Push Notifications and Offline Content

User Training Guide

With Revolution Push Notifications and Offline Content, you will easily be able to send push notifications to your mobile app users and even create different distribution lists based on security roles, giving you the ultimate marketing and communication tool. Offline content will allow your users to access your app even without an internet connection (an internet connection is required the first time they open the app). This user training guide will show you how to use all of these premium features!

In this guide, we will walk through the features of all the modules. These modules are complex to set up but easy to use which is why we include an installation service for you! Many of these modules will already be set up for you.

User Device Mapping Overview

To understand how Revolution Push Notifications work, you'll first need to understand user device mapping. When a user installs your app and opens it for the first time, the app will create a new DNN general user account in the DNN database and map the user's device id with their new DNN account. The user's device id is a combination to their device-specific id and the app id which is what allows you to send someone a push notification through their DNN account.

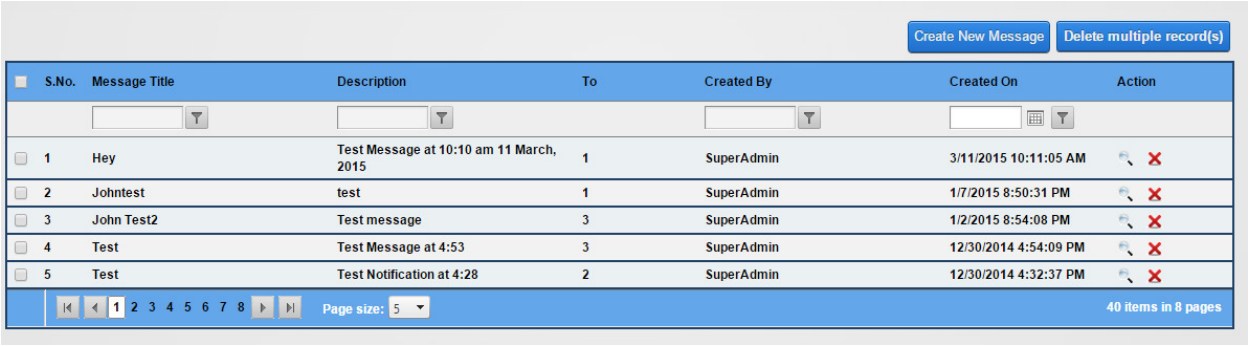
This system allows for multiple devices to be mapped with a single DNN account. User accounts can also be mapped to specific DNN accounts like "JoeSmith" rather than generic user accounts like Android_GeneralUser_9 that are automatically created upon device registration.

General user device registration happens in the background so the user doesn't see any of the registration process but you can manually map their device to a different DNN account at any time through the "List User Device Mappings" module.

There is also a hidden feature within your mobile app so that a user can find their device id. To do this, simply open the app and tap 5 times in the low left corner. You can then copy this id to the device clipboard and send it in a message.

"Messages" Module

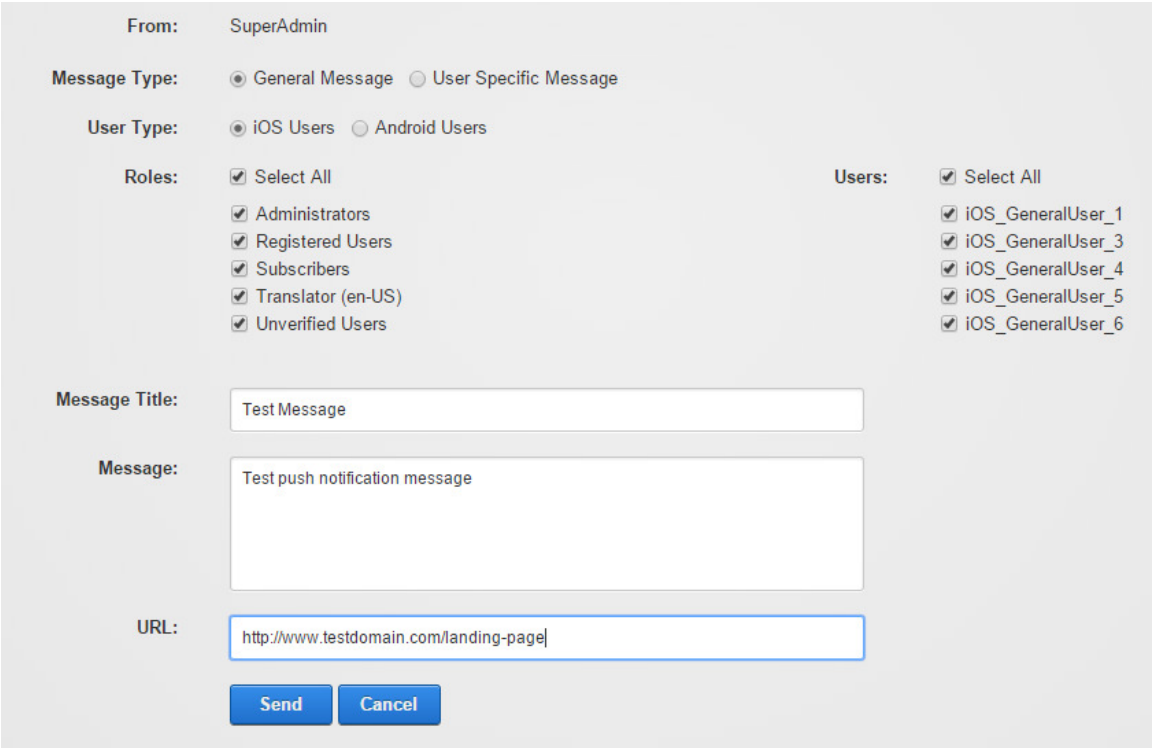
The messages module is the module you will use to create and send new push notifications. It will also allow you to view push notifications that you sent previously and to even resend push notifications.



From this module, you can delete individual messages by clicking the red "X" icon so they no longer show up in this module. This will not delete the push notification from the user's device notifications but will delete the record of it within DNN. You can delete multiple messages at once by clicking the checkbox next to the messages you wish to delete and then by clicking "Delete multiple record(s)." You can also select all messages by clicking on the checkbox in the upper left corner.

You can view a previously sent push notifications by clicking on the magnifying glass icon. After clicking on the magnifying glass icon to view the message, you will see an option to resend it.

To create a new push notification message, click on the "Create New Message" button and you'll see the screen below:"



The first option you have is to choose the “Message Type.” Choose “General Message” if you’d like to send a message to everyone, or to all users for a specific DNN security role. “Registered Users” allows you to send a push notification to every DNN account. However, you may choose “User Specific Message” as the device type if you wish to send a push notification only to a specific user(s). Selecting “User Specific Message” will only display users for which you’ve manually mapped their device to their user account through the “List User Device Mappings” module. Choosing “General Message” will send the message both to general users and to “user specific” users (for whom you’ve manually mapped their devices to their DNN account).

Next, select the “User Type” to send the push notification message to iOS Users or Android Users. You can only send to one “User Type” at a time since Apple and Google have different push notification servers. If you wish to send the push notification to both iOS and Android users, you’ll need to compose 2 messages (1 message for each “User Type”).

Next, select which “Roles” you’d like to send the push notification to. This list displays all the DNN security roles you have set up. Once you check the box next to a security role or several security roles, the module will propagate a list of all the DNN user accounts that have the respective security role assigned to them. Selecting all users for a specific security role is one way to set up distribution lists for your push notifications. You can choose “Select All” if you wish to send the push notification to all DNN accounts. Once you’ve chosen the DNN security roles you’d like to send the push notifications to, you’ll see a list of the actual DNN user accounts on the right. You have the option to “Select All,” or you can choose which specific users you’d like to send the push notifications to.

“Message Title” is simply the title for your push notification message. This will be displayed in the “General Messages” module as the title of the message.

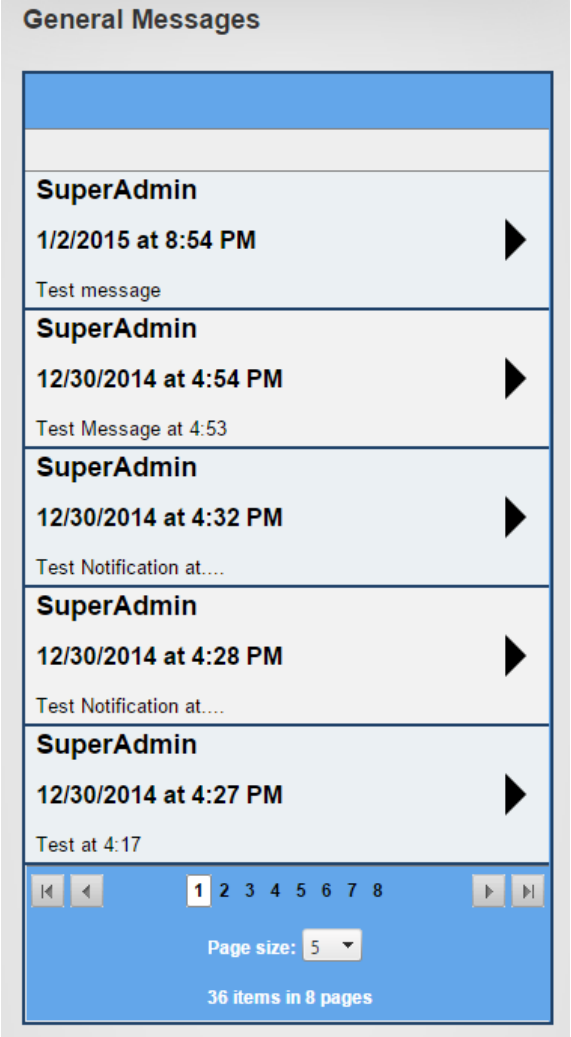
“Message” is the body of the push notification message. Messages are entered in and sent as plain text.

“URL” allows you to enter a specific URL that you want the user to be taken to upon opening the message. This could be a specific page within your app or it could be the “General Messages” page which allows users to see all of the recent push notifications that have been sent out including the message that you are sending now. You must choose a URL so if you do not have a specific page in mind, we recommend that you send your users to the “General Messages” page on your site or to the home page of your app (the first screen the user sees when they open your app).

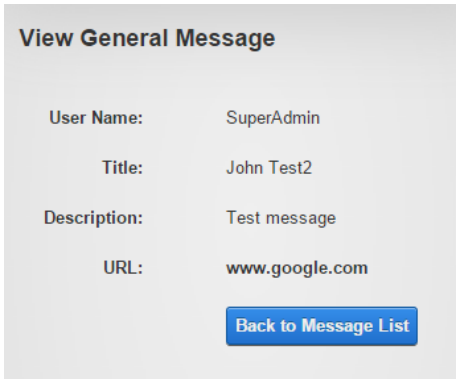
Choose “Send” to send your push notification message. Please note, while often push notifications are received by your users nearly instantaneously, it could take up to half an hour for the messages to be received. Whether or not there is a time delay is determined by Apple and Google push notification servers and it affected by factors on their end that we cannot control including traffic, batch processing algorithms, etc.

“General Messages” Module

The “General Message” module lists all of the push notifications that have been sent to “General Users.” This is a responsive module so you can display this module on a page that appears within your app. Tapping on one of the messages will open the message in another screen. Please note that this module does not display only messages that a specific user received, but all messages sent to “General Users” for all time (that haven’t been deleted).



Tapping on a specific message will display the following screen where the user can read the message in its entirety:



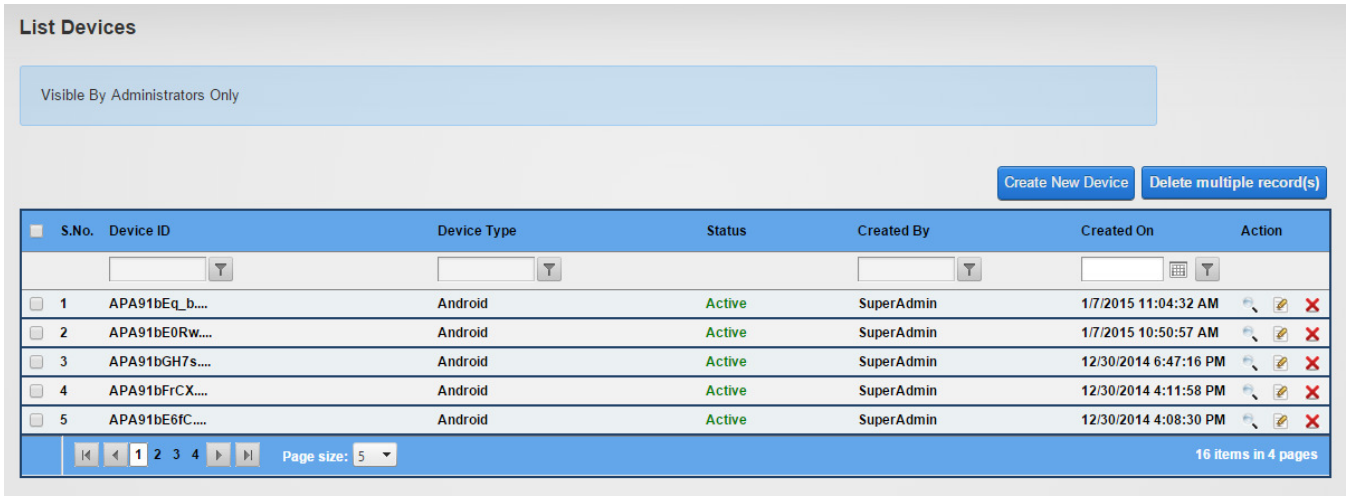
The user can choose “Back to Message List” to return to the previous screen with the list of all general messages.

“List Devices” Module

The “List Devices” module lists all the devices that have been registered for your site.

Since new devices are automatically registered with the system upon the user opening the app for the first time, you do not have to manually add devices but you have the option to do so.

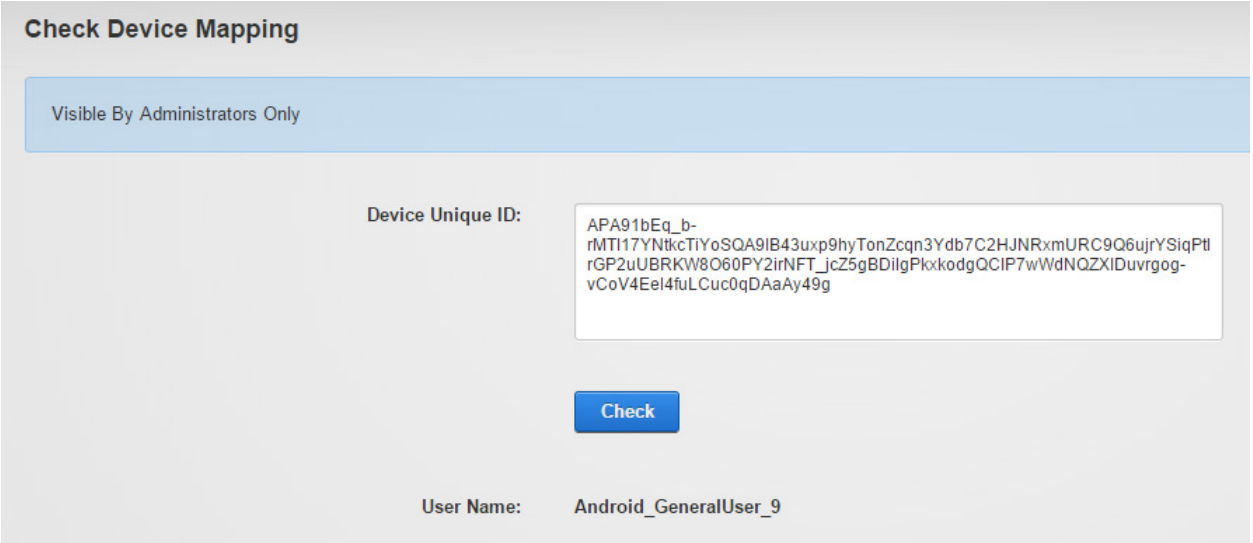
You can manually add a new device by clicking the “Create New Device” button or you can edit an existing device by clicking the checkbox next to the device and then clicking the edit (pencil) icon. From this screen, you can also view devices, delete devices or search for devices.



“Check Device Mapping” Module

The “Check Device Mapping” module allows you to find which DNN user account a particular device is mapped to. You can figure out what your “Device Unique ID” is by looking in the “List Devices” module by the time and date the device was registered. You can also open up the app on a mobile device and tap 5 times in the lower left corner. This hidden feature will allow you to see your device ID and copy it to your device’s clipboard.

Once you have the “Device Unique ID,” you can paste it in the box shown below and click “Check” to see which DNN account the device is mapped to.

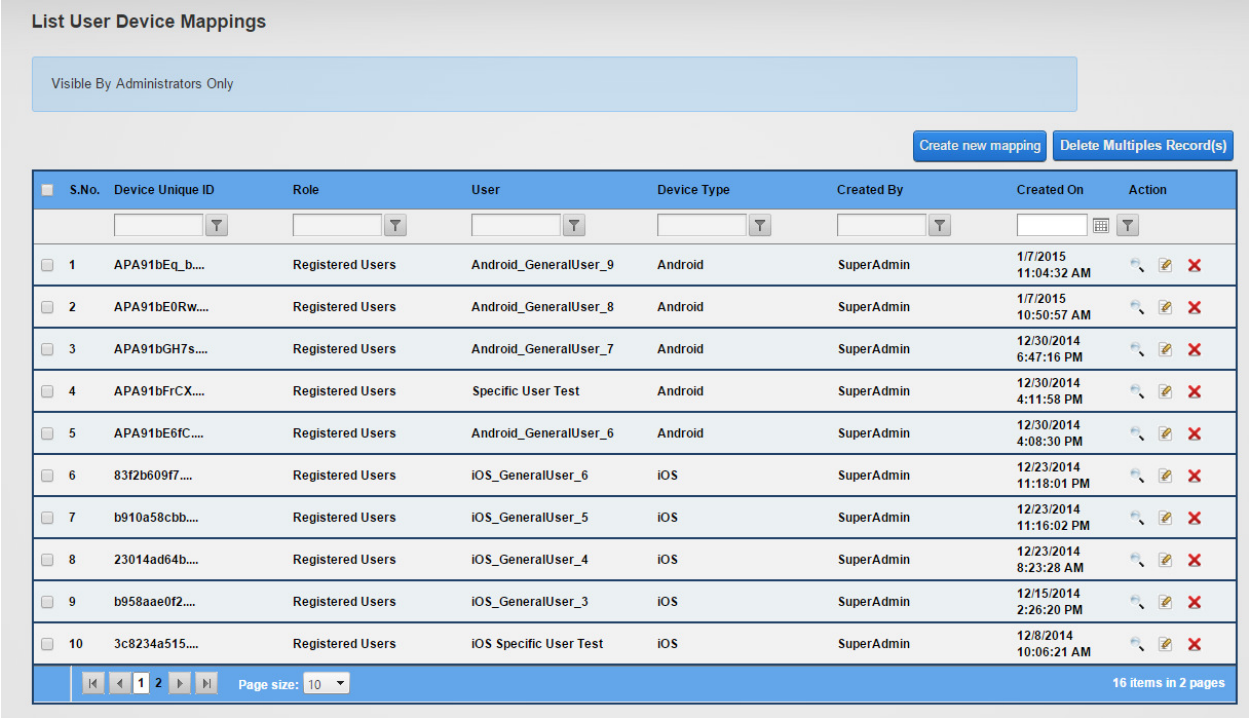


“List User Device Mappings” Module

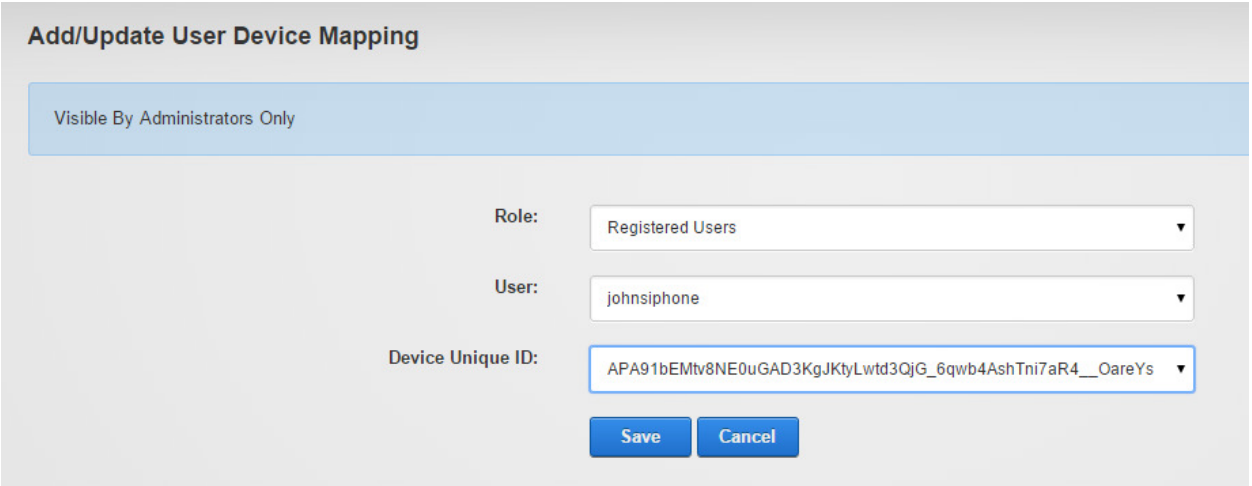
Since new users are automatically mapped to a general user DNN account which the system creates upon the user opening the app for the first time, you do not have to manually map every device to a DNN account. However, for some users such as administrators, it may be helpful to map their devices to their DNN account for testing or so that you can send push notifications to specific DNN users.

The “List User Device Mappings” module allows you to manually map devices to a specific DNN account. Once you manually map a device to a DNN user account that is not a general user account, the DNN account becomes a “User Specific” account rather than a “General User” account and you can more easily see which DNN user you are sending the push notifications to. This module also allows you to see all the devices and DNN user accounts mappings. Remember, multiple devices can be mapped to a single DNN user account.

From this module, you can edit an existing mapping by clicking the pencil icon, view a device mapping, delete device mappings, create new device mappings and search device mappings (top of the column just below the heading). You can even add a filter when you are searching by clicking on the button to the right of the input box.



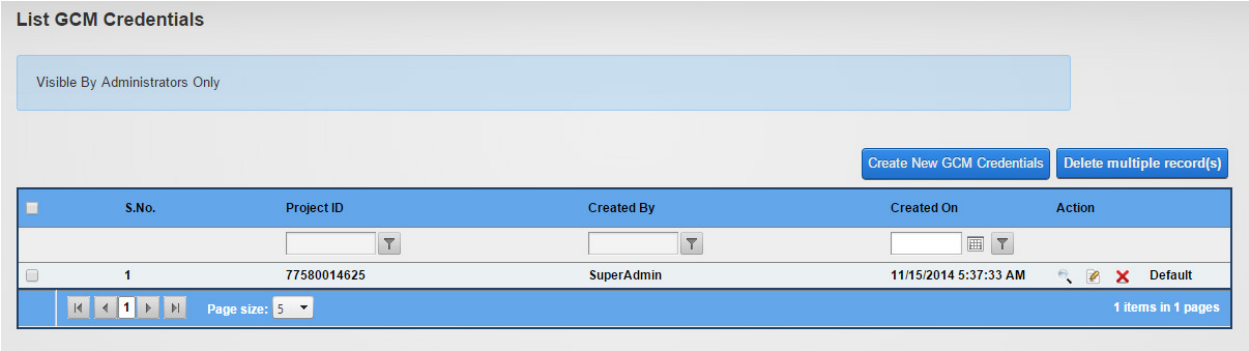
Click on “Create new mapping” and you’ll see the screen below:



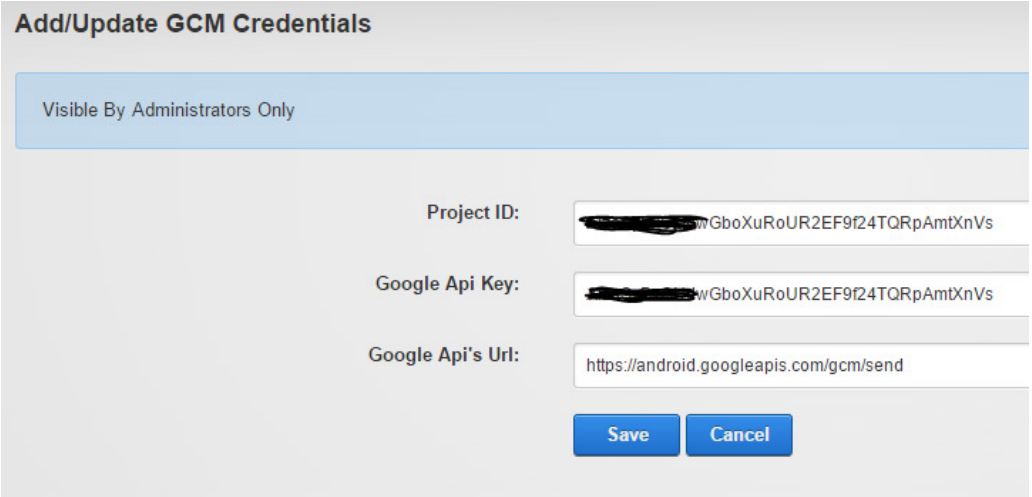
From this screen, you can create a new mapping by first selecting a DNN security role under “Role,” and then you can select a “User” below. Choosing “Registered Users” will display all the users registered with the system. Once you select a DNN security role, all the DNN user accounts who have that particular security role assigned to them will be selectable in the “User” option below. You can then assign a “Device Unique ID” in the box below which displays all the device IDs registered with the system.

“List GCM Credentials” Module

The “List GCM Credentials” module is not a module you will likely need to update as we set this up for you during installation. “GCM” stands for “Google Cloud Messaging” and it allows us to enter the credentials so we can send push notifications to Android devices. This module allows us to set these credentials right through DNN so they don’t have to be hard-coded.



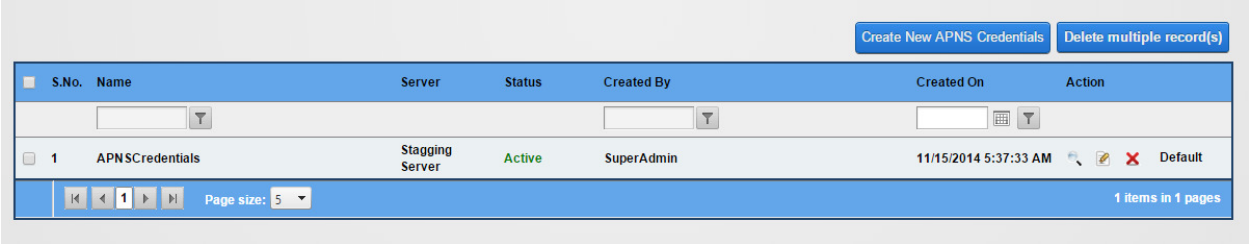
If you click the “Create New GCM Credentials” button or edit an existing item, you’ll see the following screen:



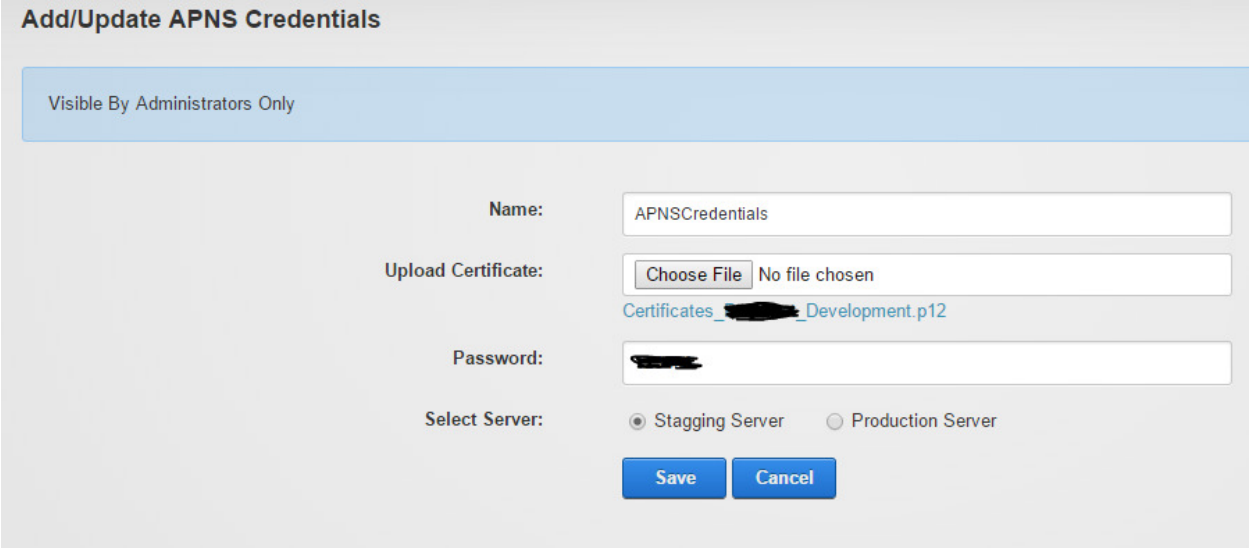
This is where we add the credentials and point to the API.

"List APNS Credentials" Module

The "List APNS Credentials" module is another you will likely never have to modify as this is included in the installation. "APNS" stands for "Apple Push Notification Service" and it allows us to enter the credentials so we can send push notifications to iOS devices. This module allows us to set these credentials right through DNN so they don't have to be hard-coded.



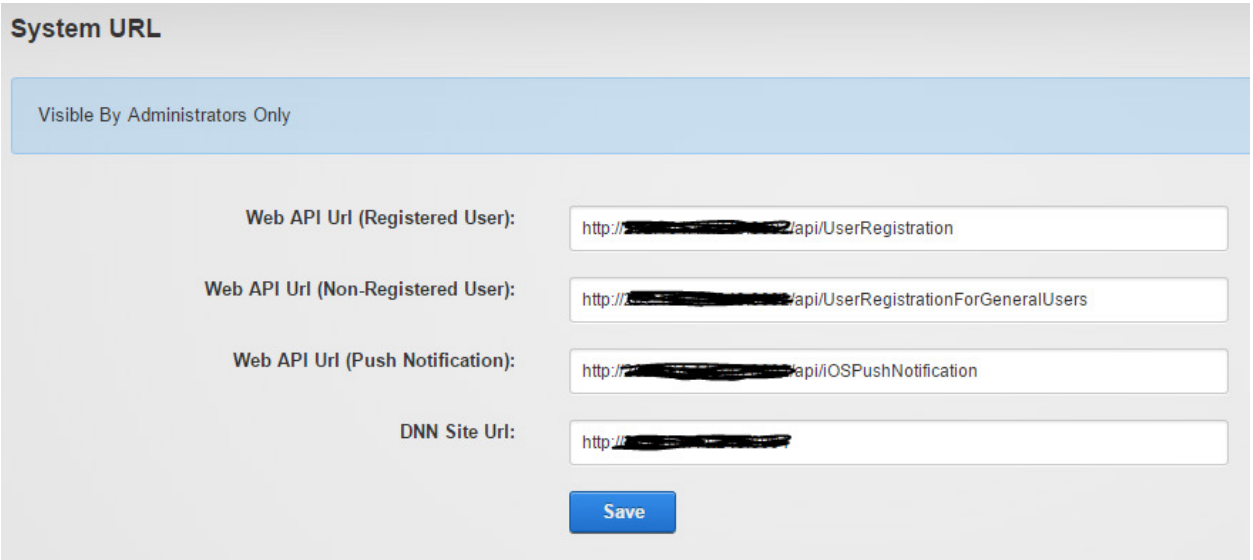
If you click the "Create New APNS Credentials" button or edit an existing item, you'll see the following screen:



This is where we add the credentials, upload the certificate and can choose whether we're working on a staging server or production server.

“System URL” Module

The “System URL” module is another module you will likely never need to update but it contains the URLs for the APIs as well as the URL for the DNN site in general.



“Create Offline Pages” Module

This module is designed to help you easily create offline versions of your DNN pages. This feature works well for content that static in nature (doesn’t change from one user to the next) and content that is not hidden behind a login.

This feature uses the HTML 5 application cache. DNN pages by default are .aspx pages which are not compatible with the HTML 5 application cache. This module creates an .html version of your .aspx pages which are cacheable. The app then directs the user to the .html pages instead of the .aspx pages.

The .html pages also have the advantage of loading more quickly since the database does not have to be accessed every time a user visits a page. This is also a great way to speed up your site.

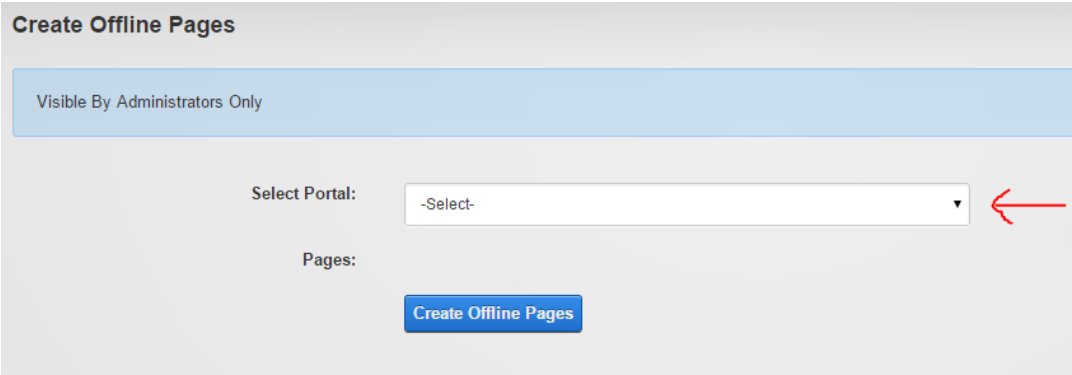
Each time you publish a change to your website, you will need to use the offline content module to publish a new .html version of that page. However, you can publish .html versions of all your pages at once.

The offline content module will use the default portal alias to create the link structure for your pages. For example, if www.yourdomain.com is the default portal alias, the .html pages will be placed inside the default directory (or wwwroot directory) for the DNN installation. This is ok if you are using your DNN installation for only one website and one small app but if you have a very large site or will be using the offline content pages for multiple apps and with multiple clients, you may want to structure your files differently to keep them organized. In this case, we recommend using a different portal alias as your default portal alias. www.yourdomain.com can still be one of the portal aliases, but if you set up another portal alias www.yourdomain.com/client1 as your default, the offline content module will place all of the offline content modules in the /client1 directory (rename "client1" to something that is appropriate for your project). This will keep your files more organized.

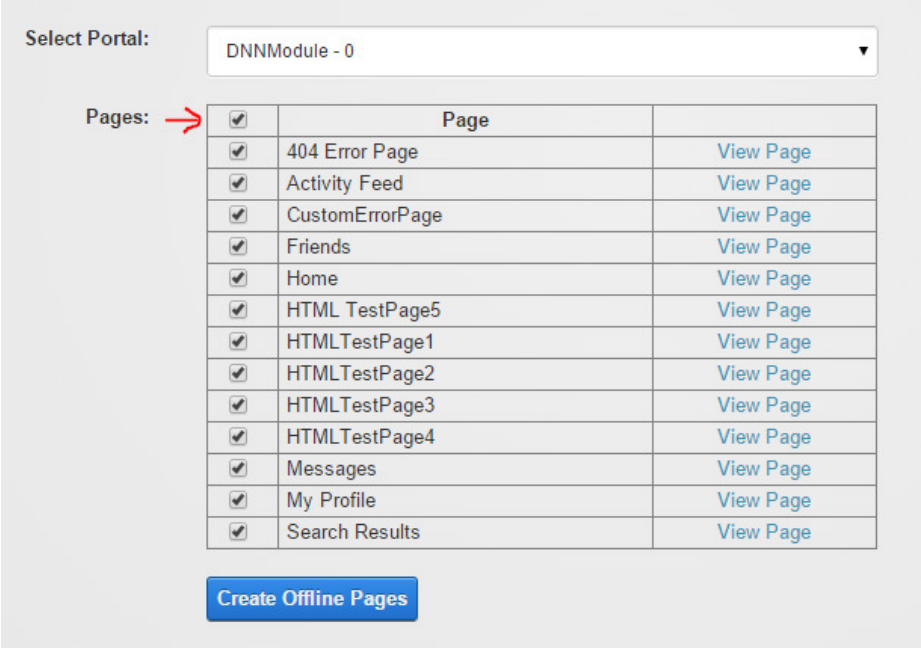
The naming structure that the offline content module uses places the portal number inside the filename so that you won't run into an issue where the offline content module overwrites another important file within your site. Some examples of the naming structure are as follows:

Home.aspx	would become:	Home_0.html	Where 0 is the portal number
About.aspx	would become:	About_2.html	Where 2 is the portal number

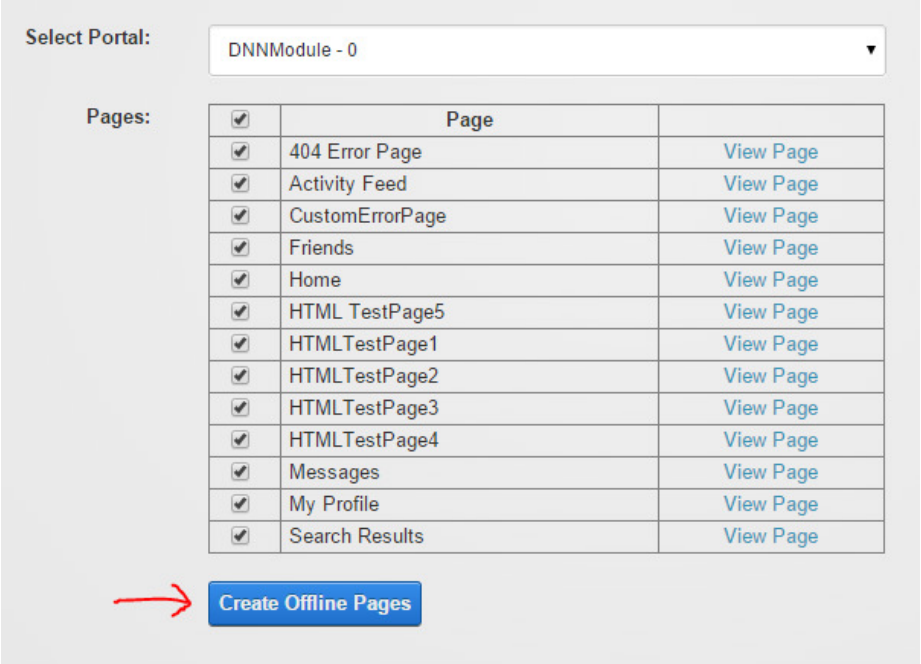
Begin by selecting a portal. If you are logged in as a Host user, you will be able to select any portal in the DNN installation. If you are logged in as an admin, you will only have access to the site for which you are logged into:



Next, you will see a list of all the pages in your DNN site which have user permission set so that all users can view the page. You can't create offline versions for pages hidden behind a login. You can select the checkbox in the upper left corner to select all the pages in your DNN site or simply check the pages you wish to create offline versions of. The more pages you have selected, the longer it will take to generate the .html pages.



Click “Create Offline Pages” to create the .html versions of the pages.



You will see a confirmation that the process is complete at the top of the page. If you log into your site with an FTP client, you will see the pages in your site directory as filename_0.html, etc.

Your app will cache any files that the user visits while online for later user offline. Upon visiting the site a second time, the app will first check to see if the user has an internet connection. If the user does not have an internet connection, it will display the cached version.

We recommend that you try to keep your cached content under 5mb. iOS has an appcache limit of about 16mb but Apple seems to be expanding this limit with newer devices and newer OS versions. Android has an appcache limit of 5mb. If your images are optimized properly, you should be able to cache quite a bit of content.

In addition to your app being able to cache content that the app user has already viewed, you can also explicitly define content to cache, even it if has never been displayed within the app. You can do this through the cache.manifest file (this is optional). In other words, a user can view a page offline within your app that they never even visited while online. This is one of the features of the cache.manifest file.

We will set up an initial cache.manifest file for you but you can also add your own files to this to cache (you would add these under the CACHE heading). If you add your own files to cache, be aware that the file names in the cache.manifest **ARE CASE SENSITIVE** so be sure to list your file names with the proper case sensitivity or they will not be cached. Below is an example of a cache.manifest file:

CACHE MANIFEST

NETWORK:
*

CACHE:
/client1/Home_11.html
/client1/homeimage.jpg

FALLBACK:

SETTINGS:
prefer-online