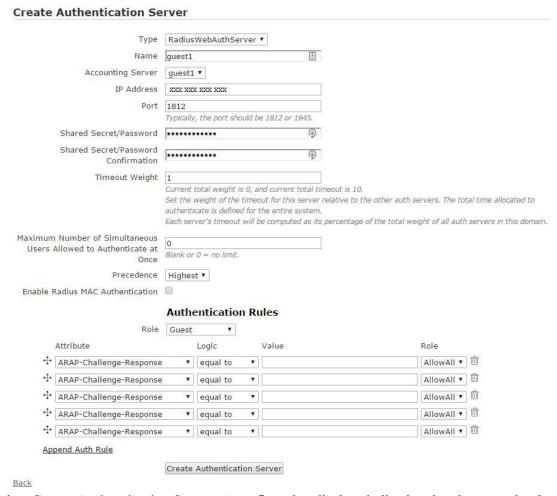
1. From the Configuration tab, select External Authentication > Servers.



2. Select Create Authentication Server.



Parameter	Setting
Туре	RadiusWebAuthServer
Name	guest1
Accounting Server	guest1
IP Address	Provided by ProServices
Port	1812
Shared Secret	Provided by ProServices
Shared Secret Confirmation	Re-enter the shared secret as above.
Timeout Weight	1
Precedence	Highest
Enable Radius MAC Authentication	Unchecked
Role	Guest



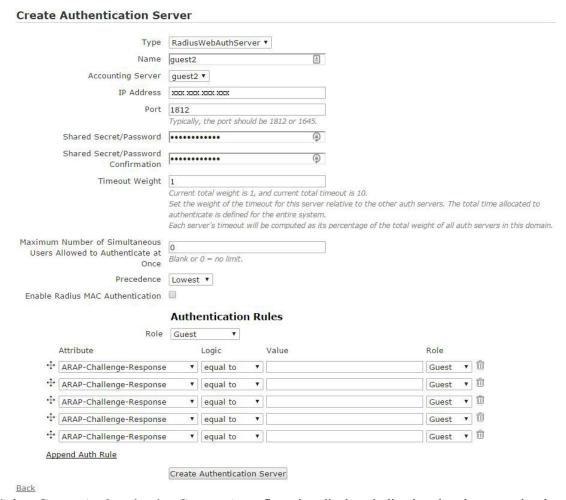
4. Select **Create Authentication Server**. A confirmation displays indicating that the server has been created.



5. Select Create.



Parameter	Setting
Туре	RadiusWebAuthServer
Name	guest2
Accounting Server	guest2
IP Address	Provided by ProServices
Port	1812
Shared Secret	Provided by ProServices
Shared Secret Confirmation	Re-enter the shared secret as above.
Timeout Weight	1
Precedence	Lowest
Enable Radius MAC Authentication	Unchecked
Role	Guest



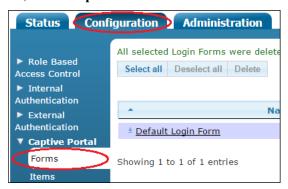
7. Select **Create Authentication Server**. A confirmation displays indicating that the server has been created.



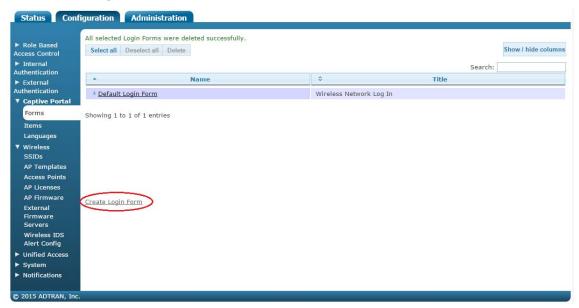
Step 3: Creating the Login Form

Use the steps in this section to create a login form that redirects clients to the URL for ProCloud Analytics.

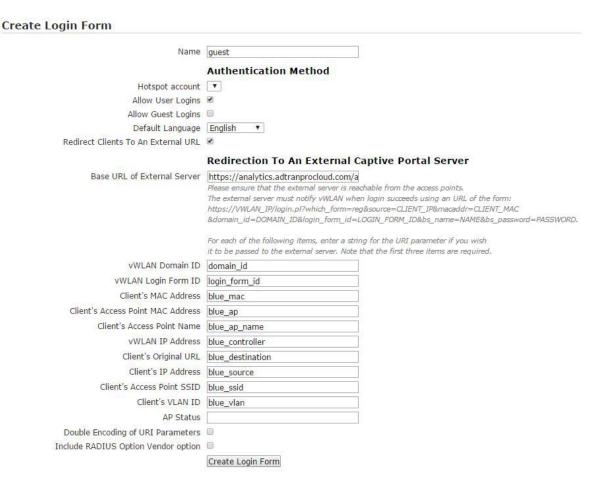
1. From the **Configuration** tab, select **Captive Portal** > **Forms**.



2. Select Create Login Form.



Parameter	Setting
Name	guest
Allow User Logins	Checked
Allow Guest Logins	Unchecked
Redirect Clients to an External URL	Checked
Base URL of External Server	https://analytics.adtranprocloud.com/access/
Client's MAC Address	blue_mac
Client's Access Point MAC Address	blue_ap
Client's Access Point Name	blue_ap_name
vWLAN IP Address	blue_controller
Client's Original URL	blue_destination
Client's IP Address	blue_source
Client's Access Point SSID	blue_ssid
Client's VLAN ID	blue_vlan
Double Encoding of URI Parameters	Unchecked
Include RADIUS Option Vendor option	Unchecked



4. Select Create Login Form. A confirmation displays indicating that the form has been created.



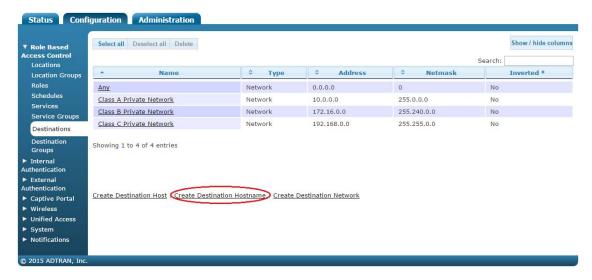
Step 4: Creating Destinations

Use the steps in this section to define which networks are available to your users. These should be the network destinations that you want to allow clients to access without having to first log into your network.

1. From the Configuration tab, select Role Based Access Control > Destinations.



2. Select Create Destination Hostname.



Parameter	Setting
Name	AnalyticsPortal
Address	analytics.adtranprocloud.com



- 4. Select **Create Destination**. A confirmation displays indicating that the form has been created.
- 5. Select Create Destination Hostname.



6. Repeat Steps 3 and 4 for each of the following:

Name	Address
ADTRAN	www.adtran.com
google1	www.google.co.uk
google2	www.google.com
google3	google-analytics.com
symcd	gn.symcd.com
venuewifi	*.venuwifi.com
owm	*.openweathermap.org
cloudfront	*.cloudfront.net
GoDaddy1	crl.godaddy.com
GoDaddy2	ocsp.godaddy.com
GoDaddy3	certificates.godaddy.com
GoDaddy4	certs.godaddy.com
GoDaddy5	crl.starfieldtech.com
GoDaddy6	ocsp.starfieldtech.com
GoDaddy7	certificates.starfieldtech.com
GoDaddy8	certs.starfieldtech.com

7. If you want to support social network logins, repeat the previous steps to add the destinations shown in the following table for each network you plan to support. For example, if you want to include Twitter, create a destination hostname for each address given for Twitter. Enter whatever you want in the **Name** field (for example, twitter1, twitter2, twitter3).

Facebook	Twitter	LinkedIn	Google	Instagram
facebook.com *.facebook.com *.fbcdn.net *.akamaihd.net connect.facebook.net	twitter.com *.twitter.com *.twimg.com	linkedin.com *.linkedin.com *.licdn.net *.licdn.com	*.googleusercontent.com *.googleapis.com accounts.google.com *.gstatic.com	instagram.com *.instagram.com

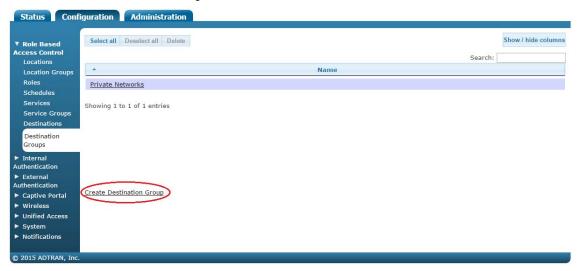
Step 5: Creating a Destination Group

A destination group is a collection of destinations that can be applied to allow traffic to certain network destinations based on a specific role. In the following steps, you will add the destinations created in *Step 4: Creating Destinations on page 15* to a group, and in *Step 6: Editing Roles on page 19*, you will limit un-registered users to these locations.

1. From the Configuration tab, select Role Based Access Control > Destination Groups.

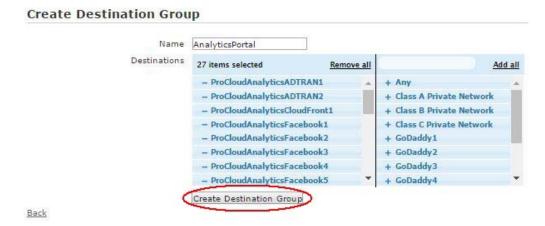


2. Select Create Destination Group.



3. Enter **AnalyticsPortal** in the Name field.

4. Select the + sign beside each destination in right-hand list that you want to add to the group. Add all of the destinations to the *AnalyticsPortal* destination group except for **GoDaddy**, **Any**, and **Class A**, **B**, **C Private Network** destinations.



- 5. Select Create Destination Group. A confirmation displays indicating the group has been created.
- 6. Select Create.



7. Repeat Steps 3 through 5 to create a destination group named **GoDaddy** and add all of the GoDaddy destinations created in *Step 4: Creating Destinations on page 15* (**GoDaddy1** through **GoDaddy8**).

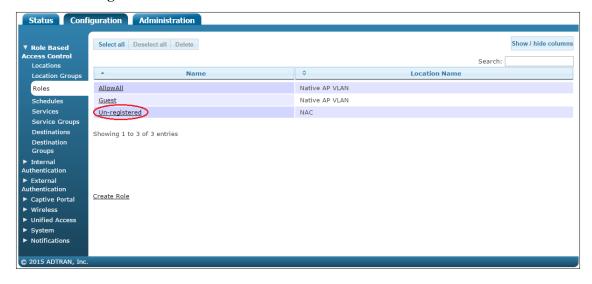
Step 6: Editing Roles

User roles in vWLAN define the policies enforced per user at the wireless access point (AP). When configuring vWLAN for ProCloud Analytics, you need to define the traffic allowed for the following user roles: **Guest** (a client who has logged into the network) and **Un-registered** (a client who has not logged into the network).

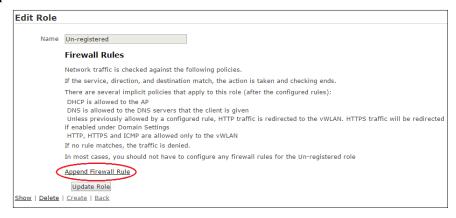
1. From the Configuration tab, select Role Based Access Control > Roles.



2. Select the **Un-registered** role.

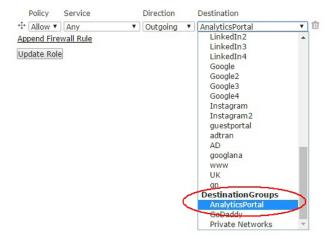


3. Select Append Firewall Rule.



4. Use the drop-down lists to add the following rules. After entering a rule, select **Append Firewall Rule** to add the next rule.

Policy	Service	Direction	Destination (Select from the DestinationGroups)
Allow	HTTP	Outgoing	AnalyticsPortal
Allow	HTTPS	Outgoing	AnalyticsPortal
Allow	HTTP	Outgoing	GoDaddy
Allow	HTTPS	Outgoing	GoDaddy



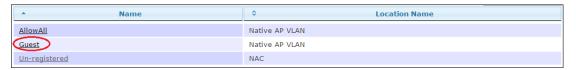
5. Select **Update Role**. A confirmation displays indicating that the role has been updated.



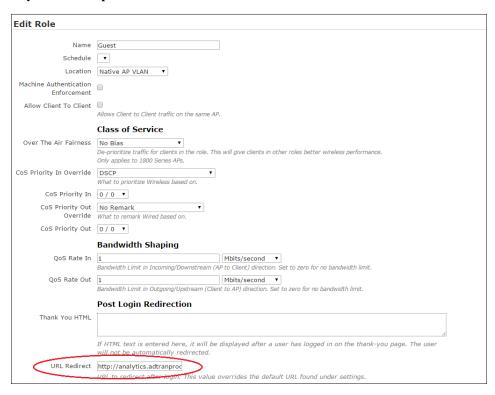
6. From the side navigation panel, select **Roles** again.



7. Select the **Guest** role.



8. Under the **Post Login Redirection** section, enter the following in the **Thank You HTML** field: http://analytics.adtranprocloud.com/access/?res=success



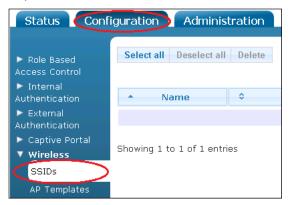
9. Select **Update Role** at the bottom of the menu. A confirmation displays indicating that the role has been updated.



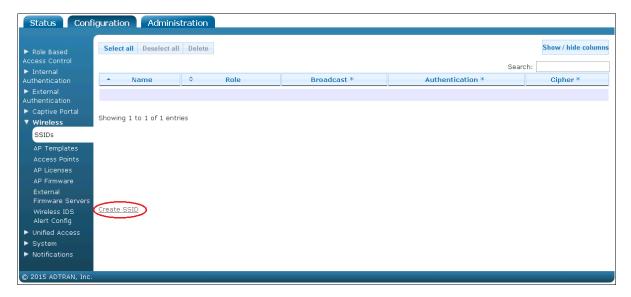
Step 7: Creating an SSID

A service set identifier (SSID) provides a unique set of connection parameters by broadcasting independent security attributes. The SSID must be associated with the AP using an AP template. Use the following steps to create the SSID. This SSID will then be associated with the AP Template in *Step 8:*Modifying the AP Template on page 24.

1. From the Configuration tab, select Wireless > SSIDs.

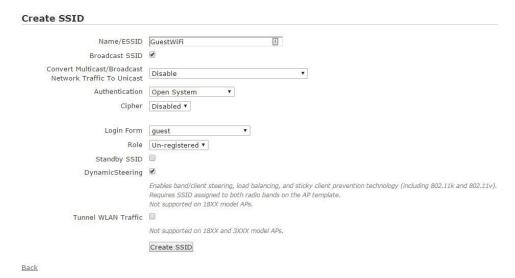


2. Select Create SSID.



Parameter	Setting
Name/ESSID	GuestWifi
Broadcast SSID	Checked
Convert Broadcast/Multicast Traffic to Unicast	Disable
Authentication	Open System
Cipher	Disabled

Parameter	Setting
Login Form	guest
Role	Un-registered
Standby SSID	Unchecked
DynamicSteering	Checked
Tunnel WLAN Traffic	Unchecked



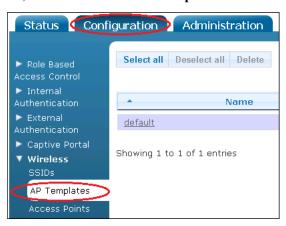
4. Select **Create SSID** at the bottom of the menu. A confirmation displays indicating that the SSID has been created.



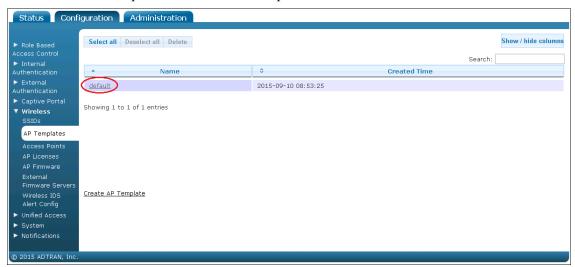
Step 8: Modifying the AP Template

Use the steps in this section to modify the default AP Template to use the SSID created in *Step 7: Creating an SSID on page 22*.

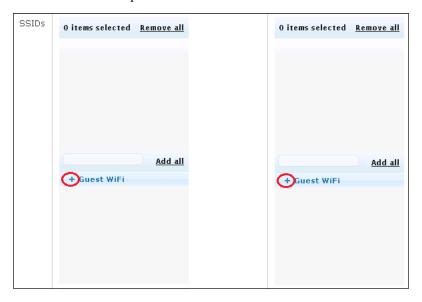
1. From the Configuration tab, select Wireless > AP Templates.



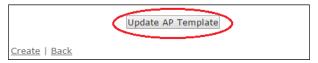
2. Select the **default** template from the list of templates.



3. In the **SSID** section, select the + sign beside the **Guest WiFi** entry in the **Add** list for each radio to add the Guest WiFi SSID to the AP template.



4. Select **Update AP Template** at the bottom of the menu. A confirmation displays indicating the AP template has been updated.



5. For the updated template to take affect, you will need to apply the template to the APs on the **Jobs** menu. Access the **Jobs** menu by selecting the **Domain Tasks** link from the upper-right of the menu. Alternatively, you can access the **Jobs** menu by selecting **Jobs** from the **Administration** tab.





Applying these changes to the APs will cause the APs to reboot.

6. Select the **Actions** arrow next to the job **Must apply configuration to APs**.



ProCloud Analytics Configuration

Proceed with this section only after your vWLAN has been successfully configured by ADTRAN Pro Services or by exactly following the steps outlined in the previous *Prior to Analytics Configuration* section in this document.

Step 1: Log into Your ProCloud Analytics Portal

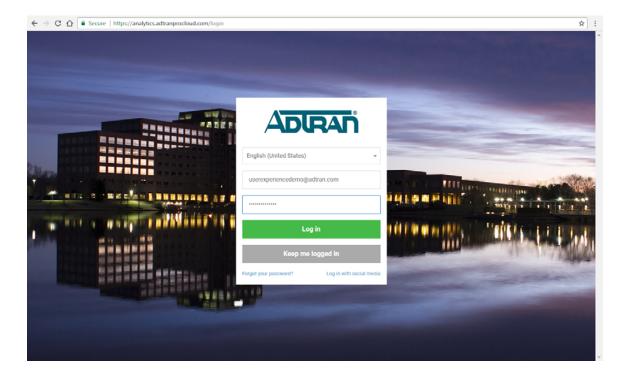
ADTRAN ProServices will assign a user name and password for your ProCloud Analytics account. Navigate to the ProCloud Analytics landing page at https://analytics.adtranprocloud.com and enter your user name and password.

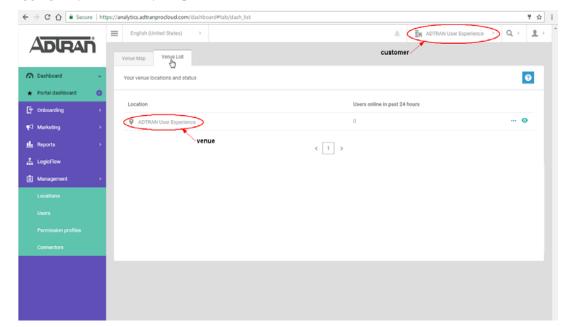
The following credentials are used for demonstration purposes in this guide:

Username: userexperiencedemo@adtran.com

Password: Adtrantest002!

These demo credentials are always active in case you need to login to clarify a menu item/action.





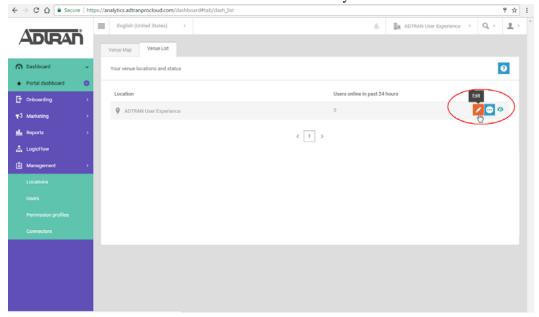
After logging in, you will see your portal dashboard.

When setting up your ProCloud Analytics account, ADTRAN creates your *customer* and *venue*, and adds your APs to the hardware section of the venue. In the illustration above, the company name is **ADTRAN User Experience** and the venue is also named **ADTRAN User Experience**.

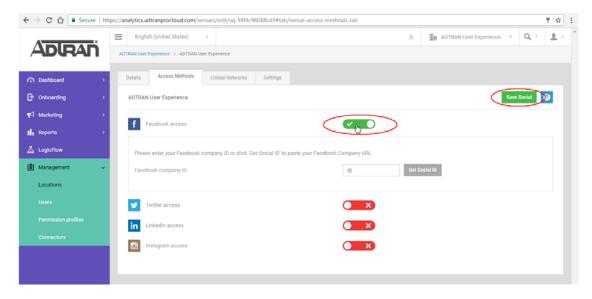
Step 2: Configure Authentication Access Methods

Use the steps in this section to set up the authentication access methods allowed for your users.

1. Select the **Venue List** tab and hover over the ... button next to your venue. Select **Edit** to edit the venue.



2. Select the Access Methods tab and mouse click the red slider next to each access method you want to enable. An access method is active when the slider is green with a checkmark. You will need your company's social network URL or company ID for Facebook, Twitter, and LinkedIn access methods. An ID is not required for the Instagram User ID field. Select **Save Social** when you are finished making changes to this page.



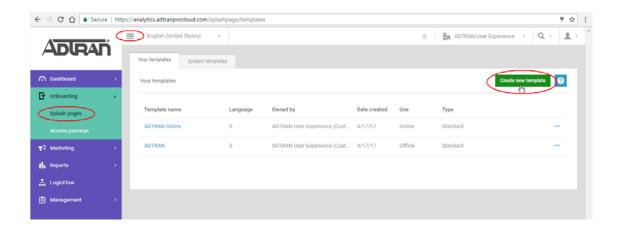
Step 3: Create Your Splash Pages

Splash pages are the pages presented to a user before (offline) and after (online) they authenticate. Use the steps in this section to configure offline and online splash pages.

1. From the left-hand menu bar, select the arrow to the right of *Onboarding* to expand the menu options. Select **Splash Pages** and then select **Create new template**.



If you do not see a left-hand menu bar, select the icon with three horizontal lines at the top of the page to display the menu bar.

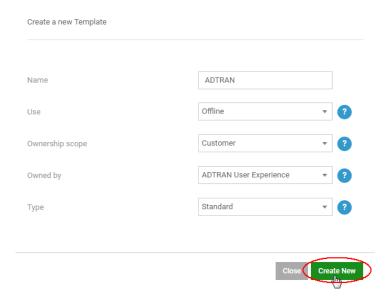


- 2. Complete the dialog box with your splash page parameters.
 - a. Enter a name for your splash page. Consider using the words *Offline* or *Online* in the name to help you differentiate between templates when later viewing the template list.
 - b. Select the *Use* for the template. **Offline** means that this splash page will be presented to the user prior to authentication. The offline splash page presents the user with various ways to log-in to your Wi-Fi network. **Online** means that this splash page will be presented to the user after authentication. The online splash page can have links to other websites or simply display a message thanking your users and confirming login success.

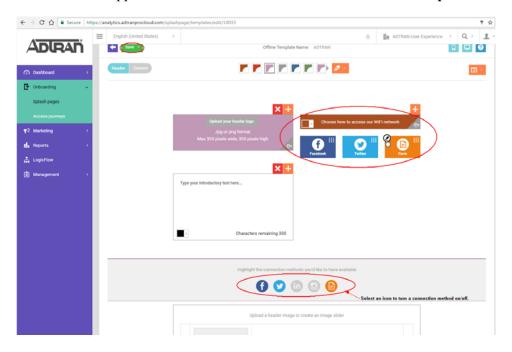


ADTRAN recommends creating both and offline and online splash page templates. This guide outlines the creation of an offline template first followed by the creation of an online template. Additional configuration for these templates is discussed in Step 4: Create Your Access Journey on page 32.

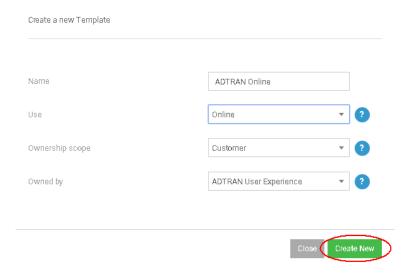
- c. Select Customer next to Ownership Scope.
- d. Select your customer's name next to **Owned by**.
- e. Select **Standard** or **Custom HTML** next to **Type**. ADTRAN recommends selecting the standard template.
- f. Select Create Now.



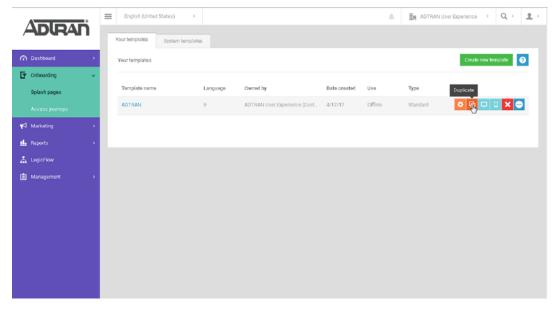
3. You are now previewing your offline splash page, which can be customized with your content. Be sure to select the connection methods you wish to allow for authentication. If a user does not use social media, there is a **Form** option. You can edit the information this form requires by selecting the pencil icon located on the upper-left corner of the Form icon. When you are finished making changes to this page, select **Save** in the upper-left corner of the screen and then select **Save template**.



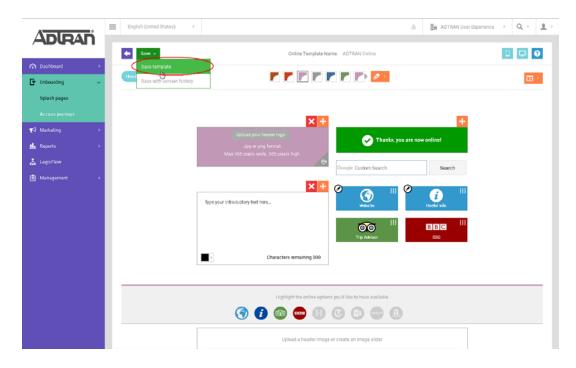
4. Repeat Step 2 on *page 29* or duplicate your offline splash page to create your online splash page. The main difference in the online splash page setup is you will specify a different **Name**, and **Use** is set to **Online**. The **Ownership scope** and **Owned by** settings should match those of the offline splash page.



You can duplicate your offline splash page and make a few changes to the template to make it your online splash page. Hover over the ... icon and select **Duplicate**. Change the **Use** to **Online**, complete the form, and select **Create New**.



5. You are now previewing your online splash page. The online splash page is slightly different than the offline splash page. In addition to informing the customer that they are now online, it also provide links to various websites that you can edit. You will not see authentication methods displayed on the online splash page. Once you are satisfied with customization of the online splash page, select **Save template.**



6. Your offline and online splash pages are now complete. You should see them both displayed under **Onboarding > Splash pages.**



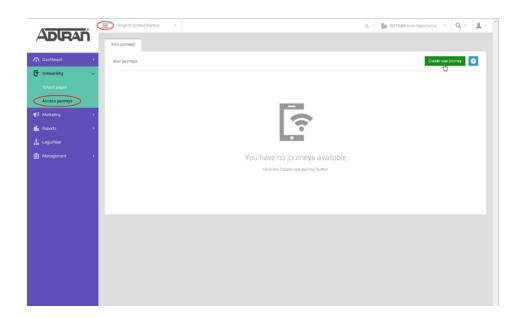
Step 4: Create Your Access Journey

Access journeys allow you to specify a splash page to use for a venue and offer additional configuration options, such as custom terms of service and redirects.

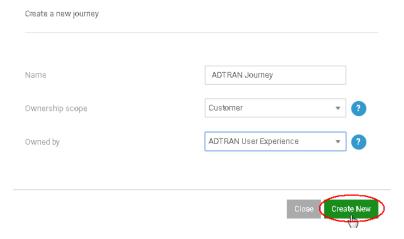
1. From the left-hand menu bar, select the arrow to the right of **Onboarding** to expand the menu options. Select **Access journeys** and then select **Create new journey**.



If you do not see a left-hand menu bar, select the icon with three horizontal lines at the top of the page to display the menu bar.



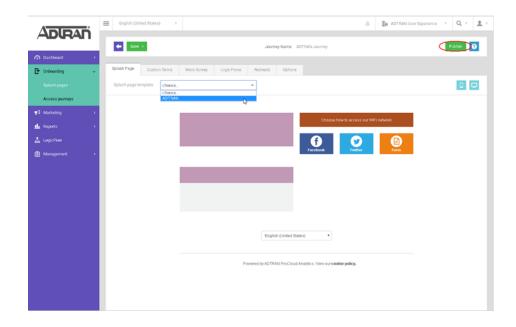
2. Specify a name for the access journey, select **Customer** next to **Ownership scope**, and select the name of the customer for whom you are creating this access journey next to **Owned by**. Select **Create New**.



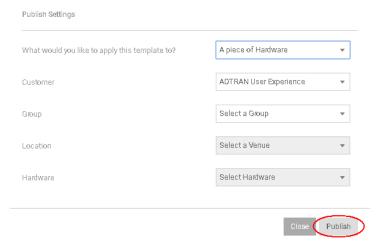
3. You are now editing the newly created access journey. From the **Splash Page** tab, select the name of the offline template you created in Step 2 on *page 27*. The page will display the template. Select **Publish**.



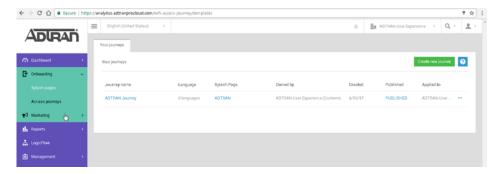
The online splash page will automatically be displayed after users authenticate using the offline splash page. There is no need to specify the online splash page within an access journey.



4. Complete the dialog box with the publishing parameters for this access journey. You can apply the template to a customer, group, location, or hardware. Available options will depend on the design of your network, typically pre-configured based on how you plan to use ProCloud Analytics. Select **Publish**.



5. The page will now display the access journey and relevant settings.



Step 5: Review

Congratulations on successfully setting up ADTRAN ProCloud analytics! The following is a review of the steps you have completed:

- 1. Specified social media preferences for authentication access methods.
- 2. Created an offline splash page.
- 3. Created an online splash page.
- 4. Created an access journey using the offline splash page.