Admin Hero Guide

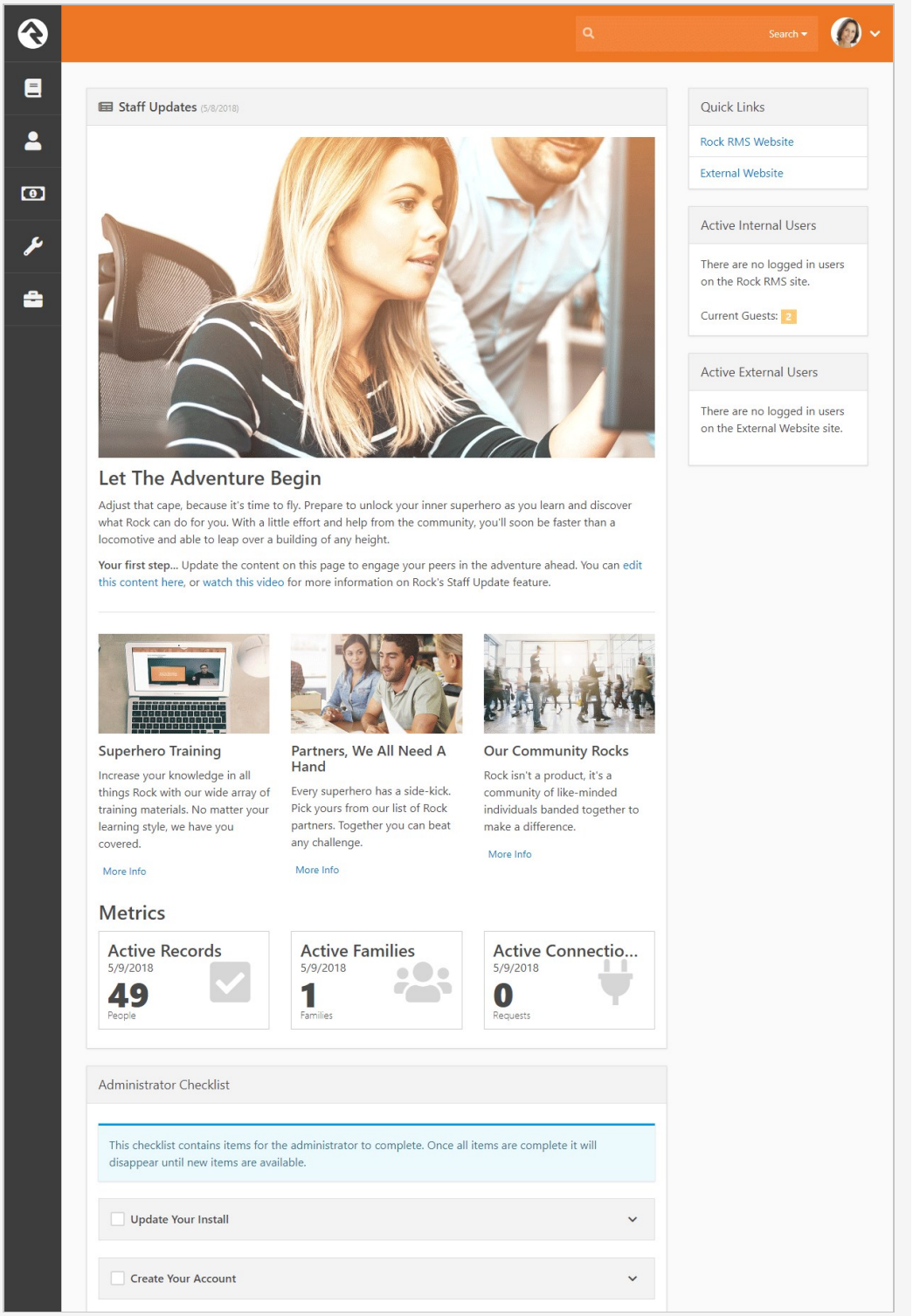
Welcome

We hope that by the time you finish this guide you will not only be able to survive, but thrive in your role as a Rock administrator. Our goal is to make you the hero of your team, the one person everyone goes to for answers. So, what are we waiting for? Let's get started.

Rock Homepage

The Rock homepage is the first screen most of your staff will see, so use that to your advantage. This is a great place for you to add organizational announcements, tips for using Rock and links to common resources. We've provided a great starting template for you to use and edit. Let's walk through some things you can do to make this page a useful resource.

Rock Homepage



Staff Updates

The main area of the homepage is dedicated to staff updates. This is a great place to post news items and announcements for your staff. Learn how to customize this area for your organization in the Customizing Your Rock Homepage section below.

Metrics

Below the articles in the staff updates section you'll see the metrics section. This section displays *Active Records*, *Active Families* and *Active Connection Requests*. Learn more about these metrics and how to customize this section in the Configuring Homepage Metrics section below.

Quick Links

The *Quick Links* section on the right side of the screen is a great place to provide staff with links that your organization uses most often. For example, organizations have used this section to provide links to:

- The online catalog for ordering office supplies
- Referral lists for counseling or pastoral needs
- The organization's webmail site
- Project management tools like Basecamp or Asana
- Facility management tools like ServiceU
- Frequently used forms

You can update the *Quick Links* section by editing the HTML, which is accessed the same way block settings are accessed.

> Tip... Be Careful
>
> When adding links, be careful with the HTML since its format is fairly specific. The best way to avoid mistakes is to simply copy an existing list item (<li>) and change the URL and name. Don't worry, HTML may look complex but changing what's already been done is a great way to start learning. You can do it!

Active Users

Under the quick links section you'll see blocks listing active individuals on the internal and external websites. This allows you to see staff who are currently working and individuals browsing your website. You can click on a name to view the individual's *Person Profile* page.

Administrator Checklist

After you first install Rock you'll see an *Administrator's Checklist* on the homepage. Don't worry, only Rock administrators can see this block.

This is a list of tasks you'll want to complete before you get too far along in your Rock deployment. Once you've checked all items off the list the block will disappear, but not forever. After an update you may need to add or change certain settings in order to use a new feature, and those steps will be listed in the block. Think of it as an old friend who shows up in your hour of need (not like your old college roommate who only shows up at the worst possible times).

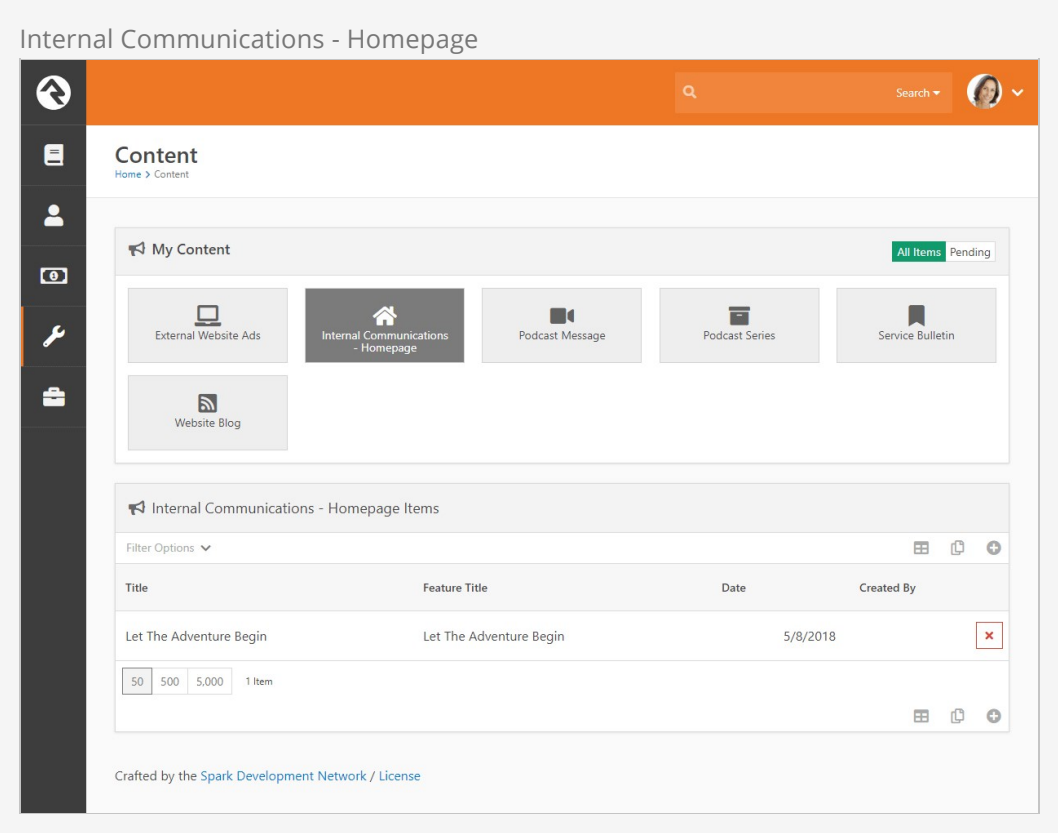
Be Creative

Don't limit yourself to what's provided out of the box, or even the suggestions we give in this guide. We crafted these features just for you, because we want to enable you to take what Rock provides and make it your own. Manage the content on your homepage to reflect the unique needs, resources and vision of your organization.

Customizing Your Rock Homepage

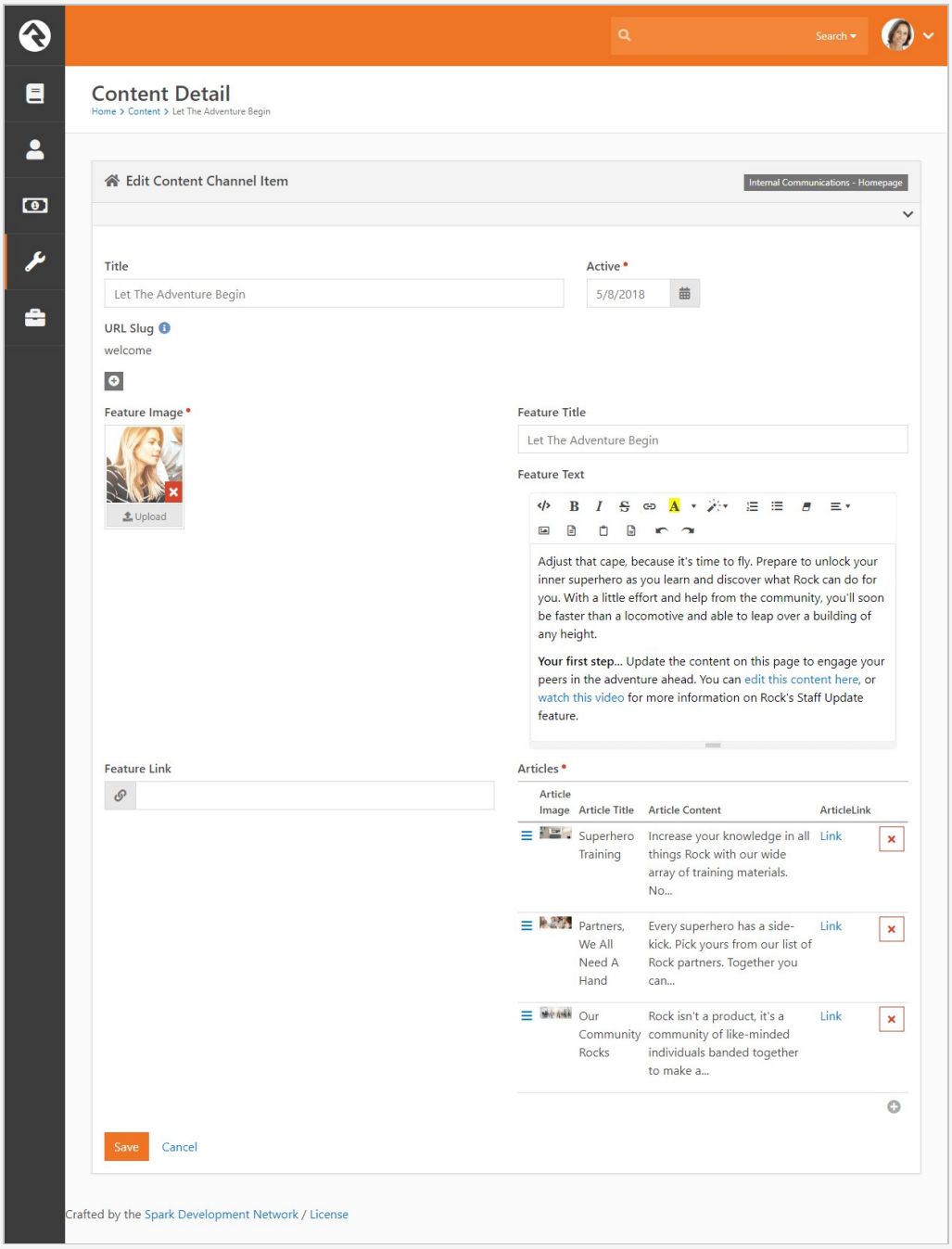
To manage the content of your Rock homepage, go to:

`Tools > Content > Internal Communications - Homepage`.



You can edit existing content items, or add new items, from the block at the bottom of the page. Doing either will bring you to the *Edit Content Channel Item* page.

Edit Content Channel Item



Viewing Updates

Content channel updates might not display on the homepage right away. If this happens, it's because of the block's *Cache Duration* setting. If you want to see updates immediately, change the duration to "0" seconds in the block properties.

See our `Designing and Building Websites Using Rock` guide for more information.

Configuring Homepage Metrics

Rock ships with three metrics ready to display on your Rock homepage:

- **Active Records**: The number of active person records in the database
- **Active Families**: The number of active families in the database
- **Active Connections**: The number of active connection requests in the database

We've supplied these metrics—which will automatically update weekly—as a way of getting you started. We encourage you to customize this section and select different metrics by editing the block settings.

Intranet

The Intranet tab is one area of Rock that will be unique to every organization. Rock ships with a few intranet items already set up, but we encourage you to customize the list. This is a great place to share information with your staff and key volunteers. Your intranet might include items like:

- Office Information
  - Holiday Schedule
  - Common Links (ordering office supplies, etc.)
  - Referral Lists
- Staff Phone Lists
- Human Resources Content
  - Payroll Calendars
  - Timesheet Templates
  - Employee Forms
  - Org Charts
  - Benefits Information
  - Employee Manual
- Finance Information
  - Chart of Accounts
  - Expense Report Templates
  - Forms (W-9, etc.)
- IT Resources
  - FAQs
  - How to set up email on mobile devices

> ### Keeping It Up-To-Date
> It’s important to know who will be responsible for keeping each area of your intranet up-to-date. It's easy enough to add the information, but there's no point in adding it if you don't have a plan for keeping it up-to-date.

Org Chart

Under the *Intranet* tab you’ll find an *Org Chart* page. This is simply a group viewer that's designed to help you develop your own organization chart. It's often helpful to have an org chart in Rock that you can easily reference, like when you’re setting up security. If you don't think you'll need this you can simply hide it from the navigation by changing

the *Display When* setting to Never under *Page Properties*. Or, you can always just delete it.

> **Going Deeper**
>
> The group type for the Org Chart areas/departments is *Organization Unit*. Feel free to add additional attributes to groups of this type if it makes sense for your organization.

Getting Comfortable

Hopefully by now you've had some time to poke around Rock - window shopping at all the features. Let's discuss a couple of tips and tricks that will make you feel more at home.

Keyboard Shortcuts

In an effort to speed up your interaction with Rock, we've added several keyboard shortcuts. Let's look at what's available:

- `Alt + Q` **Quick Search:** Sets focus to the search box at the top of the page.
- `Alt + S` **Save:** Presses the save button on the given page.
- `Alt + M` **Edit:** Presses the edit button on the given page (think M for modify).
- `Alt + C` **Cancel:** Presses the cancel button on the given page.
- `Alt + N` **New:** Presses the add button on any grid on the page.
- `Alt + I` **Edit Individual:** On the Person Profile page this allows you to edit the individual's information.
- `Alt + O` **Edit Family** On the Person Profile page this allows you to edit the family's information.

Starting in v10.2, we also have keyboard shortcuts specifically for admin bar functions:

- `Alt + B` **Block Configuration:** Enables the Block Configuration fly-outs.
- `Alt + Z` **Page Zones:** Enables the Page Zones fly-outs.
- `Alt + P` **Page Properties:** Opens the Page Properties modal window.
- `Alt + L` **Child Pages:** Opens the Child Pages modal window.

If you're using a Mac, press Ctrl + Opt (instead of Alt) and the letter key of the shortcut you want to perform.

Learn the Lingo

Why do techies always seem to speak another language? We've worked hard to limit the tech babble, but there are a few words we'd like to define to help build a shared vocabulary.

Entities

The word "entity" is used to describe the classification unit of different types of data in Rock. For instance, *People*, *Groups*, *Financial Transactions*, *Locations* and *Pages* are all entities in Rock. If you're familiar with databases, entities are very similar to tables. In fact, most entities in Rock have an associated table in the database.

You might be asking, "Why do I need to know this?" For the most part, you don't have to know a thing about entities to successfully use Rock. But, you'll see the term in many of the configuration screens so it's good to know what it is.

Defined Types / Defined Values

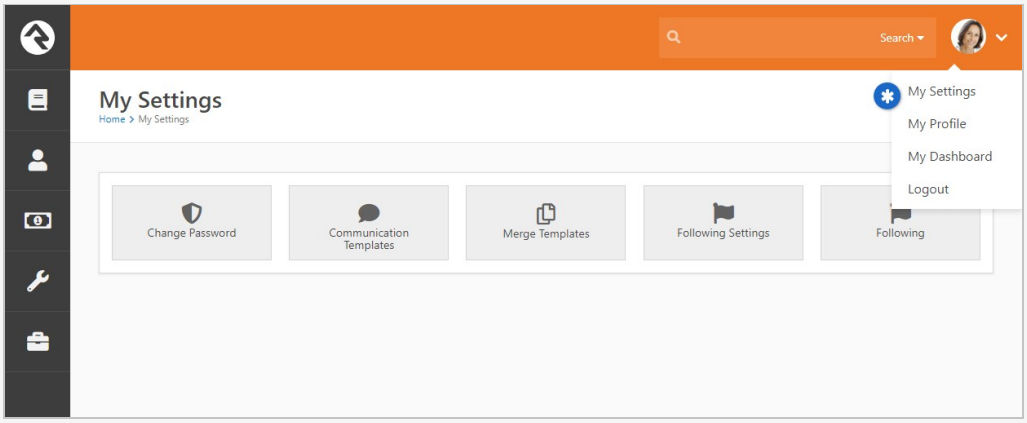
Many of the configuration items in Rock are made up of a list of valid values. Think about the *Marital Status* of a person. While we could have made this a textbox where anyone could type in the marital status of a couple, in today's world that could be a disaster. You'd probably get a million different answers to that question. Instead, it's better to limit the options to a finite list that makes sense to your organization.

The "valid value" concept is prevalent in numerous areas (*Record Status*, *Phone Types*, etc.) Instead of creating separate screens and logic for each of these, we came up with the concept of *Defined Types*. These are lists made up of values (*Defined Values*) that you get to configure according to your organization's needs.

My Settings

Rock offers several types of personal settings for each logged in individual. To help manage this Rock has a *My Settings* page which lives under the *Login Status* dropdown in the upper right of the internal pages. This page is a one stop shop for personalizing settings and configurations.

My Settings Page



Change Password

This is where the individual can change their password. Simple enough.

Communication Templates

This page allows the individual to access communication templates they are permitted to edit. You might find it convenient to secure certain templates so only a single person can edit them; they can edit those templates here even if they don't have access to the *Communications* page on the Admin Tools menu. For more information on templates, check out the `Communicating With Rock` and `Email Template Survival Guide` documents.

Merge Templates

The *Merge Templates* feature allows you to take a table of data and convert it into a formatted report or set of labels.

This page allows the individual to view, add, edit and delete personal merge templates. Merge Templates are covered in the Merge Documents section of this manual. In general though, templates uploaded here won't be available for use by other people.

Following Settings

Rock's following features allow an individual to be notified of activities in which they are interested.

From here, an individual can customize their *Following Settings*. You can read more about these features in the `Person and Family Field Guide`

Following

This page allows the person to view their current following list (the list of people and other items they have chosen to follow). You can read more about these features in the `Person and Family Field Guide`.

Background Checks

Background checks are an important requirement for most organizations these days. They involve the coordinated efforts of staff, security teams, service providers and other resources. Because of all these points of contact, it can take quite a while for background checks to process.

Using workflows to expedite the process helps prevent delays and maximizes the efficiency of your organization.

Rock seamlessly integrates with two background check providers, Checkr and Protect My Ministry. The procedure is similar for each, but we'll look at them separately beginning with Checkr.

Configuring Checkr

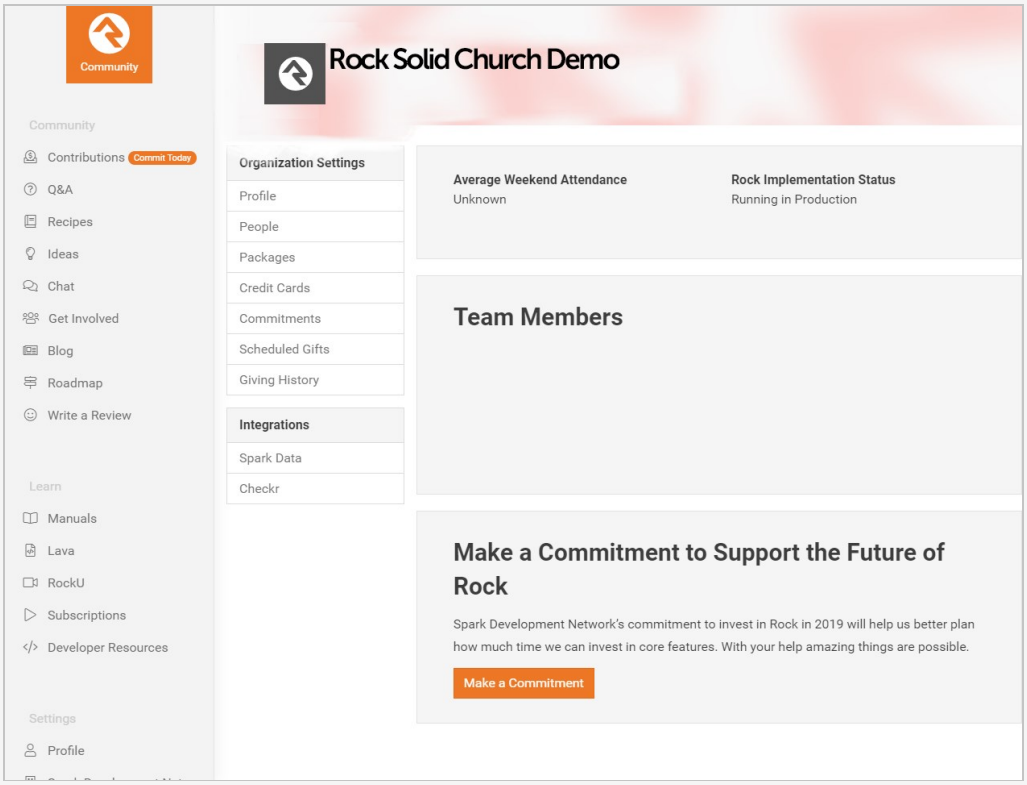
The first option for running background checks on individuals is Checkr. Once configured, Rock will default to using Checkr for background checks. You can easily change this default, however, which we'll look at shortly. First, though, let's look at the steps to set up your Checkr account.

Step 1: Sign-up

The first step in the process is to sign up for a Checkr account. You'll start from your rockrms.com account.

1. Log in at www.community.rockrms.com, and then click on the menu in the top right corner with your picture on it.
2. Click on "Your Organizations". In the center you'll see the organization(s) with which your account is associated.
3. Click on the organization you wish to set up with Checkr. Then, beneath the organization logo in the *Integrations* section, click the "Checkr" option.
4. Click the `Create New Checkr Account` button.
5. Once your account is set up, your organization page in the Rock RMS site will update with an Account ID and Access Token.

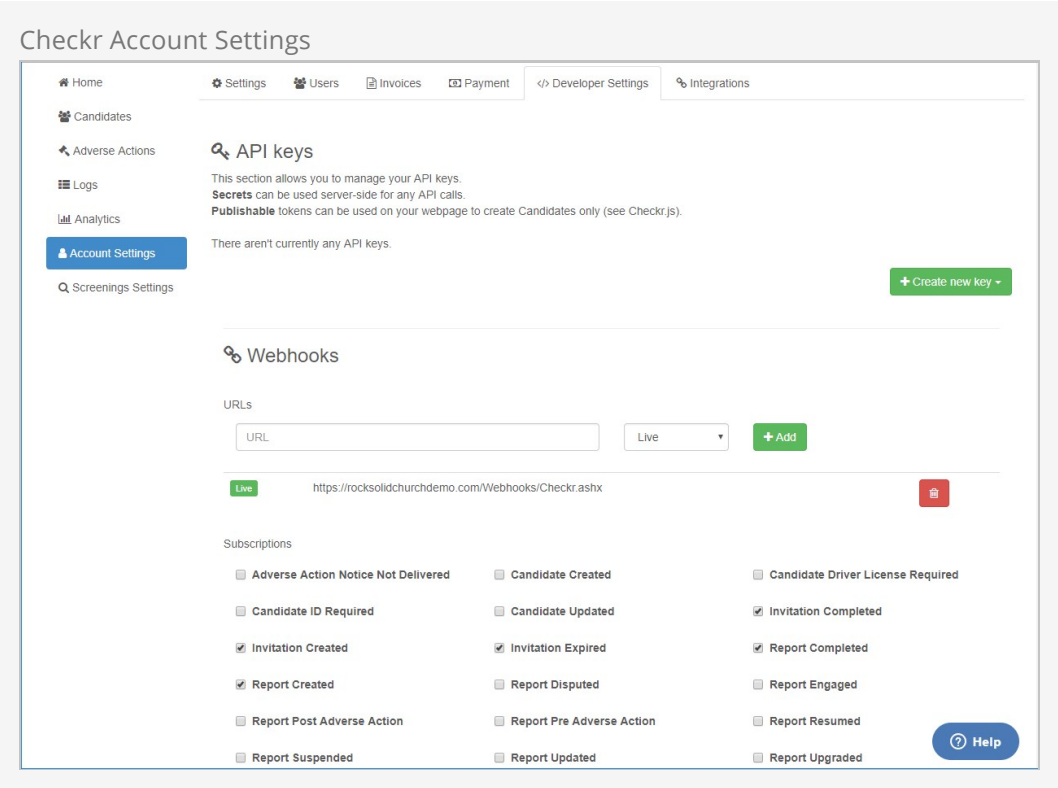
Organization Page on rockrms.com



Step 2: Set Up Webhook Inside Checkr

The next step is to set up Webhook inside Checkr. This tells Checkr where to send updates when background checks are complete. Begin by logging into your Checkr account at dashboard.checkr.com, then navigate to:

`Account Settings > Developer Settings`.



Type your Rock URL appended with `/webhooks/checkr.ashx` in the *Webhooks URL* field, select *Live*, then click `Add`. Finish by selecting the subscriptions shown in the above screenshot.

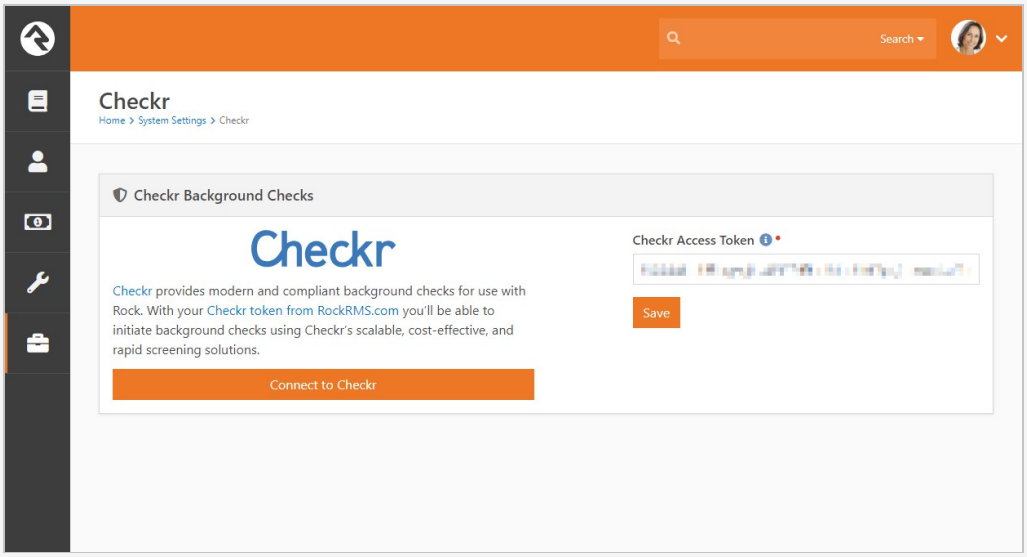
Step 3: Configuration

Now that Checkr is active, it's time to link your account to Rock. From within Rock, access the *Checkr* screen located at:

`Admin Tools > System Settings > Checkr`

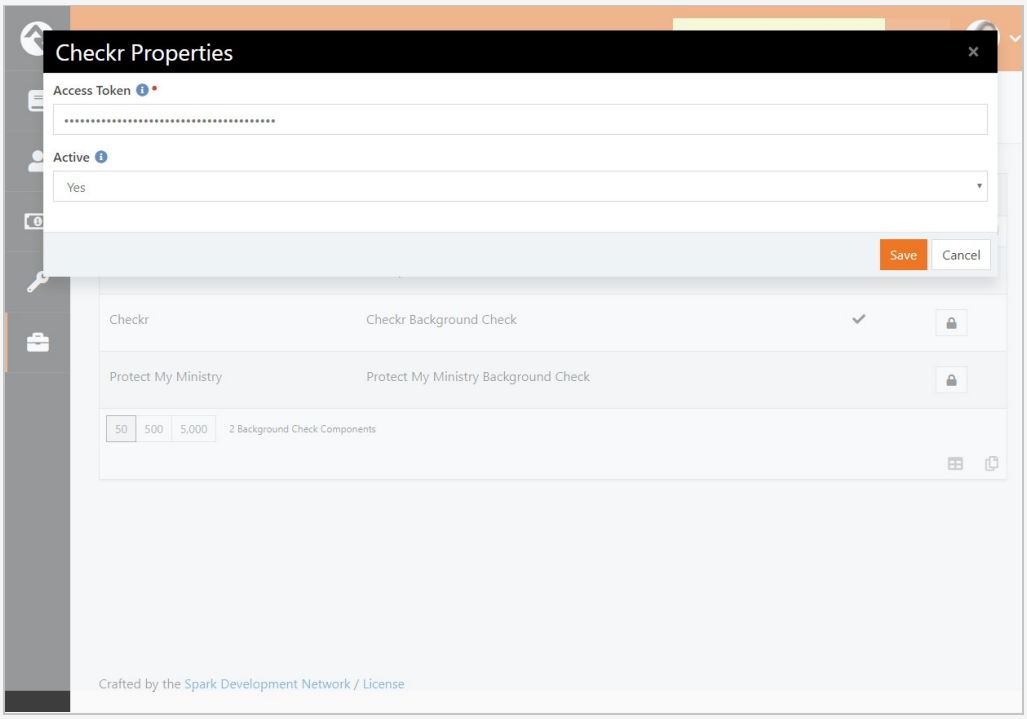
Enter your *Checkr Access Token* (from the Rock RMS website) into the field provided. Click `Save`. The Background Check Types list is automatically downloaded when you enter the access token. If you want to download an updated Background Check Types list, click the `Update Packages` button.

Checkr Background Checks



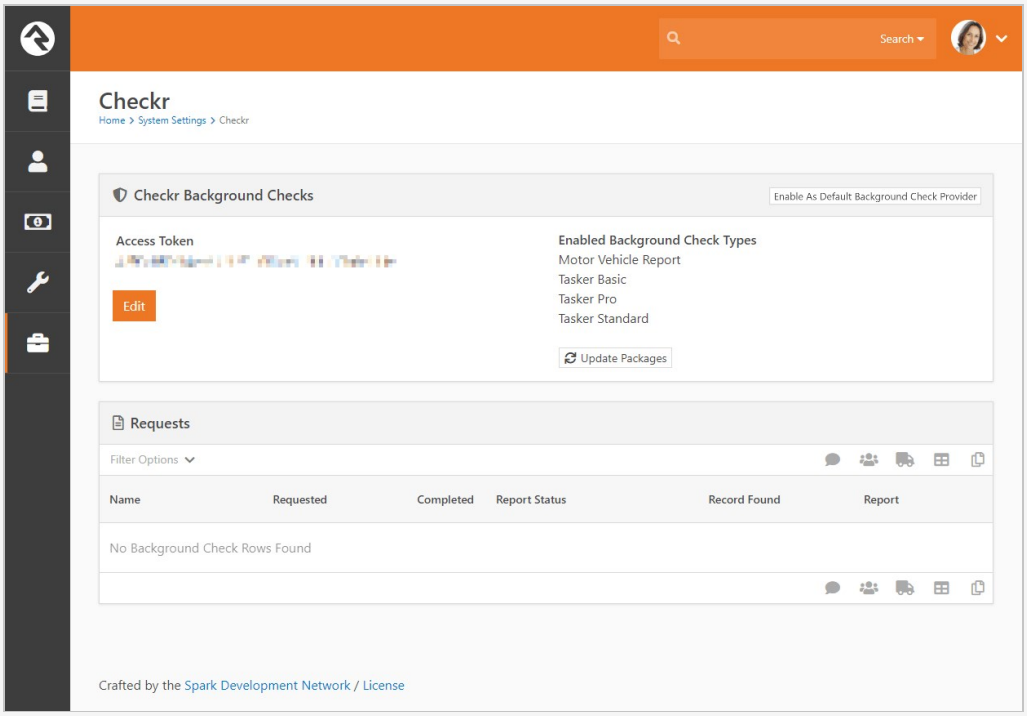
Checkr is now active by default in Rock. You can view Checkr's status in the *Background Check Providers* page in the System Settings under Admin Tools.

Background Check Providers Screen



(The Access Token should already be filled in for you at this point, since you provided it on the Checkr configuration page)

Enabled Background Check Types



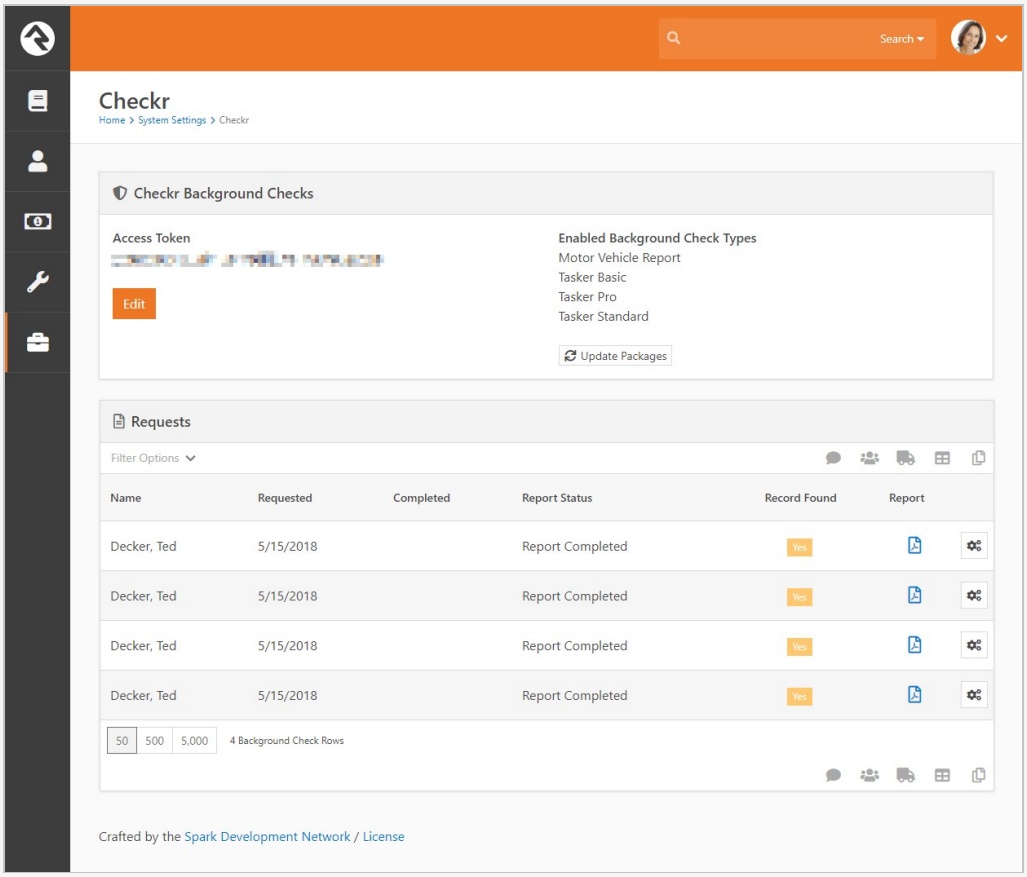
Set as Default

Note the `Enable as Default Background Check Provider` button. This button allows you to set Checkr as your default background check provider.

Viewing Checkr Requests

You can view all the requests that Checkr has processed in the *Checkr* page. This list is provided to help you see what's being processed at a high level. As you'll see soon, you can also view the results of a specific background check request from the *Workflow* and *Person Profile* pages.

Checkr Requests



Configuring Protect My Ministry

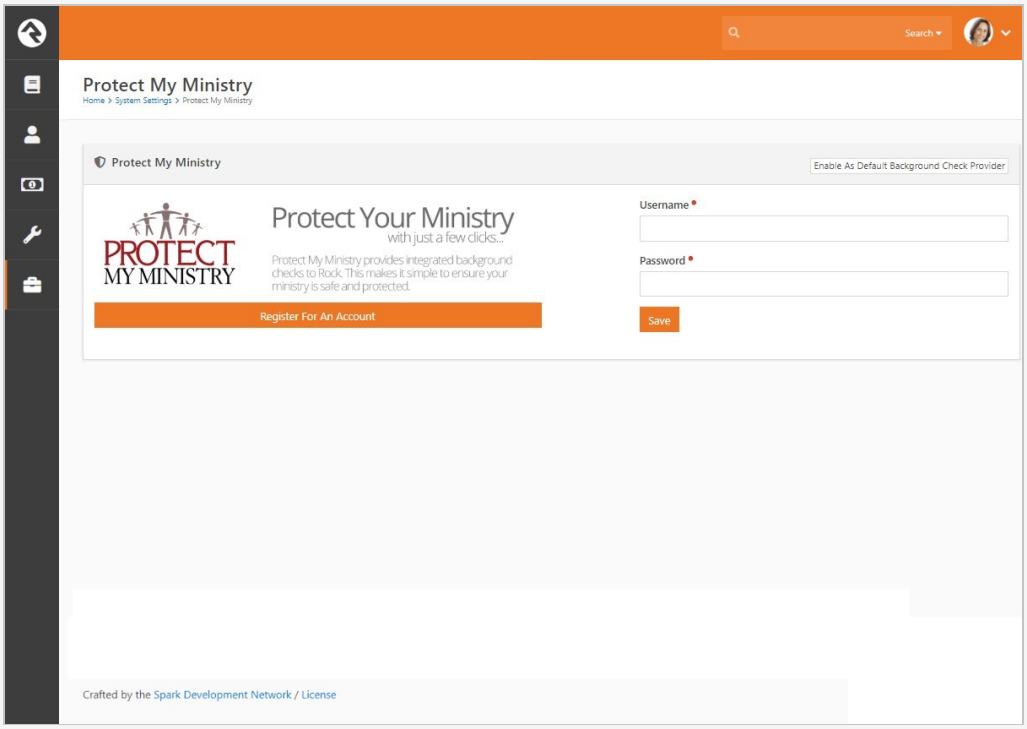
The second option for background checks is Protect My Ministry. Below are the steps for setting up and configuring this provider in Rock.

Step 1: Sign-up

The first step in the process is to sign up for the Protect My Ministry service. To do this, start at the *Protect My Ministry* page in Rock under:

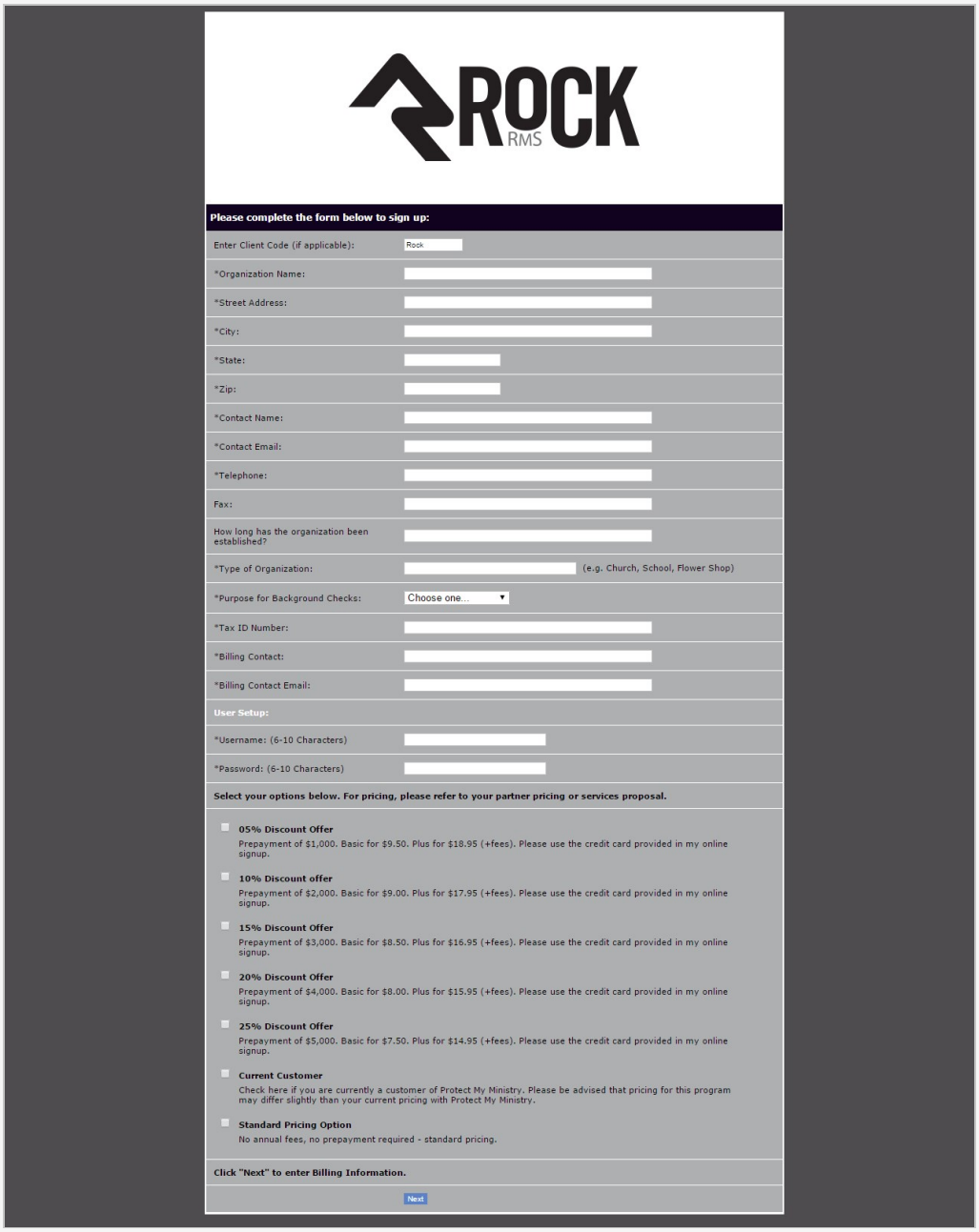
`Admin Tools > System Settings > Protect My Ministry`.

Protect My Ministry Start Page



Should you choose to register for a new account, click the `Register For An Account` button. You'll be taken to the *Protect My Ministry* website to complete the registration.

Protect My Ministry Registration Page

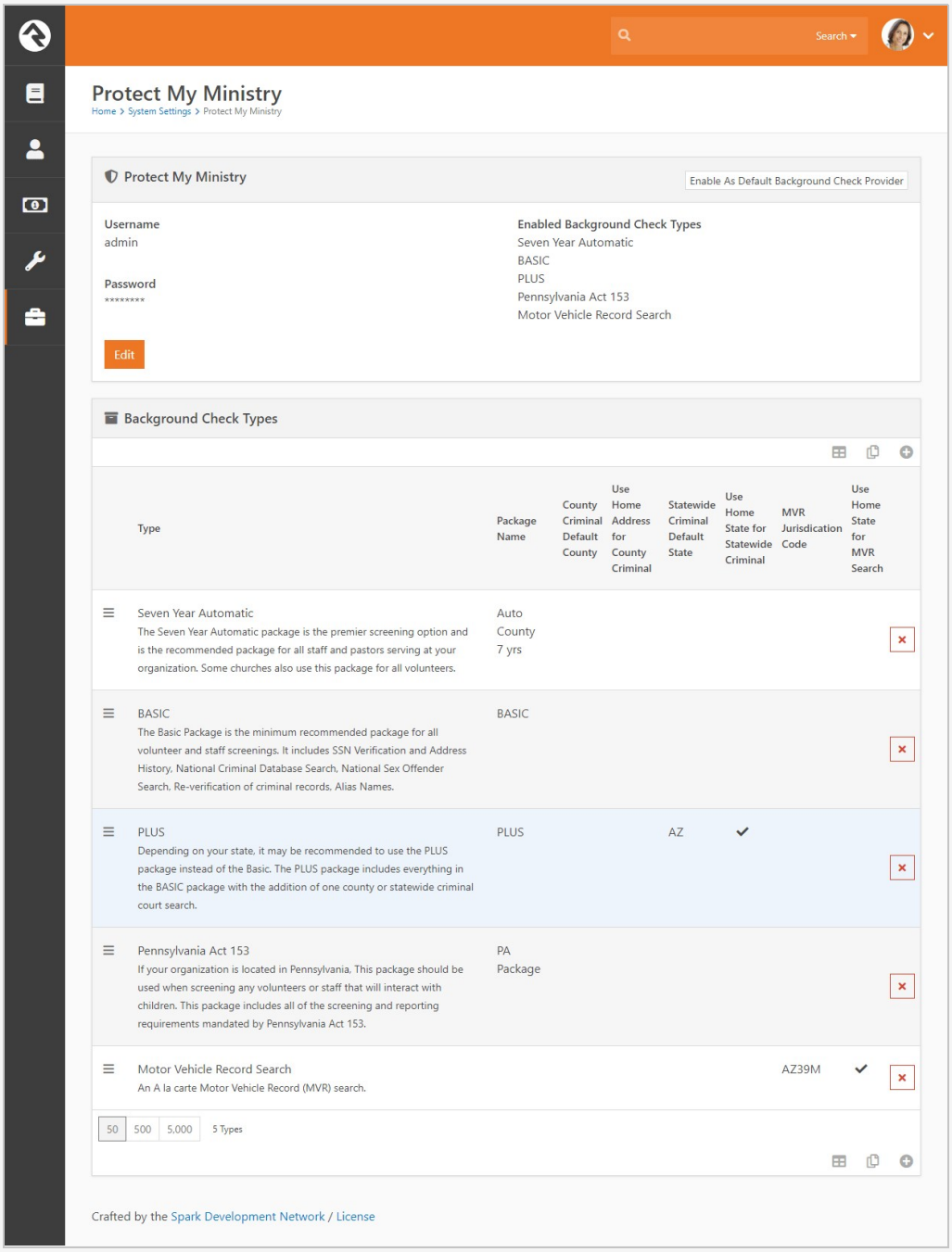


After completing the registration, come back to the Rock *Protect My Ministry* page and enter in the username and password you created. You'll then be taken to the *Protect My Ministry Detail Page*.

Step 2: Configuration

Once you've entered your account information in Rock, you'll see the details of your account on the *Protect My Ministry* page.

Protect My Ministry Registration Page



> Important:
> The **Result Webhook** setting will be populated automatically using your Rock *Public Application Root* Global Variable. However, this can be changed here if needed by clicking the `Edit` button. This address must be secured using SSL/TLS (must start with https://).
>
> Know that you can't simply change the http:// to https:// here, though, without having a valid SSL/TLS certificate installed and your web server configured properly. Google is your friend if you need help obtaining and installing a certificate.

You'll now want to configure the packages that are tied to your account. The most popular packages have already been made available to you through the integration. Each package has a brief description that outlines its specific merits.

There are several configuration settings for each package. Let's look at each setting and what it means.

- **Package Name** This is the PMM name for the package. It must be an exact match to what's in their system, so please don't change it unless instructed to.
- **County Criminal Default County** Depending on your state it may be recommended that you provide a county on your request. If so, this will be the default county to use if one isn't present on the address of the person you're checking. You can check your state's requirements using this map from PMM.
- **Use Home Address for County Criminal** This too will depend on the state in which you live. If your state is recommended for the county search, you'll want to enable this option.
- **State Criminal Default State** This is the default state to use when doing a state criminal request. This option is defaulted to the state that's most common in your database, but feel free to change it.
- **Use Home State for Statewide Criminal** This setting determines if the state from the address should be sent.
- **MVR Jurisdiction Code** This setting determines jurisdiction to use for MVR (Motor Vehicle Records) searches. You can select your area from the list provided. This is only needed for MVR type searches.
- **Use Home State for MVR Search** This determines if the state from the home address should be sent for the MVR search. This is only needed for MVR type searches.

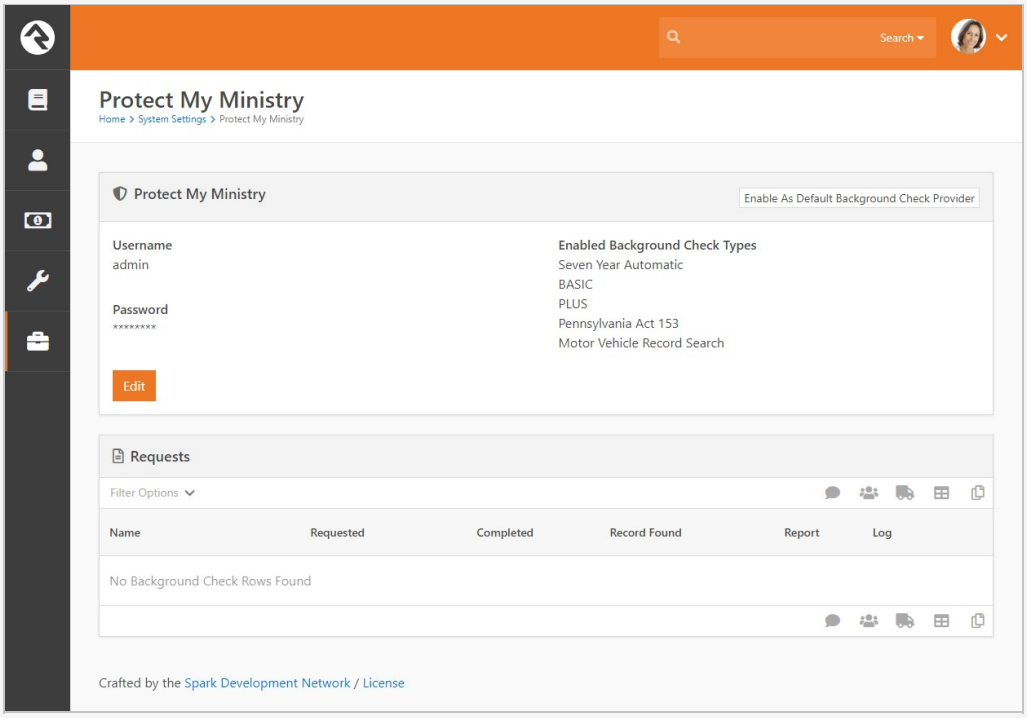
While you can add new packages using the settings above, the packages provided should meet all your needs. You may need to edit some of the configurations to meet the recommendations for your state. This decision centers around whether you should be doing a state or county search.

Viewing Protect My Ministry Requests

From the *Protect My Ministry* page you can also view requests that have been processed. This list allows you to see what's being processed from a high-level

perspective. However, it's much easier to see the results of a specific background check request from the *Workflow* and *Person Profile* pages. We'll talk about that next.

Protect My Ministry Requests



Background Check Administrators

Background check admins have access to all background check details and the ability to approve or deny them at several points in the process.

Before you start processing, you'll want to configure the person or people who will be included in this security role under `Admin Tools > Security > Security Roles > RSR - Background Check Administration`.

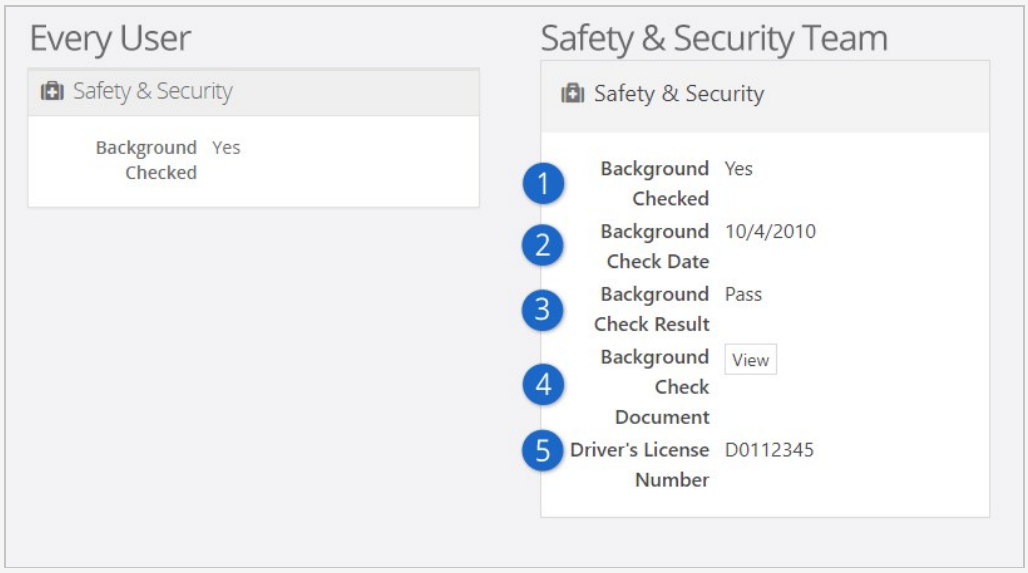
Processing Requests

Several different organizational needs kick off a background check request workflow. For instance, you may be hiring a new staff member, screening a potential volunteer, updating person profile records or transferring someone into a new position. Whatever the reason, it's usually a staff member who needs to start the request for a background check.

To see if an individual has completed a background check, go to the *Person Profile* page and look under the *Extended Attributes* tab.

Staff will be able to see either a *Yes* or *No* in the *Background Checked* field. Background check administrators can see three additional fields and have editing privileges.

Background Check Person Attributes



1. **Background Checked**
   Will have the checkbox either checked or empty.
2. **Background Check Date**
   Will have the date the check was completed, if applicable.
3. **Background Check Result**
   Will show either *Pass* or *Fail*.
4. **Background Check Document**
   Will have a complete PDF of the background check results, if a check has been completed.
5. **Driver's License Number**
   Will have the license number, if provided.

> Make It Quick:
> If you want greater visibility for Background Checks on your *Person Profile* page, consider adding a badge to the *Badge Bar*.

How It Works

Initiating A Request

Background checks can be initiated from an individual's *Person Profile* page. In the upper right corner is a drop down menu called `Actions`. Click on the *Background Check* option. The initial request will save both the person and the requestor, while prompting the requestor to provide any key missing details such as social security number, campus, type, etc.

> Just A Double Check:
> Rock will automatically look for previous background checks for that individual within the last year. If it finds another check within that timeframe, it will notify the requester, who will have to confirm that they want to request another background check before proceeding.

Workflow

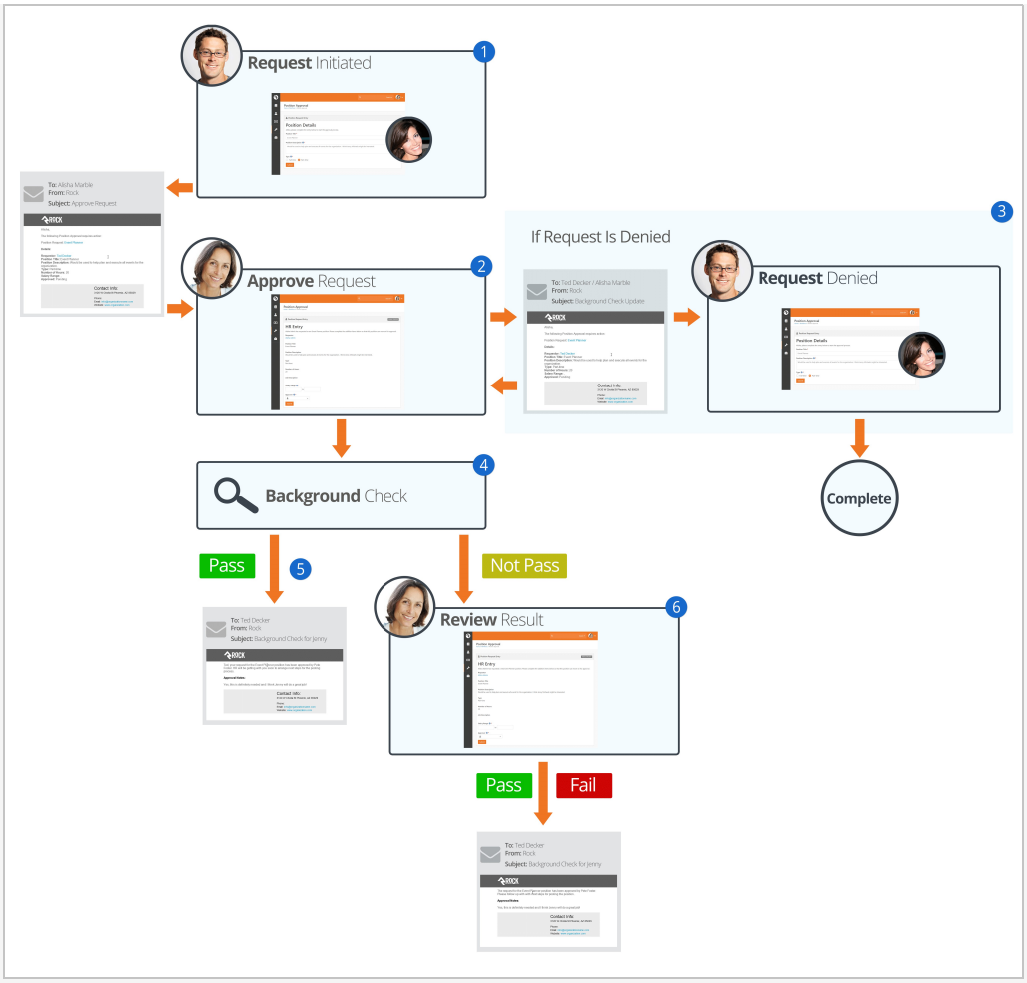
The background check workflow has eight possible activities. Like many other aspects of Rock, it's customizable. You may find that you'd like to configure your background checks a little differently for your organization. For instance, you could add a step to the process after a staff member requests a background check that notifies a volunteer to provide their own social security number.

To review or modify the workflow configuration, go to:

`Admin Tools > General Settings > Workflow Configuration > Safety & Security > Background Check`.

For more details on workflows in Rock, see `Blasting Off With Workflows`. A chart of the out of the box workflow is below.

The Lifecycle Of A Request



1. **Initiate**
   A staff member will initiate a request.

2. **Notify**
   Individuals in the 'Background Check Administrators' security role will be notified of the request, and will either Approve or Deny it.

3. **Denied**
   If the request is denied, a notification will be sent to the requestor, who can then update the request and resubmit it or cancel the request.

4. **Approved**
   If the request is approved, it will be submitted to your organization's background check provider to be processed.

5. **Results**
   If the background check comes back as 'Pass', Rock will update the *Person Profile* page with pass/fail results and a PDF copy of the full report. The requester will also be notified of the completion.

6. **Review**
   If the check comes back with a status other than 'Pass' the workflow will notify the individuals in the 'Background Check Administrators' application group to review the results and determine if the background check should be passed or failed. The results will then be emailed to the requester.

Locations

With the development of mapping technologies, location has taken on a new importance in our lives. Concepts like proximity, distance and location are common in our everyday lives and our interactions with others. Rock has a very robust location strategy. It's important that you understand all the possibilities as you set out to implement it in your organization.

Location Descriptors

When you create a location, you can define several location descriptors:

- **Street Address:** This is pretty obvious, the street address of the location.
- **Latitude / Longitude Point:** The lat/long point is simply the latitude/longitude of the address. You can set this by either providing an address and allowing Rock to convert it to a lat/long using the built in address standardization service or you can reference the point using Rock's location picker.
- **Geo-fence:** A geo-fence is a virtual perimeter for a real-world geographic area or boundary. Geo-fences are used by Rock to define things like regions for groups and to power future mobile applications like check-in. Rock allows you to draw these fences right in the address picker.

Types of Locations

There are two types of locations in Rock. Let's take a look at each and see how they are used by Rock.

Positional Locations

Positional locations describe places you could point to on a map. By themselves they don't tell you anything about the point, just its location on the map. They only find meaning when they are used by features like *Families* (to describe where they live) or *Groups* (where they meet).

Named Locations

Named locations have position and meaning. The meaning comes from giving the position a name. For instance, after install there's a *Main Campus* location that describes your organization's campus.

Named locations can also have hierarchy. Think again to your organization's campus. The campus itself is a location, but it's also made up of sub-locations like buildings. Buildings have locations too - rooms. Having hierarchy allows Rock to build rich location

contexts into applications like check-in.

Named locations must be setup under `General Settings > Named Locations` before they can be used in the application.

Address Standardization and Geocoding

Your attendees' addresses are very valuable, so it's important that they are formatted correctly and validated through the USPS database. Also, in order for these addresses to be used with the latest mapping technologies it's important to convert them into latitude and longitude points through a process called geocoding. Fortunately, Rock makes both of these tasks simple.

As addresses are entered into the system, Rock will automatically send them to an online service to standardize and geocode them. This service will ensure that:

- Addresses are formatted correctly (e.g. fix upper / lower case issues)
- Items like Streets, Avenues, West and East are abbreviated correctly
- Zip+4 is researched and added
- Latitude and longitude are added to your addresses

Out of the box Rock uses SmartyStreets to provide this service. SmartyStreets is a service for address standardizing and geocoding capabilities. They have also generously granted the Rock community a license to use their service for free. We've built this license directly into the product so there's nothing you need to do to enable this functionality. Just sit back and enjoy quality addresses.

While you don't need to configure anything to enable SmartyStreets, there are settings of which you should be aware:

- **Acceptable DPV Code** - This setting determines the acceptable quality match for standardizing an address. You can find all of the options on the SmartyStreets documentation site. The default settings is 'Y,S,D' which is a full or partial match.
- **Acceptable Precisions** - This setting is similar to the DPV code but is related to the required precision of the geocoding in order for it to be considered a successful match. You can find more information on the SmartyStreets documentation site. The default setting, 'Zip7,Zip8,Zip9' determines a successful match if the address is matched at Zip+2 (e.g. 85383.23__) or better.

If you'd like to make changes to the services used by Rock, you can under: `Admin Tools > System Settings > Location Services`.

There you'll see a list of services that Rock supports. Not every service supports both standardization and geocoding.

Service Name	Description	Service Type	Cost
SmartyStreets	SmartyStreets is the default solution because of their high-quality results and free license for the Rock community. Find out more on their website.	Address Standardization & Geocoding	Free
Bing	Microsoft's Bing mapping service	Geocoding	Free

Service Name	Description	Service Type	Cost
	provides a free geocoding service. The service does have a few limitations. You can only make a maximum of 5,000 requests a day and 125,000 in a 12-month period. For most organizations, this will be more than enough. We've even built in a daily transaction limit so you won't have to worry about going over on any given day. This service requires a key. To get your free key, follow these simple steps: This service does require a key to use it. To get your free key, follow these simple steps: 1. Go to the Bing Maps Portal. 2. Sign in using a Microsoft Account or create a new account. 3. With an account set up, you'll need to contact Bing Maps directly to get a Non-Profit key. Reach out to mpnet@microsoft.com to get in touch with the Bing Maps account team. 4. After you've obtained your key, it can be added to Rock under `Admin Tools > System Settings > Location Services > Bing`. While the Bing service provider isn't a true address standardization component it will do some format cleaning of the addresses you provide. For instance it will put your addresses in the proper case and fix any minor missing elements. It won't, however, add zip+4 information. It also removes apartment numbers from addresses.		
Service Objects	Service Objects is another paid option for geocoding data. You can find out more about their service on the Geocoding Product website.	Geocoding	$120/m for 5,000 transactions
StrikeIron	Like Service Objects, StrikeIron provides a paid option for	Geocoding	Must request a

Service Name	Description	Service Type	Cost
	geocoding data. You can find more information on their website.		quote
Melissa Data	Find out more about Melissa Data's address standardization service on their website.	Address Standardization	Must request a quote

> ### Want Even More Options?
> If you have a developer handy, you can even write your own location service provider to add to the list.

Email Configuration

Email is an important part of your communication strategy. Getting it configured in Rock should be one of your first priorities after install.

Like many aspects of Rock, you have choices when it comes to email. We highly recommend using an email service that will provide additional services like bounced mail processing, the ability to track when emails have been opened and when links have been clicked. Rock ships with Mailgun but others are available in the Rock Shop.

Email Settings

The configuration items you provided during the install can be updated under `Admin Tools > Communications > Communication Transports`.

Email is sent from Rock using a communication transport. Think of this as a delivery service. Just as you might pick between sending your package via UPS or FedEx, Rock gives you options when sending out your emails.

Mailgun Email Service

Mailgun is an email delivery service that provides several advanced features. Mailgun is operated by the popular web hosting company Rackspace and is used by numerous online businesses.

Mailgun HTTP

Mailgun HTTP is the quickest and easiest way to send emails. This transport sends the email to Mailgun with their newer HTTP API. Below are the settings Rock needs from your Mailgun account.

Setting	Description
Base URL	You can view or change the API URL from Mailgun.
Active	This setting turns the Mailgun service on or off.
Resource	This will be populated with a URL provided by Mailgun.
Domain	Enter your organization's domain for email.
API Key	The API key is provided to you by Mailgun.
Track Opens	If enabled, this setting allows Rock to report whether an email was opened.

Mailgun SMTP

This transport delivers the emails to Mailgun with their SMTP API. Below are the Mailgun SMTP settings in Rock.

Setting	Description
SMTP Hostname	This is the SMTP host. The default setting will work here in most cases.
API Key	The API key is provided to you by Mailgun.
Active	This setting turns the Mailgun service on or off.
Domain Login	Enter your Mailgun provided username.
Domain Password	Enter your Mailgun provided password.
Port	Indicate the port on your server that should be used for communications. Ports 587 or 2525 are often used, especially if you're encrypting the sending.
Use SSL	Set whether your mail server supports sending emails via an encrypted SSL session.
Track Clicks	If enabled, clicks on sent emails will be tracked.

SMTP

Below are the configuration items that are needed to enable SMTP emails to work. If you're unsure what these values should be, consult with your ISP or your organization's IT support.

Setting	Description
Active	This setting turns the SMTP service on or off.
Server	Provide the SMTP email server that Rock should use to send the emails through.
Port	Indicate the port on your server that should be used for communications. This will typically be port 25 but port 587 is often used if you're encrypting the sending.
Username	If your email server requires you to authenticate to relay email, this is where you'll provide the username.
Password	When enabling authentication, this will be where you set the password.
Use SSL	Set whether your mail server supports sending emails via an encrypted SSL session.

Most organizations will set these values to their established email server, but some very

small organizations might not have a central or common server. For example, some might run completely off of a Gmail account. Below is what you would enter for each of these settings.

> Warning
> Using Gmail settings is not a recommended configuration for organizations sending out large bulk emails. We're providing these settings only as a service for small organizations.

- **Server:** smtp.gmail.com
- **Port:** 587
- **Username:** (your Gmail username "xxxx@gmail.com")
- **Password:** (your Gmail password)
- **Use SSL:** True (checked)

Sending bulk email is difficult in today's age of spam and spam filters. Simply configuring an ISP or Internal Exchange Server isn't enough if you want to ensure all your messages will make it to their intended recipients. To do that, you need to confirm your DNS has proper SPF and Domain Key records and ensure that you're not on any blacklists. Even for the largest organizations, this can be an overwhelming task.

Wherever a problem exists, a new service will be created to help solve it. That has certainly been the case in the area of email deliverability. With the importance of email and the complexity of getting your environment right, it makes sense for most organizations to outsource the sending of their emails. These services specialize in getting it right and the pricing is fairly reasonable. Rock ships with the Mailgun transport, but you can check the Rock Shop for integrations with other transports such as SendGrid.

> Tip:
> Some of these vendors have free accounts that would suffice for many small organizations. Mailgun, as of the time of this writing, has a free starter package that generously gives you 5,000 emails a month for your first three months. After that you can pay by the number of emails you send, or purchase a different plan. For full details and up-to-date pricing visit their website. In our experience, Mailgun's pricing has been very competitive and their features are among the best in their class.

> Note:
> We realize that a list of recommended vendors is helpful, but sometimes it can also be overwhelming. If you're looking for a single recommendation, we'd say start with Mailgun. We use them ourselves for the Rock site and have been very happy with the setup and deliverability to-date.

These services do require some minor changes to your organization's DNS settings, but they walk you through the process online to make it easier.

Configuring Deliverability Services

While each of the vendors listed above have their own custom API for sending emails, they also allow you to send via SMTP using their servers. Once you get set up they will provide you with the values needed for the SMTP settings above.

Currently, the only email transport provided by Spark that supports these features is the Mailgun transport. For more information on configuring this transport see the Integrations chapter of the `Communicating With Rock` guide.

Securing Rock

Many items in Rock can be secured to protect access to sensitive information. While we hope that you find the default security settings and roles to be a good start, it's important that you understand how security works so that you're able to configure it in a way that makes sense for you and your organization.

Security Roles

While you can provide detailed security for every person individually, it's often tedious and problematic. Security roles, on the other hand, are much more flexible and far less prone to error.

> Tip:
> We highly recommend learning the Rock pattern for security before making changes or additions. It's always easier to swim downstream than upstream, but you must first know which way the river is flowing before you dive in.

Having a well thought out strategy for security roles is critical. Too simple and individuals might have more rights than they need; too complex and security will be difficult to maintain.

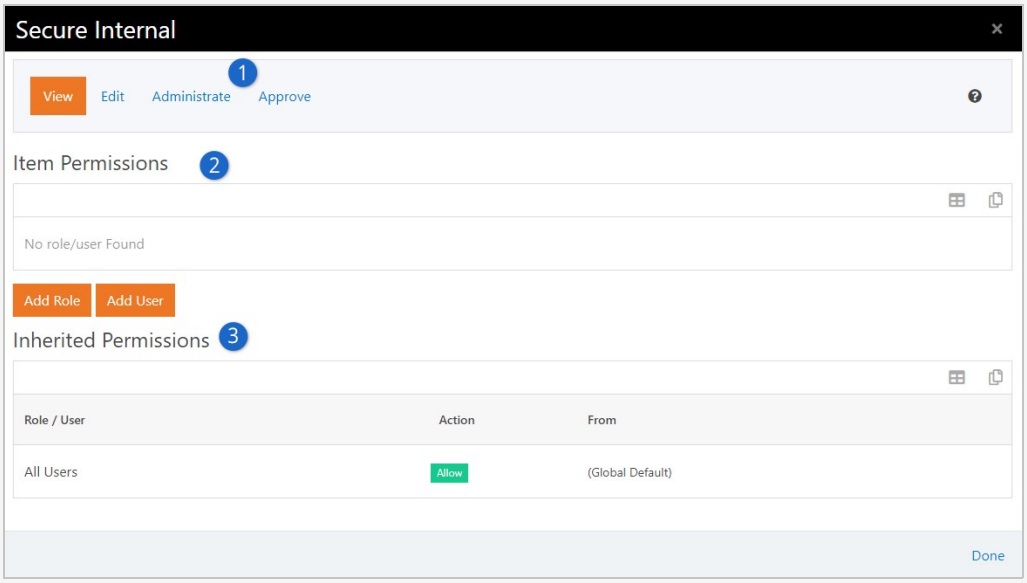
We've worked hard to lay a security foundation that makes sense for you to build on. We strongly recommend you closely review the security roles that ship with Rock before you start setting up your organization's security. You can find those roles under `Admin Tools > Security > Security Roles`.

> Tip:
> Do you have an existing group whose members also need access to a particular page or item? You can enable any group to also act as a security role. In the group viewer, simply check the group's *Security Role* property and it will show up in the security role lists.

Permissions

Wherever you see the `🔒` icon you can manage the security of the item being displayed. Clicking the icon will bring up the *Security Editor* shown below.

Security Editor



1. **Actions**
   The first thing you'll see is a tabbed list of the security actions available for the item. Typically these will be *View*, *Edit* and *Administrate*. You'll set permissions for each of these actions.

2. **Item Permissions**
   The *Item Permissions* area is a list of the specific permissions defined for the item. If there are no specific permissions set for this particular item, the list will be empty. In these cases, security is being inherited from its parent. But now we're jumping ahead...

3. **Inherited Permissions**
   Most items don't have permissions of their own. They inherit their permissions from their parents. For the most part, you'll only add *Item Permissions* when you want to increase the security of the item. This is a very powerful concept. It keeps you from having to constantly and consistently tweak the security of each item. It also allows you to change the security of an item and let the change trickle down to all of its children.

> Note:
> The Inherited Permissions list tells you which parent item has set the security. This allows you to easily find the parent and fix any incorrect security.

Setting Permissions

When setting permissions you'll add either an individual or, more commonly, a security role to the permissions list to either *Allow* or *Deny* access. The order of these permissions is very important. The way the system works is that it starts at the top and works its way down the list looking for a matching rule. The first rule that matches the logged in individual will be implemented, either granting or denying access. Crafting the

order of these permissions is important.

Let's look at an example. First, we'll look at a case where a page should only be viewed by staff members (and not volunteers or other individuals accessing Rock).

Incorrect Permissions:

Name	Allow / Deny
All Users	Deny
All Staff	Allow

The above setup might look correct at first because both roles exist with the proper access. It's true that staff should have access and other non-staff users should be denied. However, remember that Rock works through security from the top down. Because Staff are also Users, the system will stop at the "All Users | Deny" level and won't allow access.

Correct Permissions:

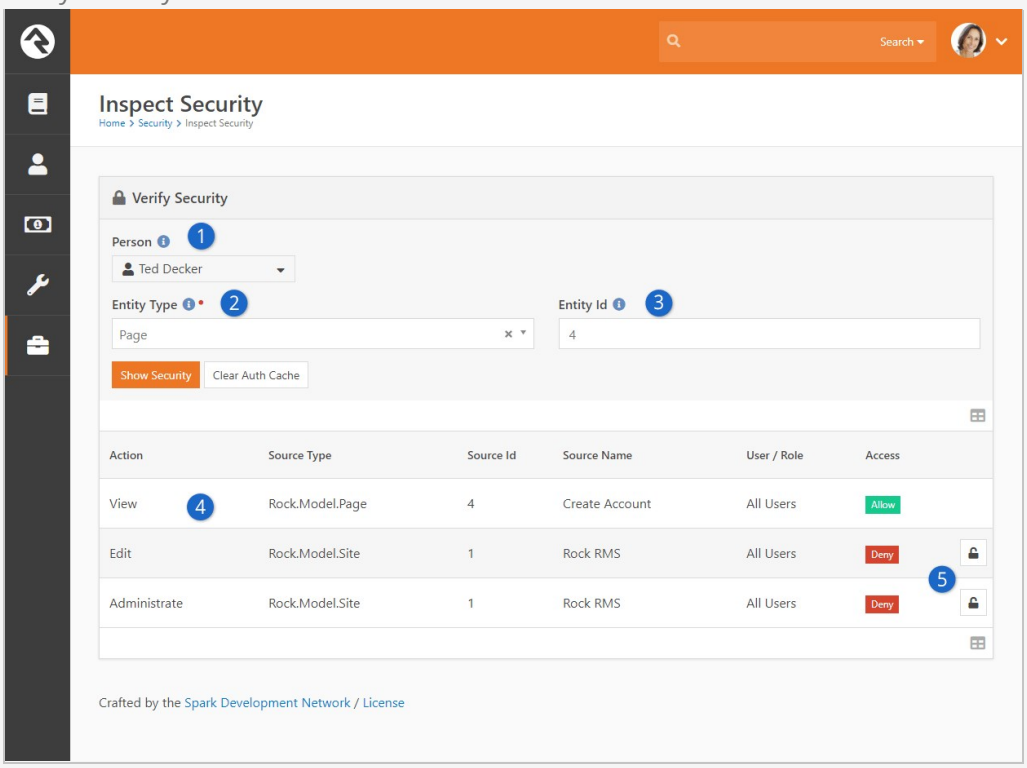
Name	Allow / Deny
All Staff	Allow
All Users	Deny

Now the logged in staff person will match on the first rule and be granted access. Processing of the subsequent rule won't occur for this person, so even though the staff person is also in *All Users*, they will still be granted access. An individual without the *All Staff* role will cause the system to keep checking down the list, where it will find a match at the *All Users* level and deny access accordingly.

Verifying Permissions

There may be times when you want to view a quick snapshot of a person's security permissions. You can do this in the *Verify Security* block, found in `Admin Tools > Security > Inspect Security`.

Verify Security Block



1. **Person**
   Search for the person whose security permissions you want to view.
2. **Entity Type**
   Select the entity type you want to verify. For example, if you want to view the security on a page, select 'Page'.
3. **Entity ID**
   This field is where you enter the Integer ID or Guid of the entity you want to view. For example, if you want to view the security of the external homepage (which has the Guid of '1'), type "1" in this field.
4. **Security Permissions**
   This is the list of security permissions for the person based on the search criteria.
5. **Unlock Security**
   This button allows you to quickly unlock security permissions.

This snapshot view allows you to do a couple of handy things.

First, it allows you to view the source of a person's effective security permissions. If, for example, someone should have access to a particular page or function but doesn't, the *Verify Security* block allows you to quickly view where the Deny rule is coming from. Keep in mind that the security permissions of particular entities (e.g., pages, groups, etc.) not listed here may cause additional limits to the person's access.

Second, and perhaps more importantly, it allows you to restore your own permissions

when you accidentally lock yourself out. Don't be embarrassed; it happens to everyone. The *Verify Security* block allows you to quickly unlock your access without having to go into the database. Simply click the 🔓 button.

Updating Rock

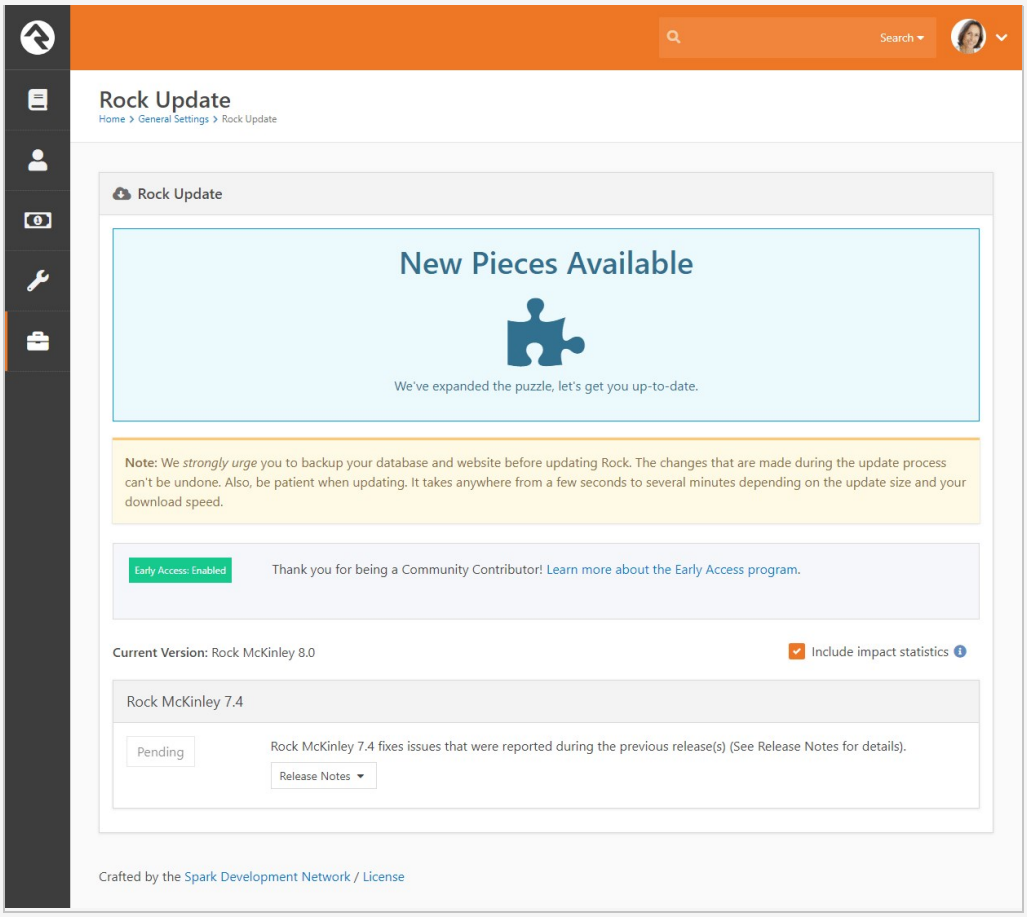
We know how important Rock is to your organization. That's why we dedicate so many resources to providing you with timely bug fixes and a steady stream of new features. That's also why we've built a sophisticated, yet simple, update process.

The update screen can be found under: `Admin Tools > General Settings > Rock Update`.

From this screen your server will initiate a quick check to Rock's server to see if there are any new updates available. If there are, the updates and their descriptions will be displayed. Once you decide you're ready, simply click the `Install` button next to `Update` and Rock will do the rest.

> Warning:
> Updates can't be undone, so be sure you have a backup of your system before installing the updates.

Rock Updates



Questions About Updating

Do I have to update to the latest version?
Depending how often you update, you may see several updates available. You don't necessarily need to update to the latest and greatest version. You can update to any version you wish. Doing so will install all of the previous updates up to that point.
Can I skip a specific update?
No, updates are cumulative. You can't skip over a specific update or patch.

Data Integrity

With data coming into Rock from all directions, it can be a real challenge to keep it all clean, consistent and accurate. To help you out with that, we've built tools that find and fix issues as they arise. You'll find these tools under:

`Tools > Data Integrity`.

Only individuals in the *Data Integrity User* security role will have access to these tools.

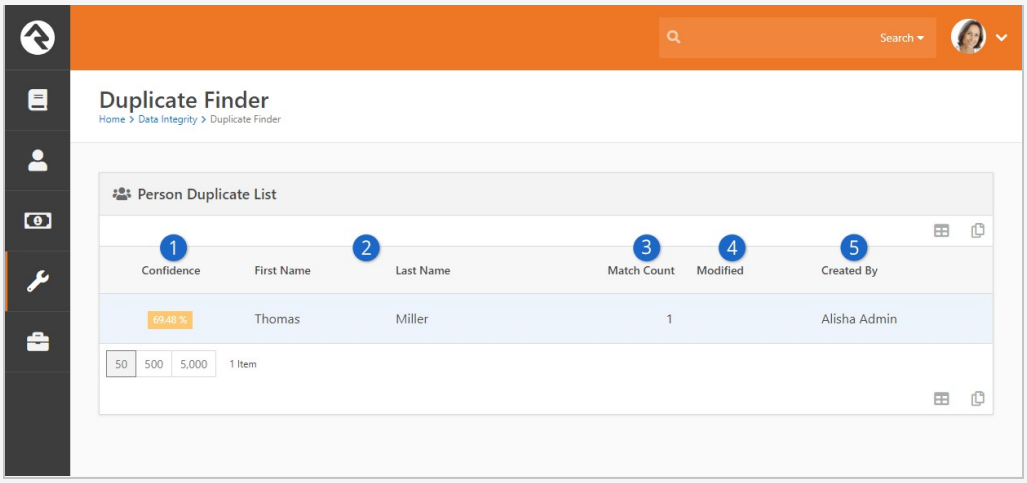
Let's look at each one in detail.

Duplicate Finder

The duplicate finder routinely goes through your database looking for records that could be duplicates. When it finds possible matches, it scores them and lists them for you under:

`Tools > Data Integrity > Duplicate Finder`.

Duplicate List



1 **Confidence**
Indicates the likelihood that this is a duplicate record.

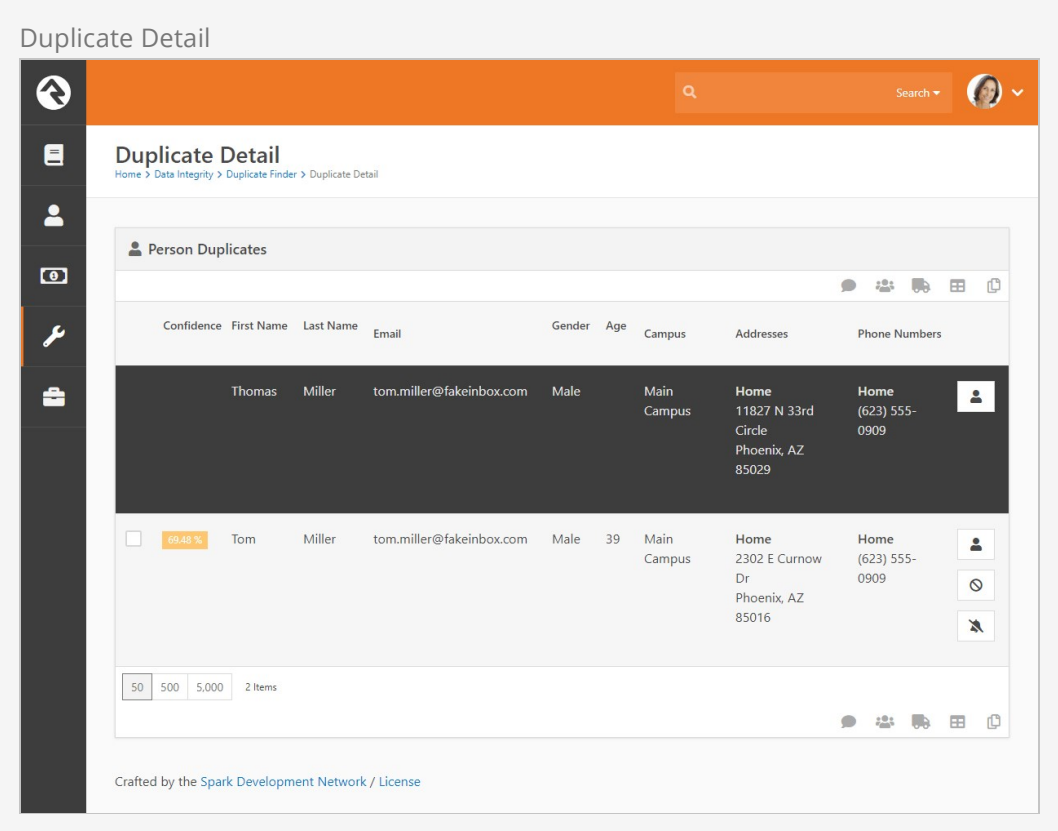
2 **Name**
The first and last name of the individual.

3 **Match Count**
The number of possible duplicate records for this person.

4 **Modified**
The date and time the duplication record was modified. This is another data point to help you determine if a record is a duplicate.

5 **Created By**
The person (or possibly application) who created the duplicate record. This helps determine how the duplicate may have come into existence and which data point might be more accurate.

Clicking on a row will take you to the duplicate detail screen.



The top row represents the source record and the rows below represent possible duplicate records. If any of these rows are duplicates, you can select them and select the icon in the grid footer to merge them. Each record has a series of buttons to the right. These buttons perform the actions defined below.

- Opens the *Person Profile* page for this individual in a new window.
- Tells Rock that this record is definitely not a duplicate of the record above.
- Tells Rock that there's currently no way to be sure if this record is a duplicate of the one above. Selecting this will keep Rock from showing it as a possible duplicate until more information is available. If you're uncertain whether two records are duplicates or not, you can simply decide not to do anything yet. As more data is added to the records, Rock will update the match scores to reflect a more accurate prediction.

Detail-minded admins might be interested in how the percentages are calculated for duplicate records. The out-of-the-box logic compares two records based on a points system. Points are awarded based on the following factors:

- Email Match (4pts)
- Partial Name Match (First 2 characters of the first name plus full last name) (1pt)
- Full First Name Match (3pts)
- Full Last Name Match (3pts)
- Suffix Match (4pts)
- Cell Phone Match (4pts)
- Non-Cell Phone Match (2pts)
- Address Match (2pts)

- Birthday Match (3pts)
- Gender Match (1pt)
- Campus Match (1pt)
- Marital Status (1pt)

A percentage is then calculated by comparing the number of points scored to the total possible points.

Reports

There are several *cleanup* reports that have been created to help you identify records that need your attention. Feel free to add your own reports here. Each of the reports that ships with Rock is documented below.

Report Name	Description
Self-Inactivated Individuals	This report lists individuals who have inactivated themselves from the database. This usually comes from using the unsubscribe link at the bottom of bulk emails. You'll want to go through this list occasionally to inactivate the other individuals in their families. You'll also want to read through the inactive reasons to get a pulse on why individuals are leaving the organization.
Pending Individuals	When someone registers on the website, their individual record status is set to *Pending*. This allows you to view the record and determine if it's a duplicate record. Once you go through them all, you'll want to bulk update their statuses to *Active*.
Individuals with Duplicate Phone Numbers	This report finds different individuals who share the same phone number. You can also use this report to identify individuals who have the same phone number listed more than once on their profile.
Individuals with Duplicate Emails	Like the duplicate phone numbers report, this report finds different individuals who have the same email address. This may be common, especially for families.

Workflows

Workflows can be set up to help automate the process of data integrity. Feel free to add your own. We've outlined the ones that come with Rock below.

Workflow Name	Description
DISC Request	This drives the DISC assessment request workflow.
Person Data Error	This is the workflow that's accessed from the *Actions* list of the *Person Profile* page.
Photo Request	This drives the photo request workflow.
Request	This is the workflow that's accessed from the *Actions* list of the

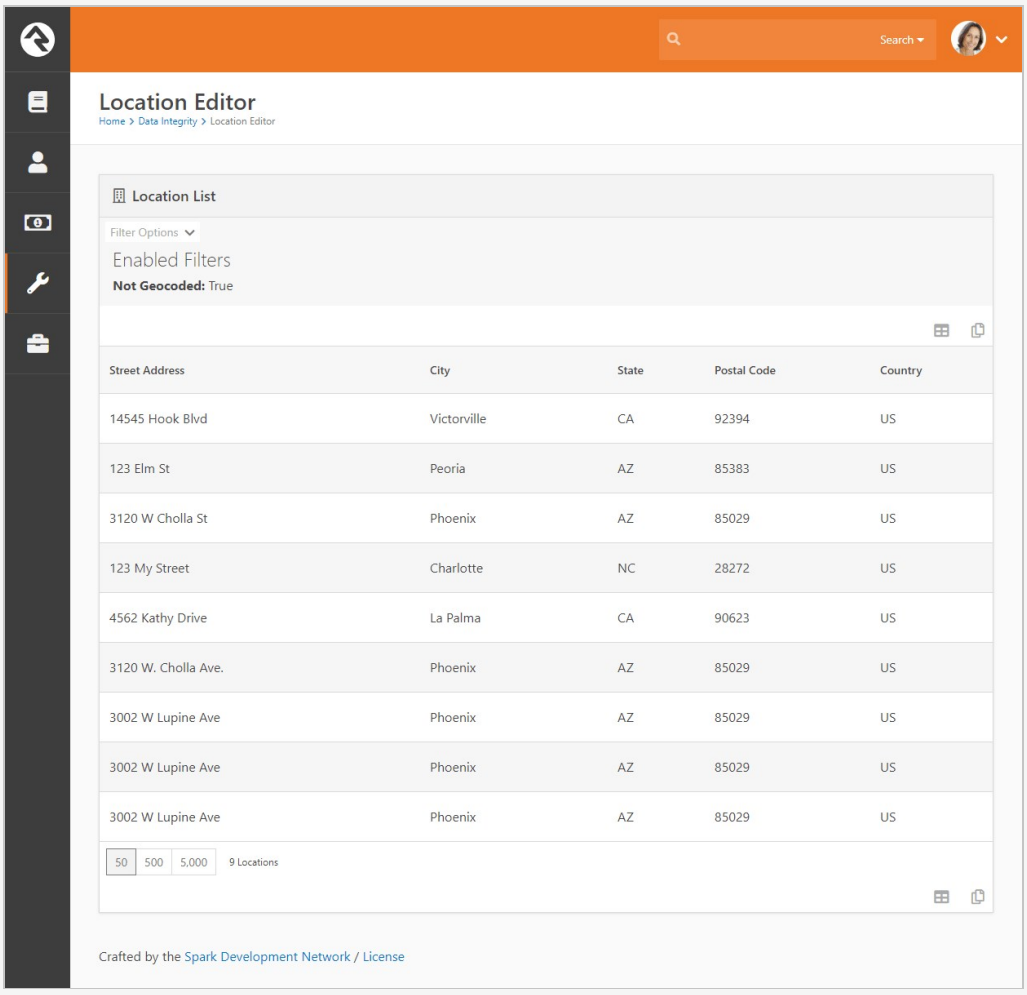
Workflow Name	Description
Assessment	*Person Profile* page.

See our `Blasting Off With Workflows` guide for more information.

Location Editor

The location editor allows you to edit and clean locations in your database. Because there are so many locations in your database (think every address) the list will only show items that match the filters you provide. A common use for this page is to edit the geocoding for a specific address. There's a helpful filter to show you addresses that are not geocoded.

Location List



You can select an address to view or edit its details.

Location Editor

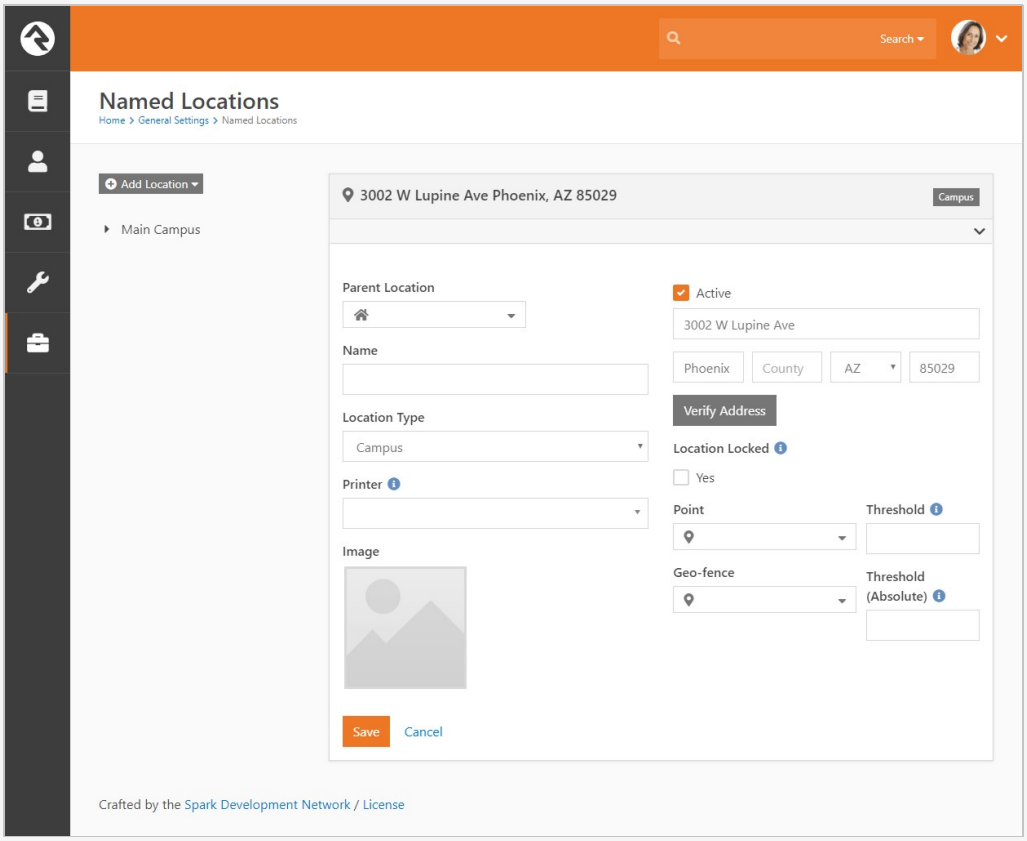


Photo Requests

When new photos are submitted by your organization's members they will be displayed here. This allows you to review the photos and ensure that they are appropriate. You can read more about this process in the `Person and Family Field Guide`.

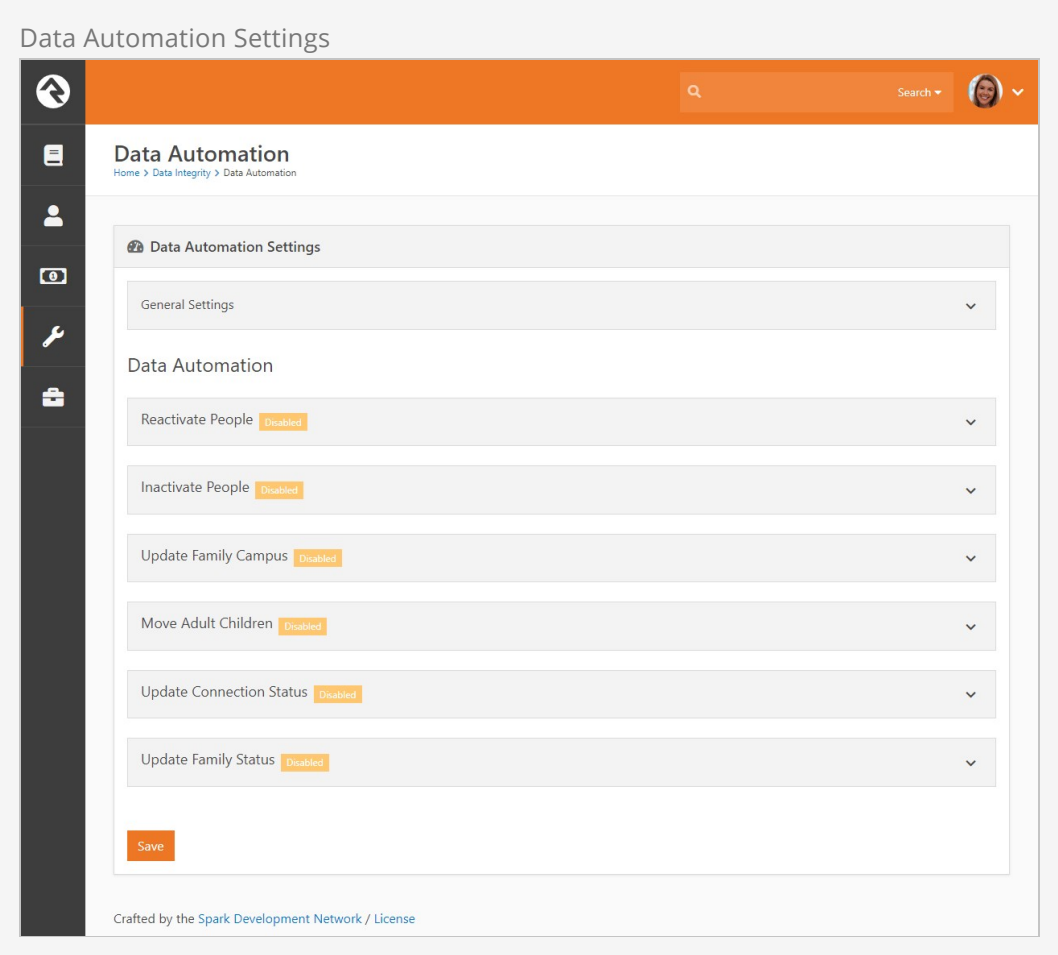
Merge Requests

If a staff member without the needed security tries to merge person records, then a merge request will be created and listed here. By default, you won't have security access until you're listed on the *Merge People* page with read rights.

Data Automation

Rock ships with a powerful *Data Automation* job that automatically updates person and family records. This makes things a lot easier for you. The job settings are configured here on the *Data Automation* page, located at:

`Tools > Data Integrity > Data Automation`.



The Data Automation job uses these settings to update person and family records in the following ways:

- Reactivating individuals who are currently inactive
- Inactivating individuals who are currently active
- Updating which campuses families are associated with
- Moving adult children to their own families
- Updating Connection Status values
- Updating Family Status values

Updates are made to records when the *Data Automation* job runs. By default, the job is configured to run every Tuesday morning, but you can change that time to what works best for your organization. Also, note that the job is active by default, but the data automation types listed above are all disabled. The updates will run automatically once the settings are enabled.

OK, now that you have an overview of the job, let's take a closer look at the four types of data automation included in the *Data Integrity Settings* screen.

Reactivate People

When the *Reactivate People* option is enabled, every person in the database who matches **any** of the following criteria (according to your selections) will have their record status updated from 'Inactive' to 'Active'.

- **Any family member has made a contribution in the last**: If any family member

in any of the person's families has made a contribution during the selected time period.

- **Any family member has attended a group that is considered a service in the last**: If there's an attendance record associated with any family members in any of the person's families, and if the attendance is for a group of a type with the *Is Service* option set to 'true'.
- **Any family member has attended a group of this type in the last**: If there's an attendance record associated with any family member in any of the person's families, and if the attendance is for a group that's of any of the selected types.
- **Any family member has logged into Rock in the last**: If any family member in any of the person's families has logged into Rock within the provided time period.
- **Any family member has submitted a prayer request in the last**: If a prayer request has been submitted by any family member in any of the person's families during the selected time period.
- **Any family member has a new value for any of the following person attributes in the last**: If any of the selected person attributes have an updated value for any family member in any of the person's families during the selected time period. The person attributes are based on the *ModifiedDateTime* of the attribute value.
- **Any family member has an interaction of the following type in the last**: If there's an interaction record for any of the selected types for any family member in any of the person's families during the selected time period.
- **The person is in a specified data view**: If the person is included in the selected data view.
- **Exclude any person in a specified data view**: This option acts as an override. Even if a person meets any of the previous criteria, if they are included in this data view, their record won't be updated.

When the *Reactivate People* automation runs, the *Inactive Reason* and *Inactive Note* fields for each person are cleared.

Inactivate People

When the *Inactivate People* option is enabled, every person in the database who matches **all** of the following criteria (according to your selections) will have their record status updated from 'Active' to 'Inactive'. Each person who's inactivated will also be inactivated in most of the groups to which they belong, including security roles. Once these people have been inactivated in their groups, there's no process to revert that change.

- **The number of days that the records must be older to get considered for Inactivate process**: This setting helps ensure that brand new individuals aren't made inactive only because they haven't had a chance to engage in any activities yet.
- **No family member has made a contribution in the last**: If no contributions have been made by any family members in any of the person's families during the selected time period.
- **No family member has attended any group type that takes attendance in the last**: If there are no attendance records associated with any family members in

any of the person's families. Any specific group types whose attendance should be ignored by the automated process can be specified in the *Ignore any attendance in the following group types* field.

- **No family member has logged into Rock in the last**: If there are no Rock logins for any family member in any of the person's families within the provided time period.
- **No family member has submitted a prayer request in the last**: If no prayer requests have been submitted by any family members in any of the person's families during the selected time period.
- **No family member has a person attribute value updated in the last**: If no person attribute values have been updated for any family member in any of the person's families during the selected time period. The person attributes are based on the *ModifiedDateTime* of the attribute value. Specific attributes you want the automated process to ignore can be selected in the *Ignore any updates to the following attributes* field.
- **No family member has an interaction of the following type in the last**: If there are no interaction records for any of the selected types for any family member in any of the person's families during the selected time period.
- **The person is not in the following data view**: If the person isn't included in the selected data view. This option can be used to make sure that certain people, such as staff members, are never inactivated.

When the *Inactivate People* automation runs, the *Inactive Reason* for each person is updated to 'No Activity' and the *Inactive Note* field is updated to 'Inactivated by the Data Automation Job on mm/dd/yyyy'.

Any person who's inactivated will also be inactivated in all of the groups they belong to, except for those that have a group type with the *Don't Inactivate Members* option selected.

> A Note of Caution
>
> Enabling the *Inactivate People* automation could have pretty significant ramifications if the options aren't configured correctly. For example, if only one criteria is selected, *everyone* who doesn't meet that one criteria will be inactivated. For this reason, it's best to select **all** of the criteria so a person has to match all of the options in order to be inactivated.

Update Family Campus

The *Update Family Campus* option is available only if you have more than one campus.

When the *Update Family Campus* option is enabled, the attendance for every family will be evaluated. If the family is attending or giving to a campus other than the one that's currently configured for the family, the campus for the family will be updated. Let's look at how this works.

First, the Data Automation job evaluates the attendance records at a specific location for all members of the family in question to determine if that location has the greatest

number of attendance records for the family. Next, the job looks at all of the contributions to campus-specific accounts made by members of the family, to determine if that campus has the greatest number of contributions. Finally, the job uses the following settings to help determine if the campus should be updated:

- **Calculate campus based on the most family attendance to a campus-specific location in the last**: Determines how far back attendance records should be evaluated.
- **Calculate campus based on the most family giving to a campus-specific account in the last**: Determines how far back transaction records should be evaluated.
- **If the calculated campus for most attendance and most giving are different**: Determines which campus to use if the campus to which the family gives the most isn't the same campus the family attends the most.
- **Ignore any family that has had a campus update in the last**: If the campus for a family has been updated within the selected number of days, the DataAutomation job will ignore the family.
- **Ignore any update that would change campus**: There may be scenarios where a family attends or gives to a campus other than the one with which they are associated. Exclusions can be added in this field to make the DataAutomation job ignore any specific campus changes based on attendance and/or giving.

Move Adult Children

When the *Move Adult Children* option is enabled, the DataAutomation job processes people who have a child role in one or more families, but also are of an "adult" age. The default age in Rock is 18. The job processes one person (not a group member) at a time. For each person, the job looks at all of the families that person belongs to and their role in each family.

- If the person is already an adult in any family, then they won't be added to any additional families but they will be removed from all families where they are a child.
- If they are currently not an adult in any family, the job checks if they are the only person in any of their families.
    - If they are in a family by themselves, the person will only be updated as an adult in that family and the job will remove them from any other family where they are a child.
    - If they are not an adult in any family and are not the sole member of any family, a new family will be added and the person will be added to that family as an adult. The person will also be removed from all other families where they are a child.

The job considers the following options:

- **Should children only be moved if they have graduated?**: If this option is checked, the job will first look at the graduation year for each person considered. If they don't have a graduation year, they won't be moved. If they have a graduation year in the future (according to the Grade Transition Date and the person's graduation year), they won't be moved.

- **The age a child should be considered an adult**: The age to consider a child an adult. The default setting is '18'.
- **An optional known relationship that should be added between the new adult and their parent(s)**: You can add an optional relationship for the other adults in the original family to have with the updated person. The recommended setting, if you use this, is "Parent".
- **An optional known relationship that should be added between the new adult and their sibling(s)**: You can add an optional relationship for the siblings in the original family to have with the updated person. The recommended setting, if you use this, is "Sibling".
- **Should the new adult's home address be the same as their current family?**: Check this box if the updated person's new family address should be the same as the Home address of the original family. The checkbox is selected by default.
- **If the new adult does not have a home phone, should they use same number as their parent?**: Check this box if the updated person's Home phone number should be the same as the Home phone number of the original family. The checkbox is selected by default.
- **The workflow type(s) to launch for each person that is processed**: Indicate any optional workflows that should be triggered for each person who's updated. The updated person will be set as the workflow's Entity. If the workflow has an *OldFamily* and/or *NewFamily* attribute, the job will set those attributes to the old/new family for the person.
- **The maximum number of records that should be processed at a time**: Set the maximum number of people to process on each run of the Data Automation job. The default setting is '200'.

The job also considers the "Lock as Child" option in the Edit Person Advanced Settings. If this option is selected on the person, they won't be made an adult by this job.

Update Connection Status

When the *Update Connection Status* option is enabled, you can update connection status values based on one or more Data Views. The status is set to one of the values listed below if the person meets the conditions of the data view.

- Member
- Attendee
- Visitor
- Participant
- Web Prospect

Update Family Status

When the *Update Family Status* option is enabled, you can update family status values based on one or more Data Views. The status is set to either *Participant* or *Unknown* if the family meets the conditions of the data view.

General Settings - Gender AutoFill Confidence

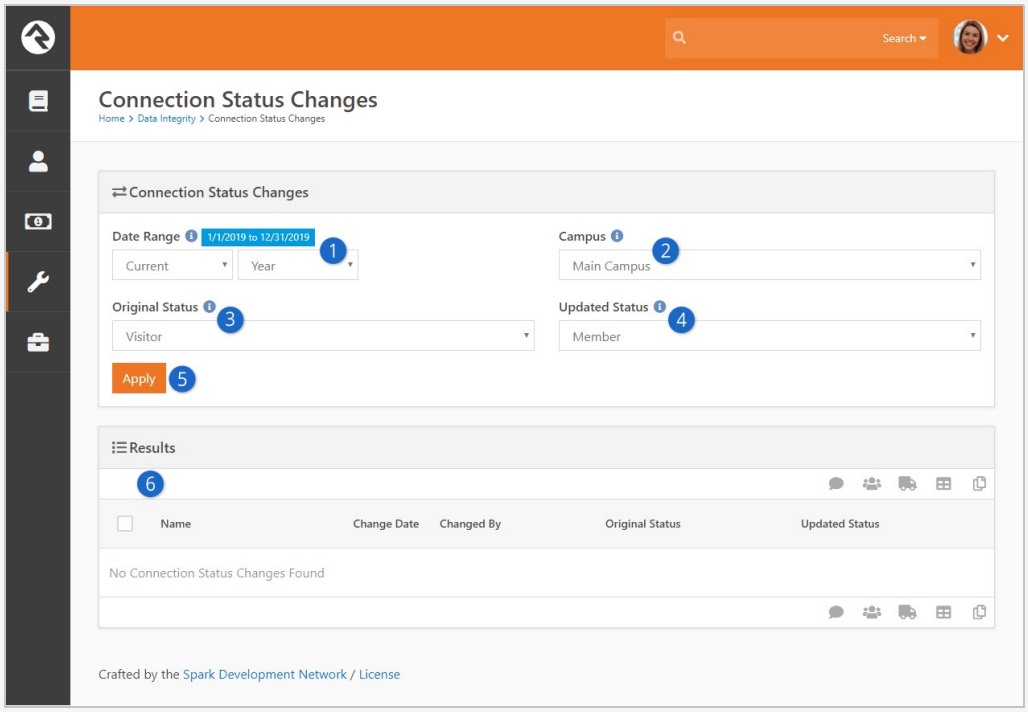
Included in the *General Settings* section of the *Data Integrity Screen* is an optional DataAutomation task to autofill gender. This task looks for individuals with an unknown

gender and attempts to set the correct gender based on the person's first name. The process uses the minimum confidence level (think of this as an accuracy rate) entered in the *Gender AutoFill Confidence* field to automatically set blank genders while running the Data Automation service job. If the number is set to 0, genders won't be automatically determined. If the number is set to 99.9% (the default setting), only names with genders matching that 99.9% confidence level will be determined. If the individual is a child, the job checks the likely match for gender against the minimum confidence level. If the likelihood of finding a match is greater than the confidence level, the gender is updated. Otherwise, it's left unknown. Adults won't autofill with a gender that's already taken by another adult in the same family.

Connection Status Changes

As the name implies, the Connection Status Changes tool lets you see (you guessed it!) changes in connection statuses. Since we're already clear on its purpose, let's dive right in and take a look at how to use it:

Connection Status Changes



1. **Date Range**
   You can narrow the results to status changes that occurred within a time period you choose. You can also leave the Date Range blank to view changes on any date.

2. **Campus**
   Only people from the selected campus will be shown in the results. You can leave it blank to show individuals from all campuses. This is disabled if you have only one campus.

3. **Original Status**
   If selected, only changes from this status will be shown in the results. This can be left blank to view changes from any status.

4. **Updated Status**
   If selected, only changes to this status will be shown in the results. This can be left blank to view changes to any status.

5. **Apply**
   Use this button to apply the above selections to the results.

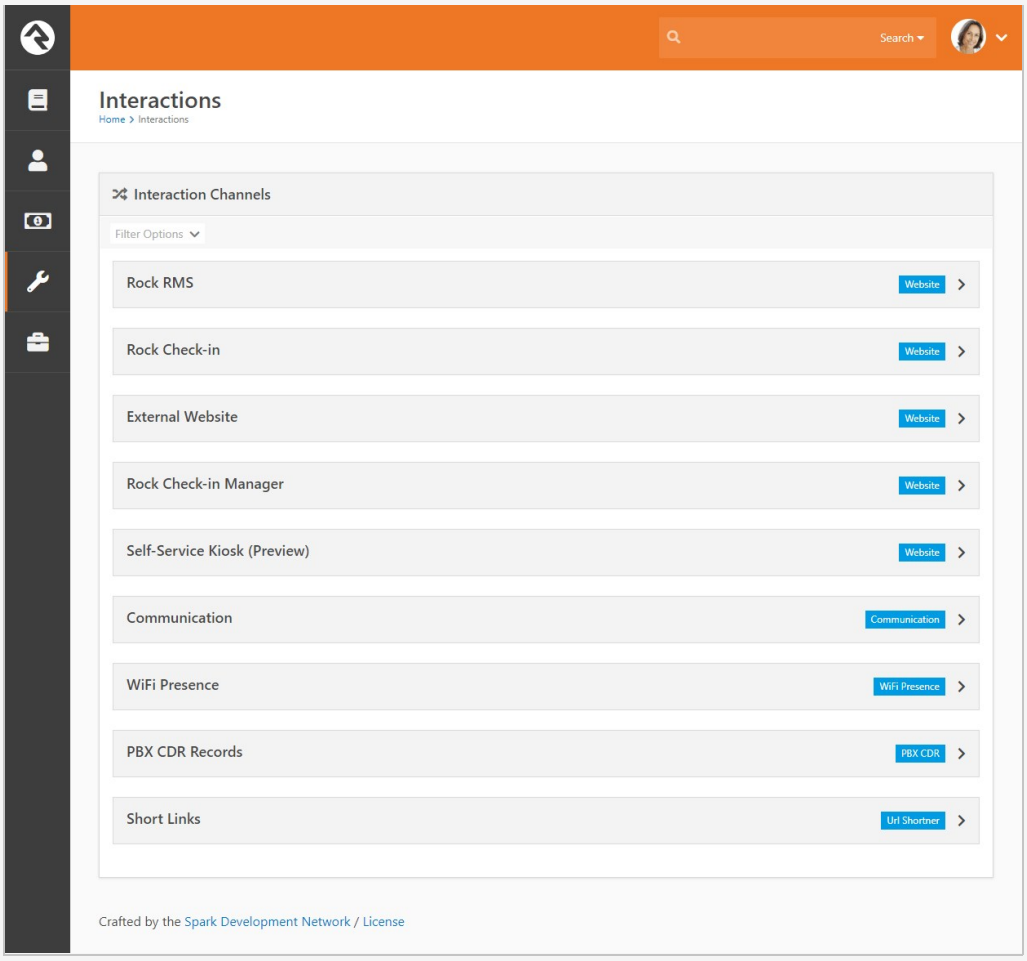
6. **Results**
   Individuals who match all criteria provided are listed here after clicking the `Apply` button.

See our `Engagement` guide for more information on connections.

Interactions

Out of the box, Rock stores all interactions—every email clicked, every page viewed, etc.—between members and organizations in interaction tables. This data is viewable on the *Interactions* page, located at `Tools > Interactions`.

Interactions



New interaction channels will be added over time.

Some of the interaction channels, such as *Wi-Fi Presence* and *PBX CDR Records*, need to be configured in order to be available to your organization. Let's take a closer look at one of those channels—PBX CDR Records—in the next section.

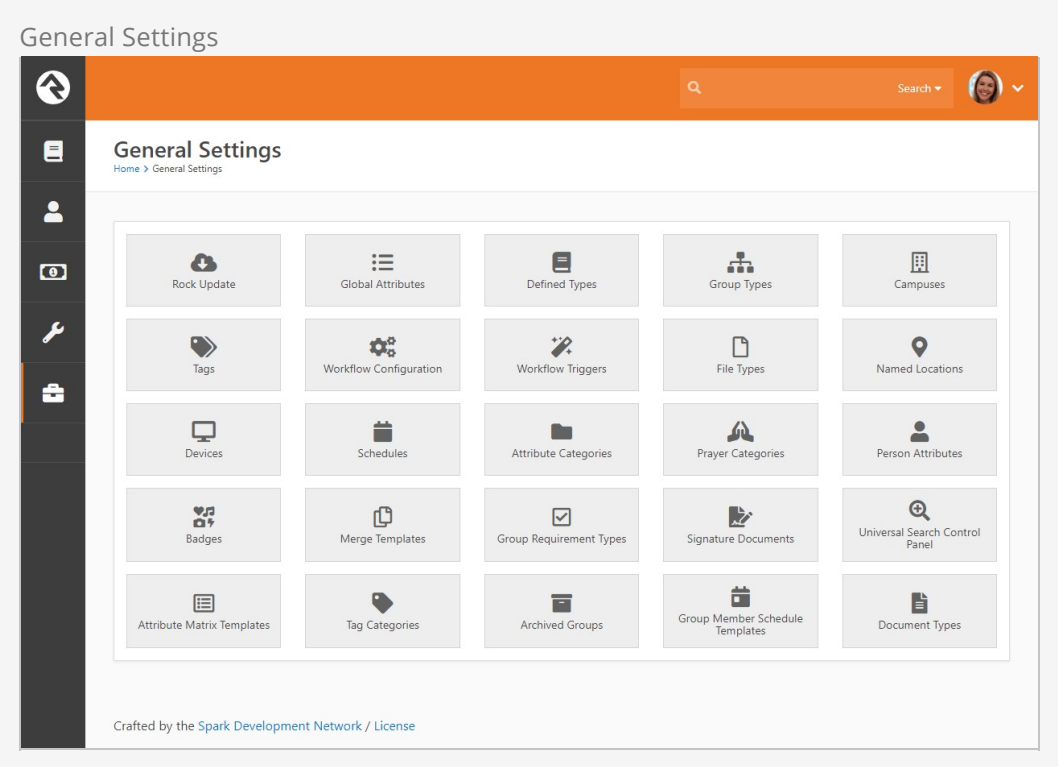
PBX CDR Records

A PBX, or Private Branch Exchange, is a telephone system in an organization that switches calls between people in that organization on local lines while allowing them to share several external phone lines. In short, it allows Rock to talk to the phones within your organization. PBX CDR Records downloads phone call detail records for the calls made on those phones and stores them in interaction tables. This valuable data helps you map the real-life relationships that exist within your organization. It also allows you to use click-to-call technology, where Rock places your calls for you with the click of a button.

You'll need a plug-in to let Rock talk to your phone system. You can write your own, or you can use one of the plugins available in the Rock Shop, such as Digium Switchvox. Additional PBX plugins will be added as this technology becomes more widely used.

General Settings

To make Rock a configurable and flexible tool, we've added a lot of settings you can tweak to make it work for your organization. While these settings may seem intimidating at first, once you learn more about them you'll become more and more comfortable. Let's look at each of the major configuration sections and we'll briefly explain what each one does. All of these areas can be found under the *Admin Tools* menu item.



Rock Update

Updates are one of Rock's best features. Many systems require tedious software updates only the vendor can complete. Not so with Rock. When an update is made available, all you need to do is visit this screen to check the details. When you're ready, simply click the `Install` button. Rock will then download and install the updates for you. How easy is that?!

Global Attributes

Global attributes (`Admin Tools > General Settings > Global Attributes`) are the basic

configuration settings that are used to customize Rock. Each has a default value that you can override. Many of these are set up during the installation process. Below is a list of the core settings and descriptions.

Setting	Description
Organization Name	The name of the organization that's running Rock. This was set for you during the install, but you can modify it at any time.
Organization Abbreviation	There will be times when you want to refer to your organization in a less formal manner. Enter an *Organization Abbreviation* to provide this value.
Organization Address	The primary address of the organization. If you're a multi-site organization, this should be the address of your central team location. Each of your campuses will have its own address elsewhere.
Organization Email	The default email bucket for the organization. This will be the default address used in the *From* field of bulk emails. This is commonly info@organizationdomain.com
Organization Phone	The primary phone number for the organization.
Organization Website	The primary website for the organization.
Public Application Root	Many times this will be the address of your external website, if it's hosted on Rock. It's the address that will be used in links that are sent out to the public, such as www.organizationname.com. If your organization's primary website isn't hosted on Rock it's important that this setting remain the public address of the Rock server (not your organization's primary website) as this setting is used for providing linkbacks for things like images and webhooks.
Internal Application Root	Similar to the Public Application Root setting above, this is the address of the internal Rock website. It will be used to construct links on the internal site. Many organizations configure their DNS to be rock.organizationdomain.com.
Update Server URL	This is the address that Rock uses to look for updates. It should not be changed.
Google API Key	Rock uses Google Maps for many of its features. This requires what's known as an API key to use the maps. While there was a setup step in the post-install checklist, you can change this key at any time.
Email Exceptions List	"Exceptions" is a technical term for errors. This setting is a list of email addresses that should receive an email when these errors occur. Keep in mind that errors do happen, and don't worry if you get a notification email occasionally. Rock also keeps a list of every exception in the database, so you don't need to keep these emails. Just think of them as an FYI.
Email	Oftentimes exceptions will occur when search indexes (like Google or

Setting	Description
Exceptions Filter	Bing) scan your site and reference pages incorrectly. While these exceptions will always get logged, you can use this setting to prevent a notification email from being sent for these (and any other) types of exceptions. When any exception occurs, Rock will evaluate the client's HTTP Server variables for any variable you specify in the Key. If that server variable exists, and its value contains what you entered in the Value, the notification won't be sent. In addition to server variable names, if you use a key of 'Type', 'Source', 'Message' or 'StackTrace', Rock will check to see if the current exception's values for those keys contain what you entered for the value and if so, the notification won't be sent.
Grade Transition Date	The date your organization uses to promote kids to the next grade level. Grades are calculated in Rock based on the future graduation date from the 12th grade. This date is used to update the grade each year. While the default date of 6/1 will probably work for most organizations, you can modify it to match the needs of your community.
Email Header / Email Footer	The HTML that makes up the header and footer for emails that are sent from Rock. These settings are only used for system communications. You can create multiple different email templates to use in Rock. See the `Communicating With Rock` guide for more information on best practices in email templates.
Email Header Logo	This is the logo that should be used in the email header. If the logo displays as a broken link, be sure to check that your Public Application Root setting is correct since this is used to help generate the link to the logo.
Password Regular Expression	A secure password means different things to different people. By default, all passwords in Rock need to be at least 6 characters long and can only contain letters and/or numbers. If you like to require passwords to include special characters and/or mixed case letters, you can provide a regular expression that all passwords are required to match.
Password Rules Friendly Description	When you change the regular expression required for passwords, you'll want to change the description of the password requirements that people see on the website. Use this setting to describe what a valid password must contain.
Job Pulse	This isn't really a setting; it continuously displays the date and time that jobs last ran. You can use this to confirm that jobs are running correctly.
Log 404s As Exceptions	This tells Rock whether File Not Found errors (404s) should be treated as exceptions. For the most part, you'll want to leave this off. You can enable it if you'd like to find all of the broken links on your website.
Preferred Email Link Type	This setting is used to configure the type of email links you'd like Rock to use. 'New Communication' will cause Rock to link to the New Communication page, while 'Mailto' will configure Rock to use a mailto

Setting	Description
	tag which will take the individual to their configured mail client.
Lava Support Level	This setting allows you to choose your support level for old Lava syntax. There are three levels: supporting legacy Lava code, supporting legacy Lava code but logging its usage and ignoring Legacy Lava code.

Editing A Global Attribute

You can click the row to edit the attribute's value. This is the standard way to, for example, change your organization's phone number or enable auditing.

You'll also notice a icon for each row. While clicking the row will let you edit the attribute's value, clicking allows you to update the attribute itself. Typically, there won't be any reason to do this.

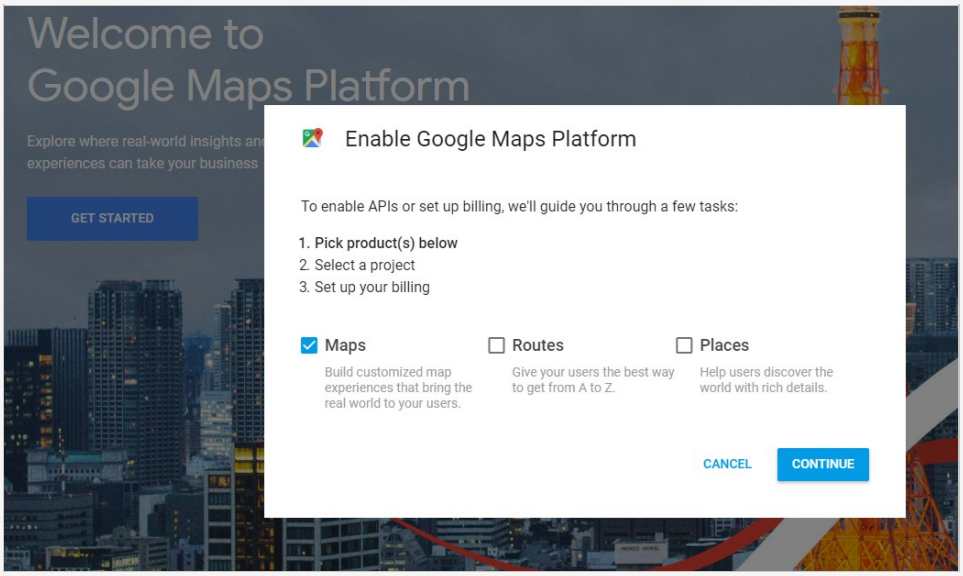
Creating a Google Maps API Key

Let's take a moment to look more closely at the "Google API Key" global attribute. We're giving this particular attribute a lot of attention because there are several steps involved with setting it up correctly.

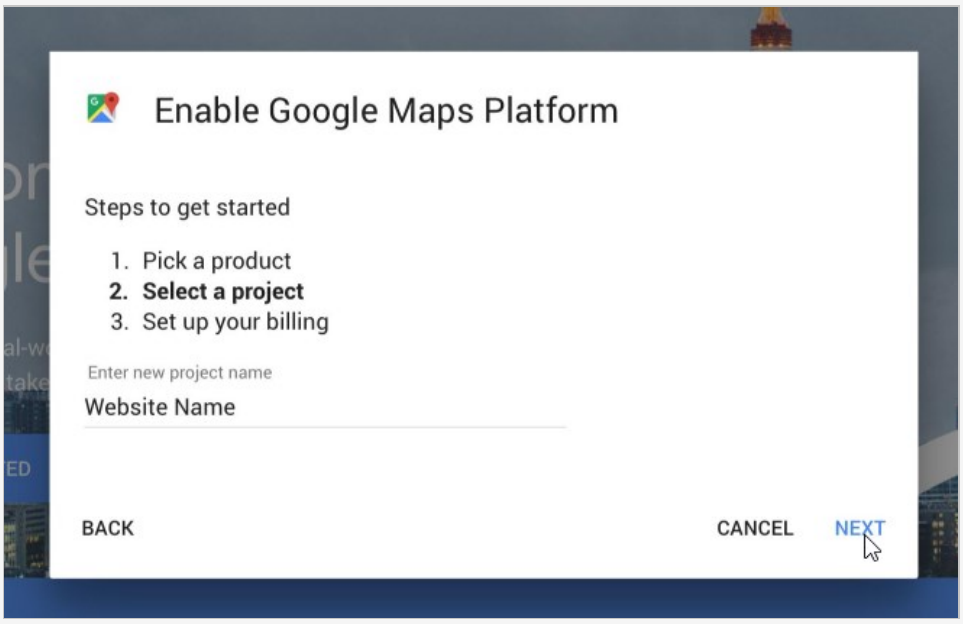
Rock's *Group Viewer* can display a static map showing a group's location, but to do so it requires you to set up a Google Maps API Key and activating the Google Maps Javascript API. Below are the steps you'll need to get started.

> **Note**
> Google provides a large number of free credits each month, so you shouldn't be charged for using maps in Rock.

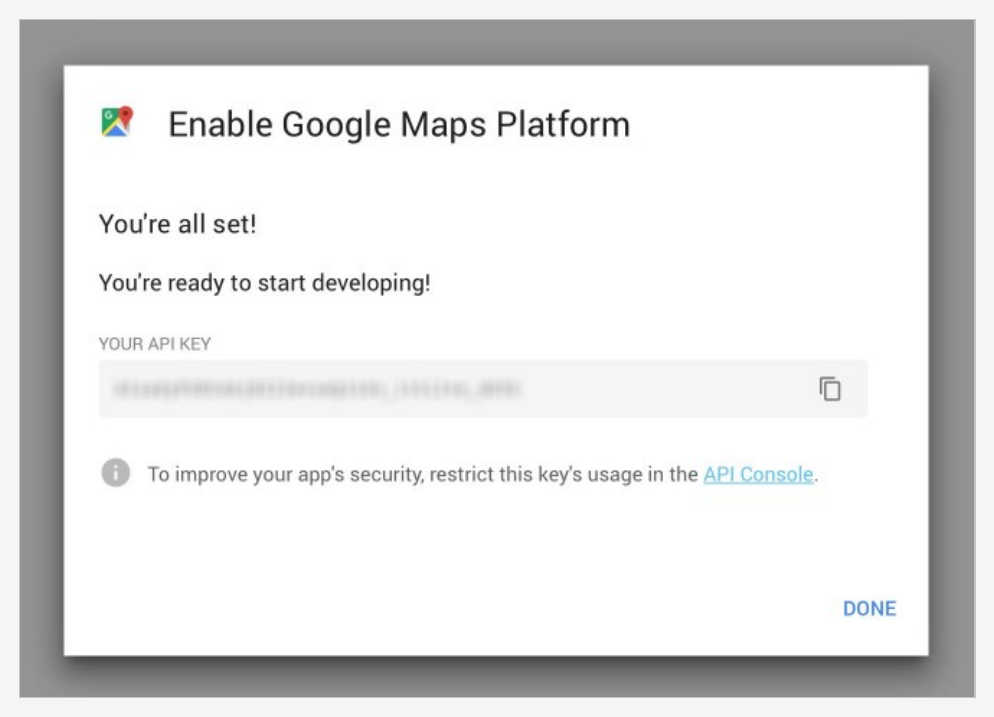
1. Go to the Google Maps Platform welcome page then click Get Started.
2. Choose Maps then click Continue.



3. Log into your Google Account or create a new one, if necessary. You may need to repeat the previous steps after logging in.
4. Choose "Create a new project", enter a name and click Next.



5. Click Save then copy the key.



6. In Rock, on the Global Attributes page click the "Google API Key" row to edit and add the key value.
`Admin Tools > General Settings > Global Attributes`,

Back in Google, navigate to the "dashboard" on the API manager and click on the button labeled "ENABLE API". This brings you to a page listing all the available API's. Under the Google Maps API click on the JavaScript API. Then you'll choose your project, and once that's loaded you'll select the "ENABLE" button near the top center of the page.

Defined Types

Defined Types are settings that are specific to a certain feature. In the list, you'll find settings for *Check-in*, *Giving*, *Marketing Campaigns*, *Metrics* and *People*. Each of these will be discussed more in sections relevant to each feature, but let's look quickly at how you can edit these settings.

Each *Defined Type* can have multiple values (cleverly called *Defined Values*). To edit the values for a *Defined Type*, simply click on the item in the grid you want to edit. You'll then be taken to a new screen where you can edit its values.

A basic example is the "Ability Level" Defined Type. There are three ability levels that can be used in the system (Infant, Crawling or Walking, or Potty Trained) and each is set up as a Defined Value within the Defined Type.

Group Types

The *Group Types* screen is used to add new types of groups and to modify those that already exist. These settings are discussed in detail in the `Rock Your Groups` guide.

Campuses

If your organization has several sites you can manage them here. Check out the

Campuses chapter to see the various options available to you.

Tags

Tags allow you to categorize any entity (person, content channel, etc.) into groupings based on a descriptive label. The default entity is Person, but you can change it to any entity you want. The possibilities here are endless, and the results can be super beneficial to your organization.

Tags are discussed in detail in the `Person and Family Field Guide`.

As an administrator, you'll be responsible for the classification of organizational and personal tags. Only administrators can create an organizational tag and convert a personal tag to an organizational tag. Only those with tagging rights can add security to tags.

Create A New Organizational Tag

To create a new organizational tag, first be sure that your filter settings are set to view only organizational tags. Once this is set, simply click the button in the footer of the grid.

Converting A Personal Tag to An Organizational Tag

Before converting the tag, be sure that the filter for the tag list is set to show only personal tags. Next, find the tag you want to convert and click its row on the grid. You'll then be taken to the edit screen where you can convert it to an organizational tag.

Securing Tags

Organizational tags can be secured, which limits who can see them. Tagging rights are based on security settings, and this advanced usage is typically done by administrators. You can add security to a tag by clicking on the button in that tag's detail screen, located at `Admin Tools > General Settings > Tags`. For more information about security settings, see the Securing Rock chapter.

Workflow Configuration

Rock is built on top of a powerful workflow engine. These workflows can be configured using the screens found in this section. Creating and configuring workflows is covered in the `Blasting Off With Workflows` guide.

Workflow Triggers

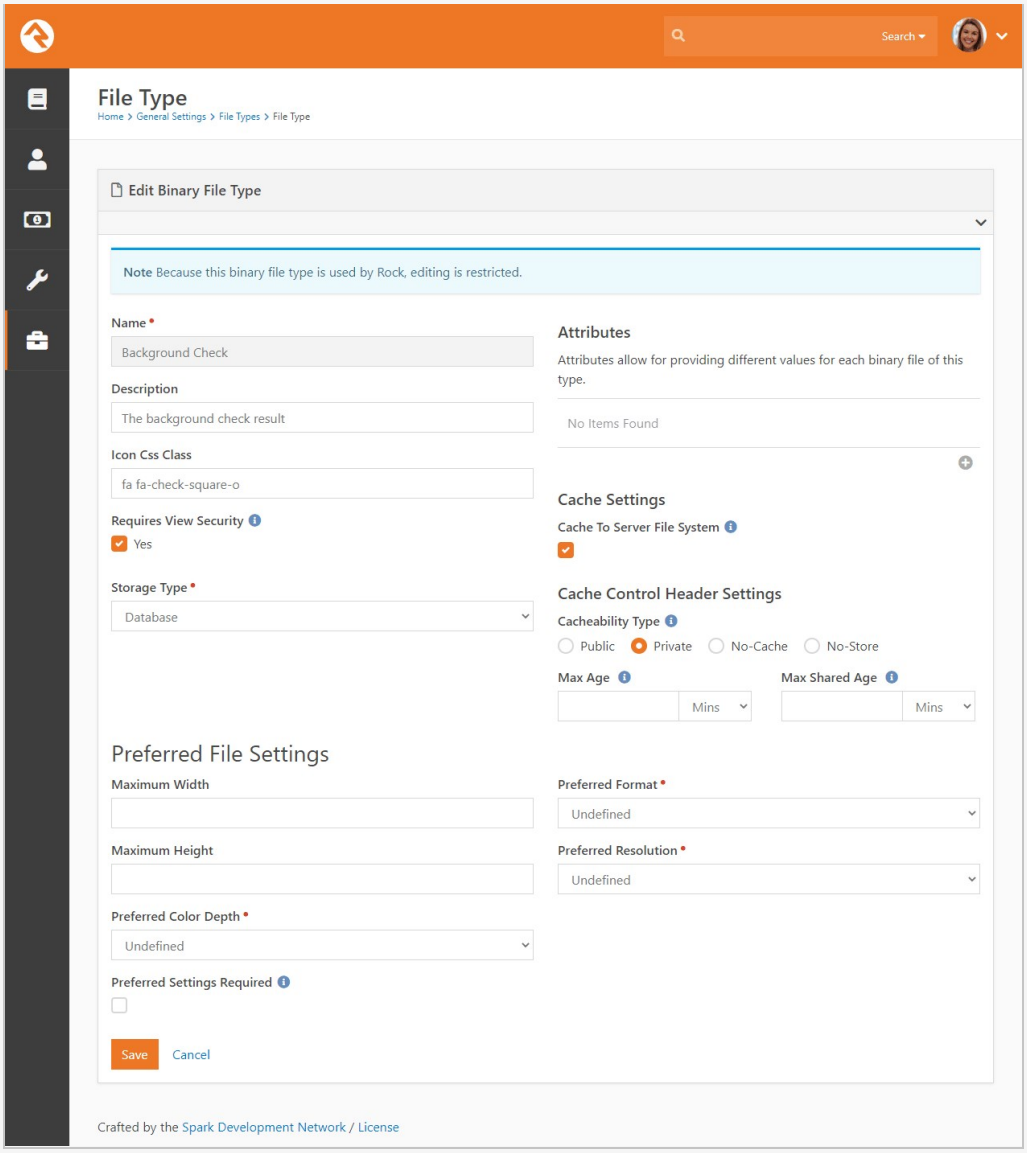
You can configure a workflow to be launched whenever an entity record is changed or deleted. See the `Blasting Off With Workflows` guide for more information on configuring workflow triggers.

File Types

Rock can be made to store and manage several different types of files. These include things like images for marketing campaigns, label templates for check-in and the pictures of individuals that display on the *Person Profile* page. These files can be saved in different storage types. The two main storage types are:

- **Database:** The files are stored as BLOBs (Binary Large OBjects) in the database. Database storage is a good solution for items that you'd like backed up with your data. Database storage is also a bit more secure since the files are stored in an additional layer of security in the database.
- **File System:** Files using this storage type are stored on the webserver's file system. They are securely stored in a directory that can't be directly linked to. This storage type is best for large files that might eat up your valuable database storage space.

File Type Settings



Each file type is assigned a storage type to use. You also have the ability to cache files of this type and set a Cacheability Type. Caching is especially useful when using storage types other than the file system since they tend to be a bit slower. Enabling the cache will store a cached version on the server file system to improve speed. Caching is also very useful when working with images. Rock can size images on the fly, which is very powerful but it can impact performance, especially with large source images. When

caching is enabled, though, the resized image is cached, so the resize isn't required in the future until the image is updated.

Named Locations

This configuration screen allows you to define specific locations with a name. You'll want to use this to define your campuses, buildings and rooms. These *Named Locations* can then be used with configuring groups, check-in, etc.

Devices

The *Devices* page is used to manage devices that interact with Rock in some way. Today this is primarily used to help manage check-in kiosks and label printers, but in the future we hope to add support for all types of devices.

Schedules

Several features require the configuration of repeating schedules. For instance, check-in needs to know your organization's schedules to be able to configure the time check-in should start. These screens allow you to create those schedules.

Attribute Categories

Everything stored in Rock can have attributes added to it. For example, we can add numerous attributes to a person according to what's important to your organization. In an effort to keep this from becoming unmanageable, you can group your attributes into categories. These screens help define these categories and provide some basic configuration for each.

The first step in adding a category is to filter by the data entity you wish to work with. The default, and most often used, is Person. For each category you can provide a description and give it an icon to use on the Rock screens.

Prayer Categories

The prayer features use categories to help organize and classify prayer requests. See the `Raising Up With Prayer` guide for more information on configuring prayer features.

Person Attributes

This screen allows you to manage the person attributes you've configured in the system. See our `Person and Family Field Guide` for more information.

Person Profile Badges

Badges are simple icons that express details about a person's involvement or activity with your organization. Examples of badges would be baptism or attendance rate. The *Person Profile* page block properties need to be updated to display new badges. See our `Person and Family Field Guide` for more information.

Merge Templates

This is where you'll manage the systemwide merge templates. You can find out more

about merge templates in the Merge Documents chapter of this guide.

Group Requirement Types

This page allows you to manage the group requirements for your organization. You can learn more about group requirements in the `Rock Your Groups` guide.

Signature Documents

This page allows you to house templates for documents that require signatures, such as registration forms. Click the + button to add a new document. You can learn more about digital signatures in the Digital Signatures chapter of this guide.

Universal Search Control Panel

This screen allows you to configure the Universal Search settings. To learn more about Universal Search, see the `Universal Search` manual.

Attribute Matrix Templates

The Attribute Matrix Templates screen allows you to create a dynamic layout of multiple field types of your choosing. Like a spreadsheet, the matrix is made up of rows and columns. You can use Lava to customize the fields, but what's provided out of the box will likely fit most of your needs. Keep in mind that attribute matrix templates aren't reportable (yet), but this powerful tool allows you to dynamically populate pages with just about any information you want. For example, you can create a matrix of phone number attributes, then customize a page to display those numbers on the fly.

Creating an attribute matrix is a two-step process. First, create your template in the Attribute Matrix Templates screen, then configure the page to display the matrix. You can learn more about page customization in the `Designing and Building Websites Using Rock` guide.

Tag Categories

This screen allows you to view and configure tag categories. To learn more about tags, see the Tags chapter of the `Person & Family Field Guide`.

Archived Groups

This screen allows you to view groups that have been archived. To learn more, see the `Rock Your Groups Guide` manual.

Group Member Schedule Templates

This allows you to add or modify group member volunteer/serving schedule preferences. Examples include once a week, twice a week, etc. To learn more, see the `Rock Your Groups Guide` manual.

Document Types

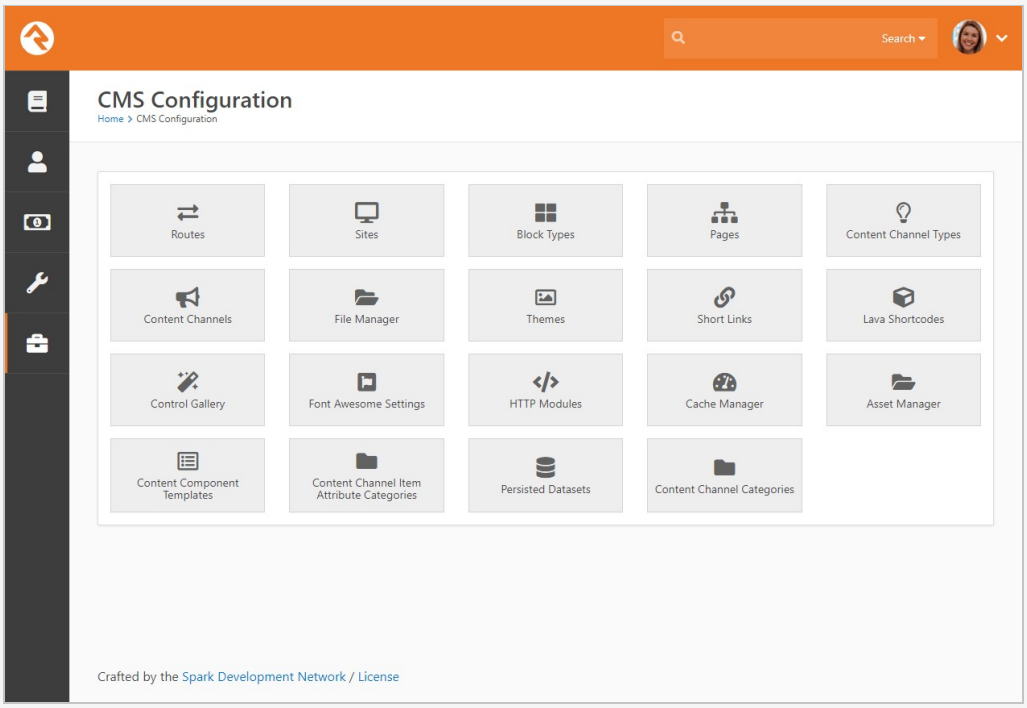
Use the *Document Types* page to manage documents for use by any entity. This block provides a summary of the document types, the file type and the associated entity type.

See the Entity Documents chapter for full details.

CMS Configuration

Rock is built on top of a very powerful Content Management System (CMS). A detailed review of Rock's CMS tools is outside the scope of this guide, but we do want to provide you a high-level overview of these settings. For full details on any of these configuration settings, check out the `Designing and Building Websites Using Rock` guide.

CMS Settings



Routes

The routes section lists all the routes, or URL page names, in use for both the internal and external pages of your site. Some routes come preconfigured in Rock. The ability to edit these system routes is limited, but custom routes you create are fully editable.

Sites

The sites section lists your Rock websites. Rock initially comes configured with three different sites:

- **Rock Internal:** The internal site used by the organization's staff to manage people, groups and the system in general.

- **External Website:** The primary portal for those outside the organization.
- **Check-in:** The site that's used for the check-in system.

You can add as many sites as you wish. For instance, the site that Spark Development Network uses to manage Rock has all of the sites above plus two additional ones. One hosts the Spark site (sparkdevnetwork.org) and the other hosts the Rock site (rockrms.com). Notice that each site looks different and unique from the outside but shares a common set of data and configuration.

Block Types

Every page in Rock is made up of several blocks. These blocks are the core unit of functionality. For the most part, anything you see on a page is a part of one block or another. The *Block Types* page lists all the types of block available.

Pages

While most of the configuration for a page can be completed directly on the page itself, there are times when it's difficult to navigate to a supporting page if it isn't shown in the main navigation. This screen lists all the pages defined in Rock in a simple tree display to help you get where you're going. New pages can also be added here.

Content Channel Types

Rock's dynamic content capabilities are a cornerstone of its content management system (CMS) feature set. The *Content Channel Types* page is where you'll define the data structures for dynamic content.

Content Channels

The *Content Channels* represent the actual data that's defined for use by the CMS tools.

File Manager

The *File Manager* allows individuals to upload files and manage directories on your Rock host server.

Themes

Rock comes preconfigured with several themes, all of which you can customize using the Theme Styler. You can also get creative, though, and design your own. All themes, both system and custom, will be listed here, and you can access the Theme Styler for each from this page.

Short Links

You can create short links for the internal and external pages of your site either from this screen, or by clicking the button in the admin tool bar. All of your short links will be listed here.

Lava Shortcodes

Shortcodes are a way to make Lava simpler and easier to read. They allow you to use a

simple Lava tag in place of a complex template written by a Lava specialist, which means you can do some really powerful things without having to know how exactly how everything works. Rock comes with some Lava shortcodes preconfigured, but you can create your own. All of your shortcodes will be listed on this screen. To read more about shortcodes and how to author them, see the `The Long & Short on Shortcodes` manual and the `Lava` guide.

Font Awesome

Font Awesome is the easiest way to add icons throughout Rock. There's a free version already linked to Rock that's ready and available for use. You can optionally upgrade to a Pro version for more icons.

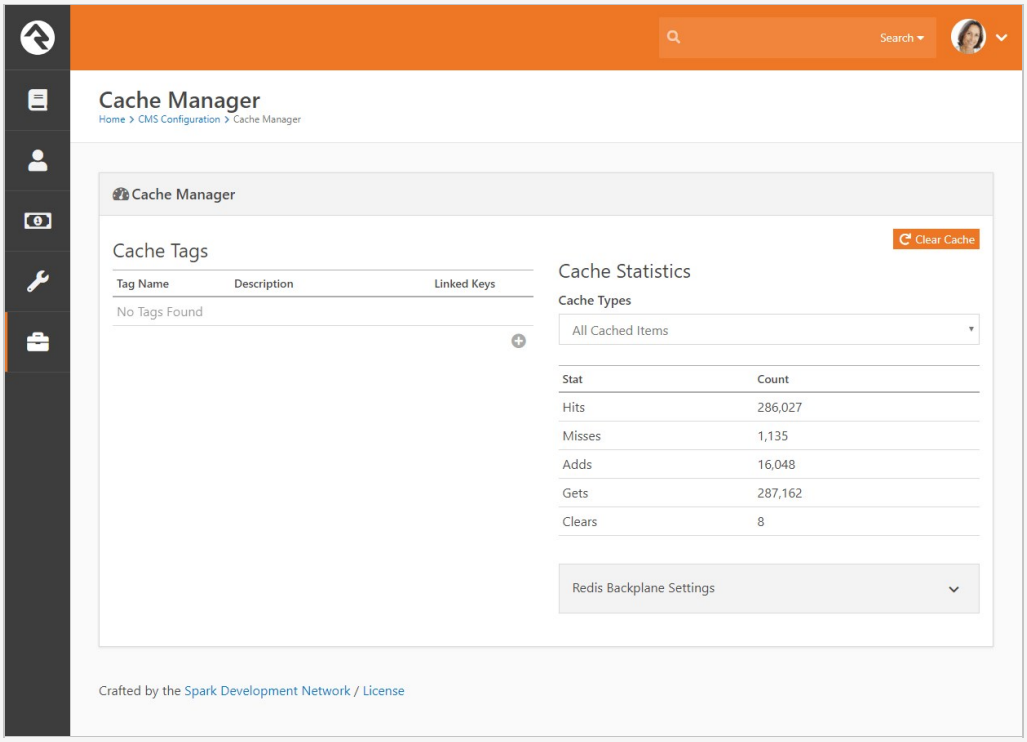
Cache Manager

The Cache Manager lets you manage the information cached on your Rock server(s) through the use of cache tags. Cache tags work a bit like personal and organizational tags, except in this case you're tagging types of information. Using the Cache Manager, you can tell Rock to clear the cache of information based on those tags. There are two sides when it comes to configuring and using the Cache Manager: the more user-friendly web person side, and the more technical, IT person side. Let's look at the web person side first.

Clear Cache by Tag

From the Cache Manager screen you can add and view cache tags, clear the cache by cache tag, view cache statistics, clear the cache by type and configure the Redis backplane.

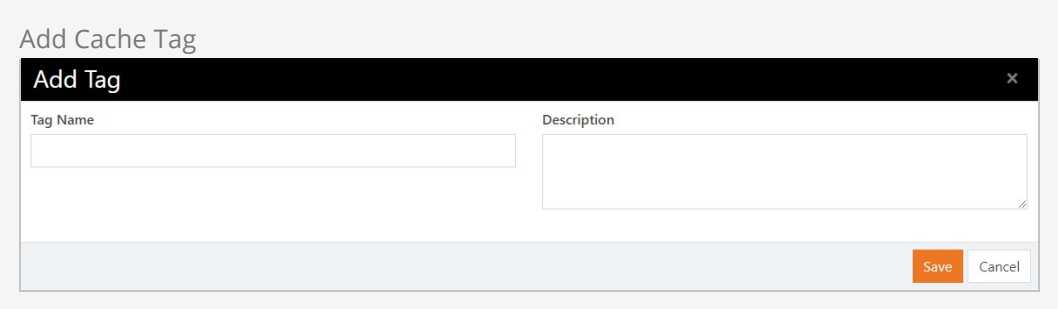
Cache Manager Screen



The complete list of cache tags, as well as their descriptions and number of items (called Linked Keys) currently cached by each tag are listed in the Cache Tags section of the screen. To clear cached items by a particular tag, click the button for that tag. Clearing the tagged items from the cache won't change the associated linked key number.

Add Cache Tags

Click the + button to add a new cache tag. Tag names must be all lowercase with no spaces. Once created, they are stored as a defined value of the Cache Tag Defined Type and can't be deleted.



Current Cache Statistics

The *Cache Statistics* section of the screen displays the statistics for the cache type selected in the *Cache Types* field. Here's a breakdown of the stats provided:

- **Hits** – The number of times something was looked for and found in the cache.
- **Misses** – The number of times something was looked for but not found in the cache.
- **Adds** – The number of items added to the cache.
- **Gets** – The number of cache requests (i.e. the total number of hits and misses).
- **Clears** – The number of times a clear was performed on the cache.

Clearing Cache by Type

You can clear the cache of the item types specified in the *Cache Types* field by clicking the `Clear Cache` button.

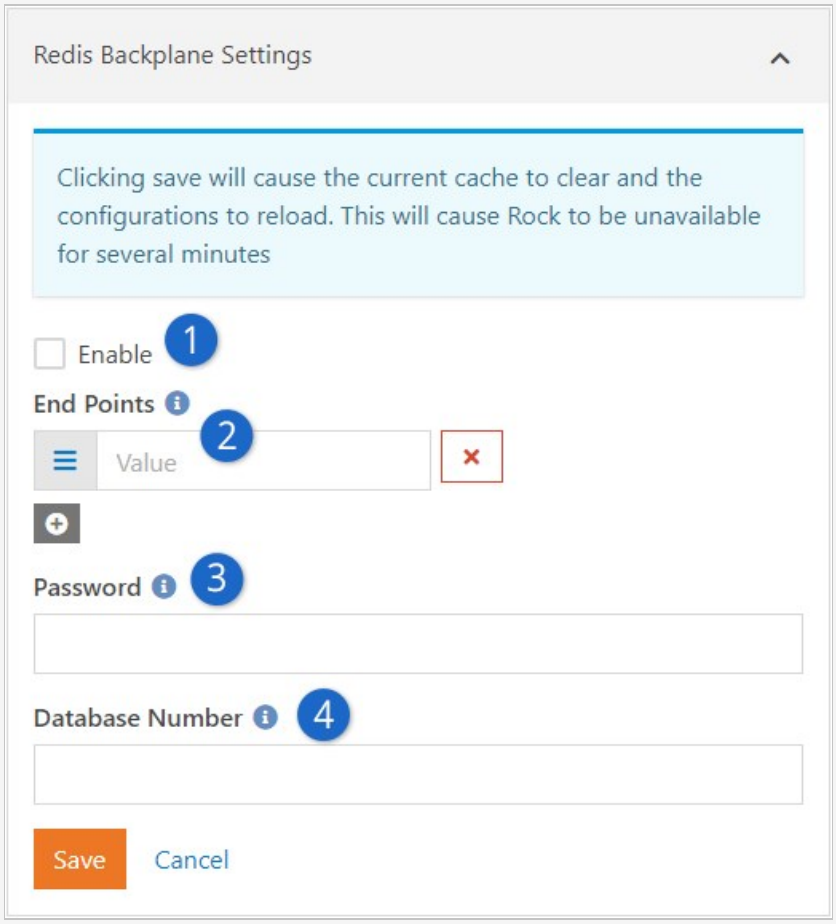
OK, now let's look at the more technical side of the Cache Manager.

Configure Redis Backplane

A cache backplane is used when multiple servers are running Rock and the cache in each server needs to be kept in sync. If your organization isn't using a load-balanced web farm, don't use Redis. Redis will slow down the response time of the cache.

Click the `Redis Backplane Settings` button to view the current Redis configuration. If Redis is configured, the panel expands to display the settings. If Redis isn't configured yet, click the `Edit Settings` button.

Redis Backplane Settings

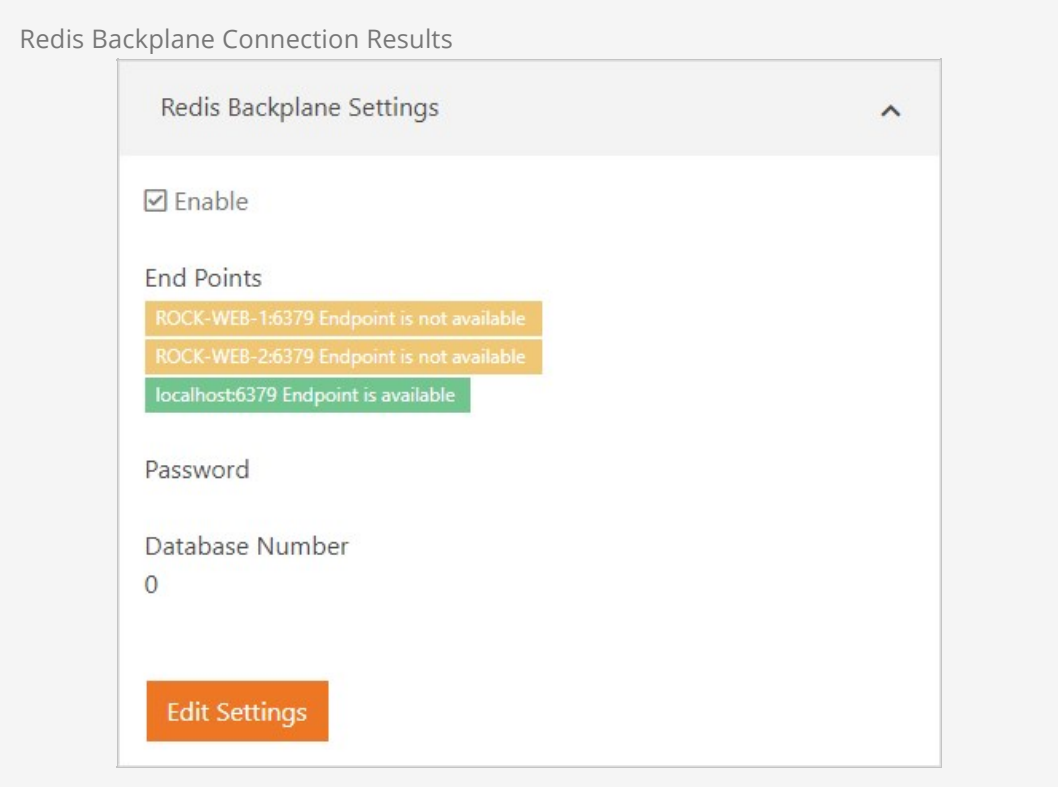


1. **Enable**
   Check this box to enable Redis.
2. **End Points**
   Add or remove Redis end points in this field, using the standard Address:Port format. The address can be a name or and IP address (e.g. 192.168.100.5:6379, where the default port is 6379).
3. **Password**
   If Redis is set up with a password, enter it here.
4. **Database Number**
   Enter the Redis database number here. It's possible to run multiple databases with Redis. Because Redis uses a zero-based index, the default database number is 0. If Redis isn't being used for anything else, this number should be 0.

Changes to the Redis Backplane Settings require Rock to be restarted. Clicking the `Save` button will restart Rock, causing it to be offline for a few minutes. Because an invalid or unavailable Redis backplane will cause Rock not to run, invalid or unavailable configurations are not allowed.

When Rock is back online, it will display a read-only version of the Redis configurations.

Rock will try to establish Redis connections to the end points. End points that connect are highlighted in green when Rock displays the results. End points that fail are highlighted in yellow.



When Redis is enabled, the Cache Manager page will update with a summary of available endpoints. If all are available, a green *All Redis end points are available* message is displayed. Otherwise, a yellow label with the ratio of unavailable servers is displayed.

> **Warning**
>
> Only use Redis if you need it. Not only is the cache slower, but it's a point of failure as well. If the entire Redis cluster goes down and the Rock Cache engine can't contact any endpoints Rock won't work. If the Redis cluster is unreachable for any reason, but the web farm is otherwise functioning, set the EnableRedisCacheCluster setting in web.config to “False” and use just the Rock Cache.
>
> ```
> <add key="EnableRedisCacheCluster" value="false" />
> ```
>
> This allows Rock to function while Redis issues are resolved; however, the servers won't have their cache in sync. Once Redis is back up, changing the EnableRedisCacheCluster setting to “True” will tell IIS to restart the application. Sometimes IIS doesn't do this automatically (or fails while trying) and the app pool will have to be recycled manually.

Asset Manager

The *Asset Manager* allows you to browse and manage assets in the provider.

Content Component Templates

Out of the box, Rock comes with three preconfigured content component templates. Use Lava to create your own.

Content Channel Item Attribute Categories

Use this page to add or modify categories for content channel item attributes. You can edit the name, description, icon or highlight color.

Persisted Datasets

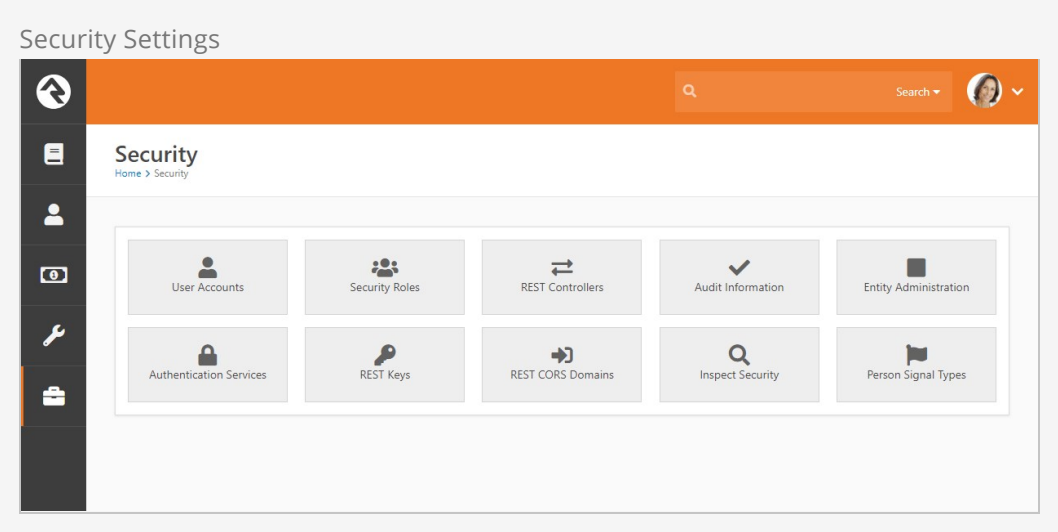
With *Persisted Datasets* you can shape data for speed and reuse demanding queries without worrying about performance. For all the details, see the `Designing and Building Websites Using Rock` guide.

Content Channel Categories

Content Channel Categories let you group and organize your content channels according to how they're used. This page is where those categories can be configured. A content channel can be in more than one category if it's needed in different areas. See the `Designing and Building Websites Using Rock` guide for more information.

Security Settings

Due to the sensitive nature of the data in Rock, it's important that you secure it wisely. This next section displays configurations specific to customizing the security of Rock.



User Accounts

While you can find a specific user's accounts on their *Person Profile* page, you can see a list of all user accounts on these screens. This helps determine which person is tied to a specific account and allows you to monitor general login activity.

Security Roles

Security roles are used to lock down features and data in Rock. While you can configure Rock at the user level (allow and deny specific users), it's much easier to assign people to roles and then build security around those groups. This adds consistency to your security model, which leads to fewer mistakes. The security role pages allow you to manage your roles and to add individuals to them.

It's important that you think strategically as you create security roles for your organization. A little planning in the beginning can prevent a jumbled mess of roles in the end. You'll also want to think about a naming scheme for your roles. While it sounds trivial, a good naming convention can significantly reduce confusion. We suggest using a naming convention of:
prefix – area action (RSR – Prayer Administration)

We've added helpful prefixes for you to use:

- **RSR** – This stands for 'Resource Role'. Roles with this prefix are used to secure various 'Resources' in Rock.
- **APP** – These roles are used to secure various applications that use Rock. For example, Rock ships with a role of 'APP – Check-in Devices' that's used to provide security to the check-in site.
- **WEB** – You'll quickly find the need to add several new roles that allow your staff and volunteers to edit parts of the website. Adding the 'WEB' prefix to these roles allows you to group these roles together.
- **GROUP** – While not technically a prefix, Rock will dynamically add this prefix for you when it lists groups that while not a 'Security Role' group type are marked to be considered a 'Security Role'.

Feel free to add new prefixes that make sense to your organization.

REST Controllers

One way you can build applications that extend Rock is through a technology called REST (REpresentational State Transfer, http://en.wikipedia.org/wiki/Representational_state_transfer). If this seems Greek to you, don't worry. Most developers are familiar with it. The screens in this area help document all of the REST APIs that are available to you. From these screens you can also manage REST API security to ensure only authorized applications can access the data.

Audit Information

Most changes to the Rock database are tracked in a special audit table. The information in these tables is presented in the screens of this section. This is a helpful tool for you to see what changes are being made and by whom. You can also use these logs to write custom SQL reports or create custom jobs that take action after certain changes.

Entity Administration

Entities are specific types of data. A person is a type of entity. So is a group, an email communication and a financial transaction. For those of you familiar with databases, an entity is like a table in your database. In fact, many entities do have a corresponding table in the database. These sets of screens allow you to view and configure the entities in Rock.

There are only two configuration items that you need to worry about. The first is whether the entity is "common." Common entities are shown at the top of the list when you need to select from a list of entities. We've preconfigured *Groups* and *People* to be common, but you may wish to add more (especially if you start adding custom entities of your own).

The second configuration item you'll want to note is related to security. You can also add security to entities to help protect the data they contain. For instance, we've configured the *Financial Transactions* entity to only be viewable by those in the finance security roles. This is especially useful when it comes to using the reporting features of Rock. The security you define here will be used by the reporting engine to ensure that

only authorized individuals can access sensitive data.

Authentication Services

Rock can be configured to allow several types of authentication during the login process. The available options out of the box are:

- **Auth0:** Auth0 provides authentication and authorization as a service. For full details, see the Auth0 Integration section.
- **Database:** This is the most common authentication type for most organizations. This stores the user's username and password in the database. The user's password is stored in a one-way encrypted format so it can't be retrieved by any means.
- **Active Directory:** If your organization uses a Microsoft Active Directory for network logins, Rock can use it to authenticate your staff. To enable this service, you'll first need to activate it and provide the address of a Domain Controller server along with the Domain Name of your network. Then, you'll then be able to configure Active Directory logins for your staff under the *Security* tab on their *Person Profile* pages.
- **PIN Authentication:** This authentication service is primarily used in the Check-in Manager to provide a quick way to authenticate on touch devices. This authentication only requires a username made up of numbers.
- **Facebook:** You can also enable the use of an individual's Facebook account as authentication to Rock. This makes their life a little easier because they have one less password to remember. In order to enable this, you'll need to configure a Facebook application.
- **Google:** This authentication provider allows guests to use their Google account with Rock.
- **Twitter:** As you can probably guess... yes, you can use Twitter as an authentication source.

> ### Implementing Authentication
> Once you implement a new authentication service you'll need to enable it on each login page where you want it used.

REST Keys

When writing applications that use Rock's REST API you'll need to use keys for authentication. These keys can be set up and configured here. See Rock's developer documentation for more information on using REST keys in your applications.

REST CORS Domains

Writing secure web applications requires that all domains that use your server's REST API be authorized using Cross-Origin Resource Sharing (CORS). You can define these allowed domains here.

Inspect Security

The *Inspect Security* page does just what the name implies: allows you to quickly verify a person's security settings. It also allows admins to "pop the trunk" on their own security settings when they lock themselves out of Rock. (It happens sometimes.) To read more about verifying permissions, see the Security Settings chapter of this manual.

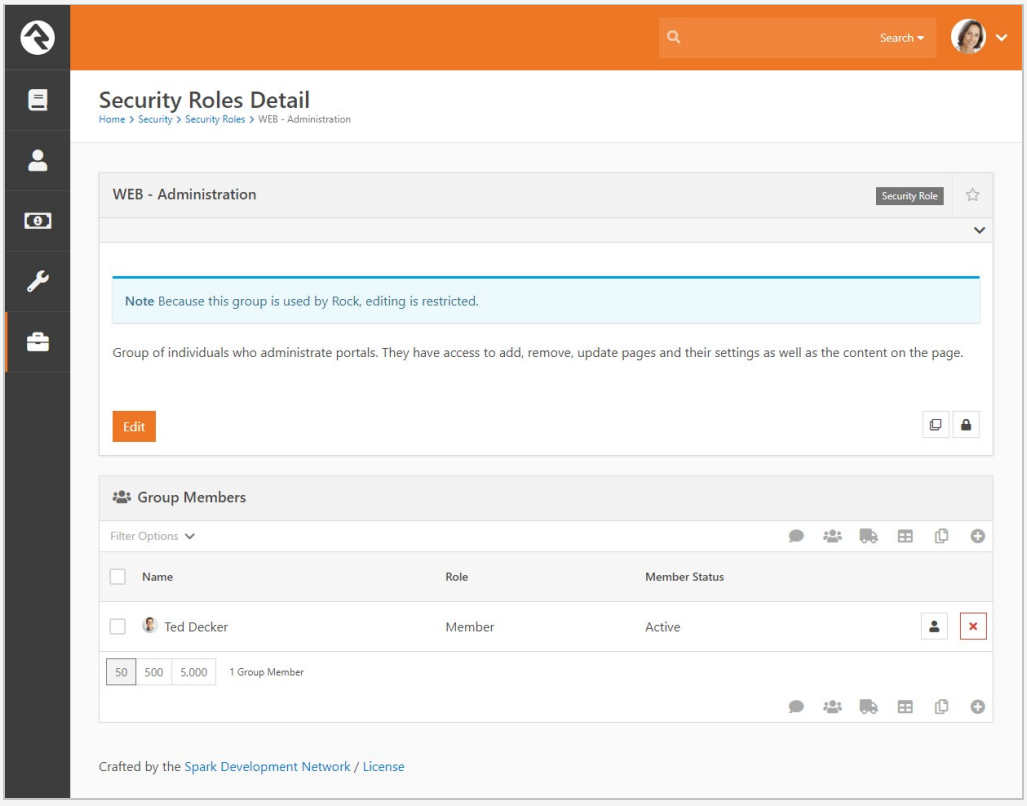
Person Signal Types

Signals are discreet flags that can be assigned to a person to bring attention to a sensitive or private matter. As with most aspects of Rock, signals are highly customizable. They can be used to flag anything from security concerns to high-level lay leads and everything in between. Check out the Person Signal Types chapter of the `Person & Family Field Guide` to learn more about this powerful feature.

Cloning Security Role Groups

We'll wrap up our Security Settings chapter by circling back to the *Security Roles* page we reviewed earlier. To save you time (and possibly a headache), you can access the *Security Roles* page to clone security role groups. Cloning allows you to make a copy of an existing group along with all of its security settings. Group members are not copied over to the new group.

Clone Security Role Group

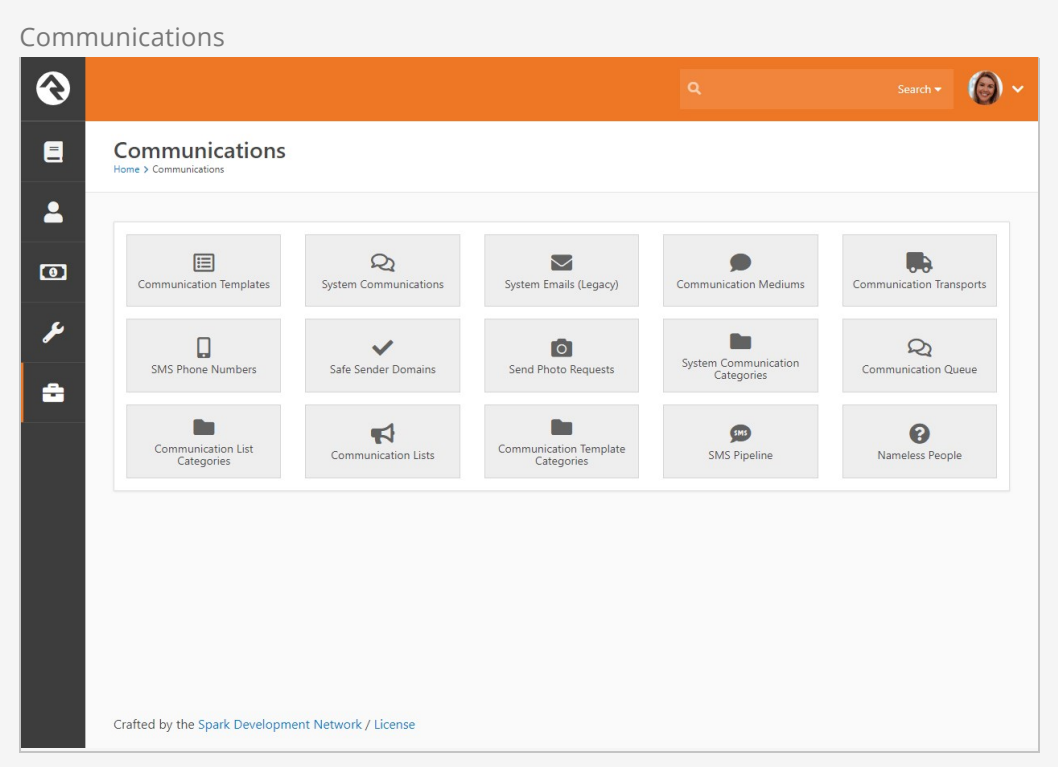


Cloning groups is a quick and easy process. Simply choose the group you want to clone in the Security Roles Group List and click the ▢ button. The word "copy" will be appended to the name of the group. Click the `Edit` button to change the name and description of the group, and to make any further changes to the group's settings. Then

click `Save`. When you return to the Group List, the newly-cloned group will be listed among the other security roles.

Communications

These settings help Rock use powerful tools to communicate with your attendees. While each tool is covered below, additional information can be found in the `Communicating With Rock` guide.



Communication Templates

You'll find over time that you often send the same types of emails and SMS messages over and over. When you see this pattern consider making a communication template to help simplify these tasks and improve consistency.

System Communications

System Communications (formerly known as "System Emails") are communication templates that are used by Rock to send very specific messages. Typically these are automated communications, such as the message someone receives when they've forgotten their password and requested to reset it.

System Communications can be used with either emails or SMS messaging. While Rock

sets these up to look professional from the start, you may want to modify them to match your organization's branding. You can edit these communications under `Admin Tools > Communications > System Communications`.

> **System Emails and System Communications**
> With the addition of SMS messaging configuration, *System Communications* replaces what was formerly known as *System Emails*. Current versions of Rock will have both areas available, but *System Emails* has been renamed to *System Emails (Legacy)* to help distinguish between the two. If you're using any Rock Shop plugins related to communications, you may need to maintain templates in both places until the plugin can be updated to reference *System Communications* instead of *System Emails.*

Communication Mediums

When you send a new communication from `Tools > New Communication` or from the bottom of any grid that contains a list of people, you can select to send either an SMS message or an email. Both of those are communication mediums. You can configure the settings for each medium from the *Communication Mediums* page. This is where you can set the *Email* transport to use normal SMTP or a bulk delivery service like SendGrid. This is also where you can configure the SMS channel to use Twillio to send text messages.

You can also add communication mediums to the list. For example, it's possible that in the future a new medium might be created to push content through an organization's mobile app. Once this new medium is written (by either a third-party or the core team), it can be simply dropped into Rock and worked by using configuration from these screens.

Communication Transports

We mentioned services like SendGrid, Twillio and SMTP in the Communications Mediums section. These delivery options are called transports. They take the message contents and make sure that they get to the recipients. Each transport has a set of configuration options specific to its needs. For example, the Twillio transport requires an account SID and a token to tie into your account.

> **Don't Forget...**
> If you activate a new transport you must then navigate to `Admin Tools > Communications > Communication Mediums` to set it as the Transport Container for a Communication Medium.

Like channels, new transports can easily be added over time, from either the core Rock team or third parties.

SMS Phone Numbers

This menu item is a hotlink to the *SMS Phone Numbers* defined type. This defined type helps you configure the SMS environment. See the `Communicating With Rock` guide for more information on SMS.

Safe Sender Domains

This menu item is a hotlink to the *Safe Sender Domains* defined type. This defines the domains that can be used to send emails. If an email communication is created with a *From* address that isn't from one of these domains, the *Organization Email* global attribute value will be used instead and the original value will be used as the *Reply To* address. This helps reduce the likelihood of communications being rejected by the receiving email servers.

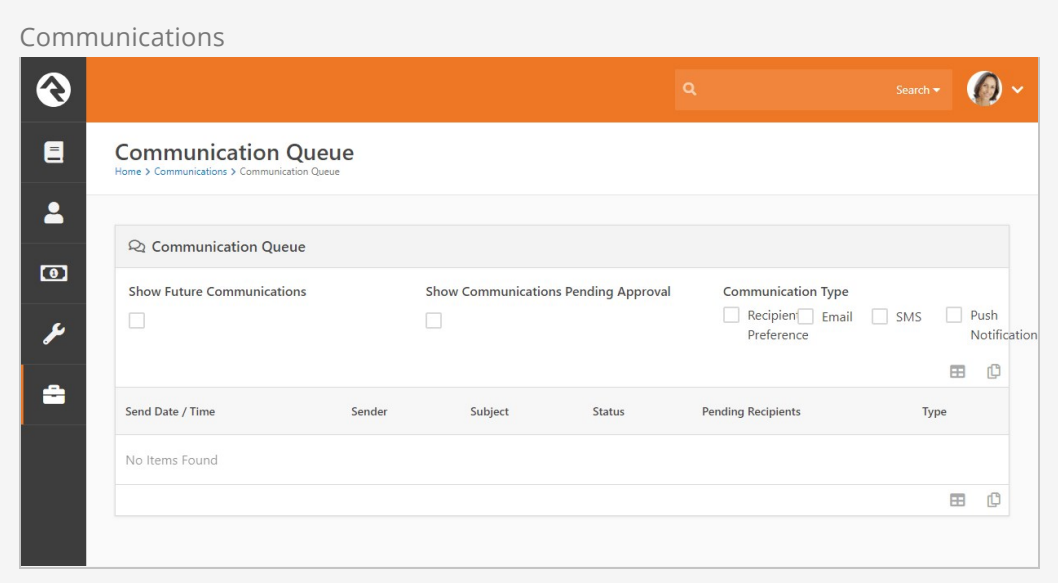
Send Photo Requests

These pages allow you to send and administrate requests for photos from your community. You can find detailed instructions for these tools in the `Person and Family Field Guide`.

System Communication Categories

This page allows you to create and manage categories (e.g. Event Registration, Groups) for your system communications.

Communication Queue



The *Communication Queue* is where communications that are pending approval or have failed to be sent are stored. Ideally you'll never see anything listed here but, if you do, you'll know something elsewhere in the system needs attention.

While the *Communication Queue* doesn't require any configuration, the *Send Communication* job settings will affect what may end up in the queue. By default, the

Send Communication job waits 30 minutes before sending any new communication to prevent any sending overlap for communications requiring approval.

Also, you can use the *Communication Queue Alert* job to send an email notice to specified recipients when a communication is sent to the *Communication Queue*. This helps to ensure the queue is being monitored regularly.

The *Send Communication* and *Communication Queue Alert* jobs can be configured by going to `Admin Tools > System Settings > Jobs Administration`

Communication List Categories

The *Communication List Categories* page is where you can view, edit and create new categories for use with communication lists. Communication list categories can be used for a number of powerful functions, from segmenting communication lists to allowing communication recipients to subscribe and unsubscribe from lists. To learn more about communication list categories, see the `Communicating With Rock` manual.

Communication Lists

This page allows you to view, modify and add communication lists to be used with the *Communication Wizard*. To learn more about communication lists and sending communications, check out the `Communicating With Rock` manual.

Communication Template Categories

This page allows you to view, modify and add communication template categories. To learn more about communication templates, check out the `Communicating With Rock` manual.

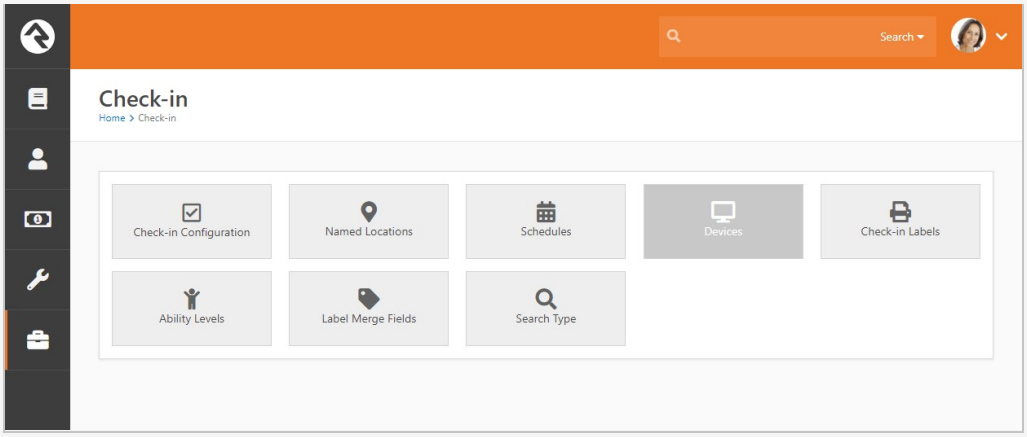
SMS Pipeline

This is where you'll configure your SMS phone numbers with the necessary actions used by your organization. Check out the `Communicating With Rock` manual for more details.

Check-in

Rock's check-in system is very powerful. With that power comes several configuration options. This section of the administrative tools groups all of the check-in configuration into one place.

Check-in



Check-in Configuration

These screens help manage the setup of your check-in configurations. These settings are discussed in detail in the `Checking-out Check-in` guide.

Named Locations

This configuration screen allows you to define specific locations with a name. You'll want to use this to define your campuses, buildings and rooms. These *Named Locations* can then be used with configuring groups, check-in, etc.

The *Named Locations* page can alternatively be accessed from `Admin Tools > General Settings > Named Locations`

Schedules

Several features require the configuration of repeating schedules. For instance, check-in needs to know your organization's schedules to be able to configure the time check-in should start. These screens allow you to create those schedules.

The *Schedules* page is also available under `Admin Tools > General Settings > Schedules`

Devices

The devices screens are used to manage devices that interact with Rock in some way. Today this is primarily used to help manage check-in kiosks but in the future we hope to add support for all types of devices.

The list of devices is also available under `Admin Tools > General Settings > Devices`

Check-in Labels

The check-in process can be configured to use several formats of printed labels. These labels and their configuration are managed using these screens. The `Checking-out Check-in` guide also covers the creation and configuration of these labels.

Ability Levels

This is a short-cut link to the *Ability Levels* defined type. *Ability Levels* are used to classify developmental stages. *Ability Levels* can also be accessed under `Admin Tools > General Settings > Defined Types > Ability Levels`

Label Merge Fields

This is a short-cut link to the *Label Merge Fields* defined type. *Label Merge Fields* are used to find and print data for labels. This defined type is also available under `Admin Tools > General Settings > Defined Types > Label Merge Fields`

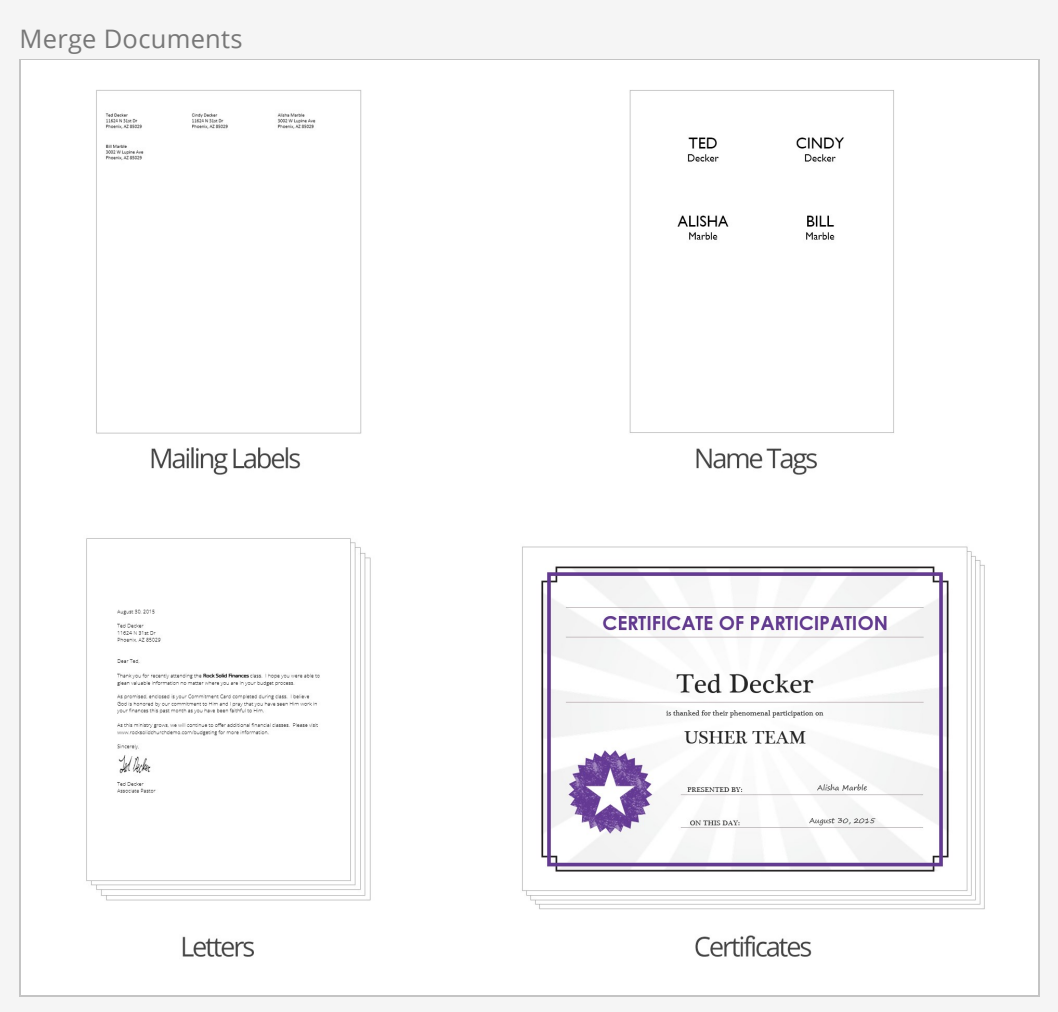
Search Type

This is a short-cut link to the *Search Type* defined type. *Search Type* are the ways to search for a family (e.g. phone, name, etc.) in check-in. You can also manage this defined type from `Admin Tools > General Settings > Defined Types > Search Type`

Merge Documents

Hopefully by now you've had a chance to play with "Lava", Rock's templating engine. To know Lava is to love Lava. Much of the time Lava is used to format many of the pages in Rock. But what if you wanted to use Lava to format documents? Well, that's exactly what merge documents do.

Rock ships with two different merge document formats: Word and HTML. The HTML format is pretty simple—just create a new HTML file and embed Lava much like you do elsewhere in Rock. The Word format makes it super simple to achieve amazing results. Let's take a look at the output from a few sample documents to see what's possible.



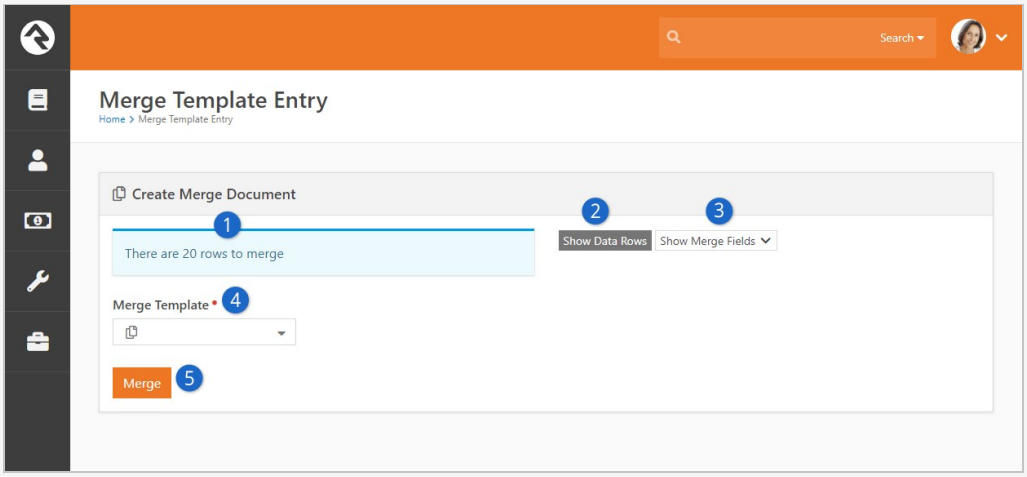
Let's look at how you manage and use merge docs. Then we'll dive deeper into how to

create and format them.

Using a Merge Document

You'll notice at the bottom of most grids there's a button. Pressing this button will take the contents of the grid and make it available to import into a merge document.

Merge Document Page



1. **Count**
   Shows you how many records will be merged into the document.
2. **Show Data Rows**
   Shows the first 15 records that will be used for the merge.
3. **Show Merge Fields**
   This is a cheat sheet of sorts to help you create a merge document for the data provided.
4. **Merge Template**
   The template to use for the merge document.
5. **Merge**
   This button will initiate the merge process.

That's it! Pretty easy, no?

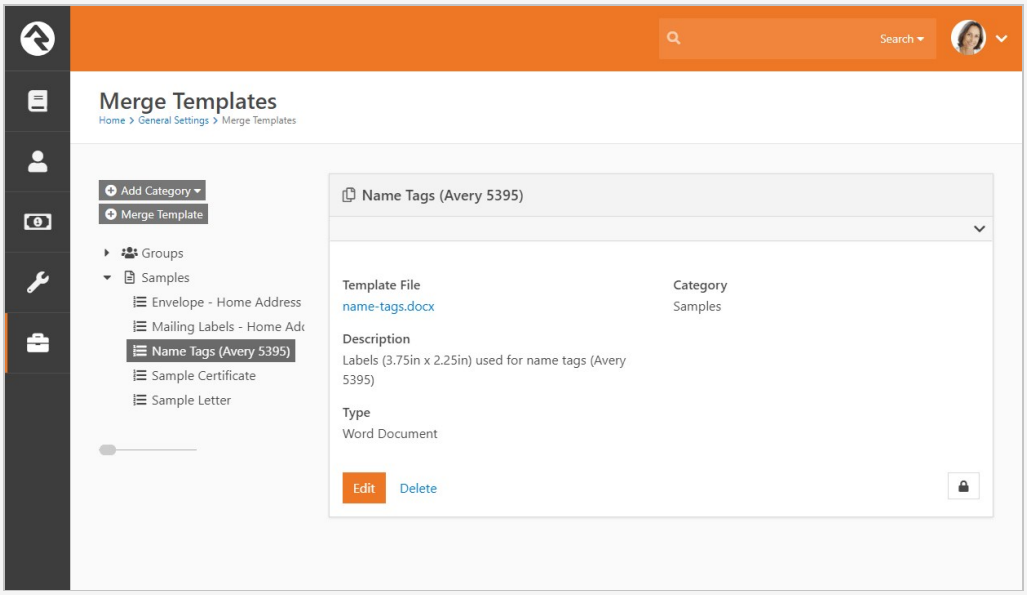
Administrating Merge Templates

Merge documents are created from templates. Some merge templates will be used by everyone; others, though, can be limited to a specific role or person. To help keep the list of merge documents from getting out of hand, we've created the ability to classify templates as either global or personal.

Global Merge Templates

You can set up a list of merge templates that are accessible to everyone in the database under `Admin Tools > General Settings > Merge Templates`.

Global Templates

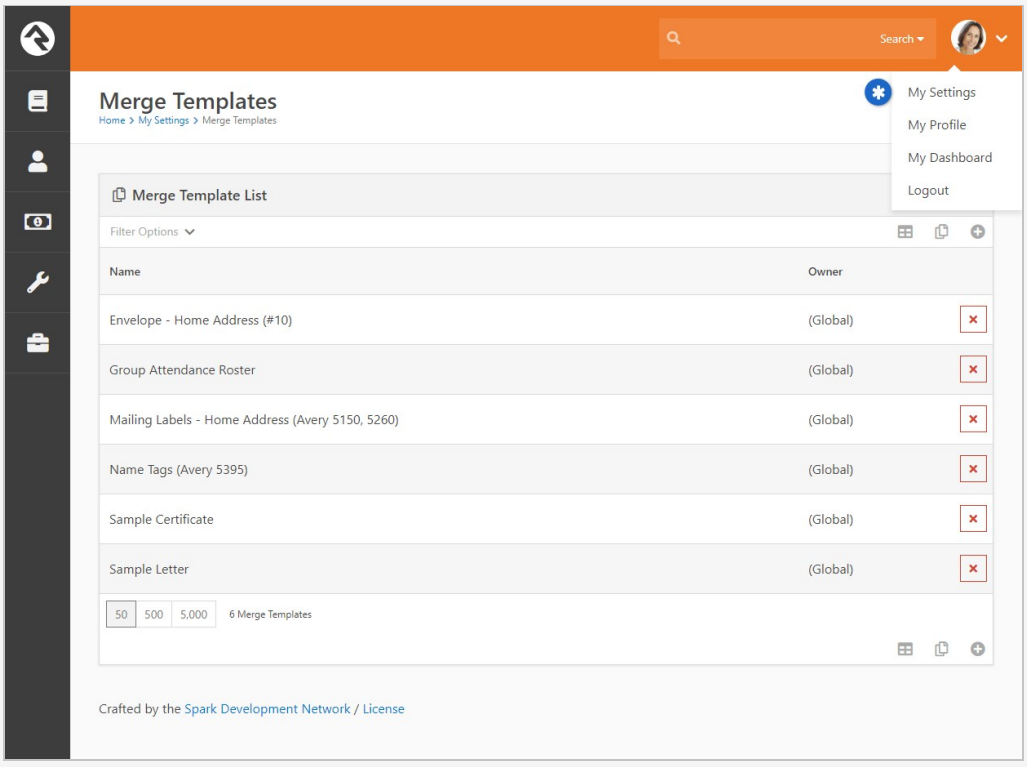


Security can be added to templates on the *Merge Template Detail* block. Security settings are enforced whenever a merge document is created.

Personal Merge Templates

You can set up a merge document for your personal use on your *My Settings* page (found under the dropdown in the upper-right corner of the screen).

Personal Templates



From this screen you'll see your own personal templates as well as any others you can access based on security roles or direct assignment.

Creating a Merge Document

As mentioned previously, Rock currently supports two different merge document formats: HTML and Word. Below we cover how to create a merge document for each format.

Word

The most common document format is Word. Creating these documents is actually pretty simple. Before we jump in it's important to talk about the two strategies for merging using Word.

The first strategy is to create a Word document where the whole document acts as a template for each record. This is most common for things like letters.

Sample Merge Letter Template

{{ 'Now' | Date:' MMMM d, yyyy ' }}

{{ Row.NickName }} {{ Row.LastName }}
{{ Row | Address:'Home','[[Street1]]' }}
{{ Row | Address:'Home','[[City]], [[State]] [[PostalCode]]' }}

Dear {{ Row.NickName }},

Thank you for recently attending the **Rock Solid Finances** class. I hope you were able to glean valuable information no matter where you are in your budget process.

As promised, enclosed is your Commitment Card completed during class. I believe God is honored by our commitment to Him and I pray that you have seen Him work in your finances this past month as you have been faithful to Him.

As this ministry grows, we will continue to offer additional financial classes. Please visit www.rocksolidchurchdemo.com/budgeting for more information.

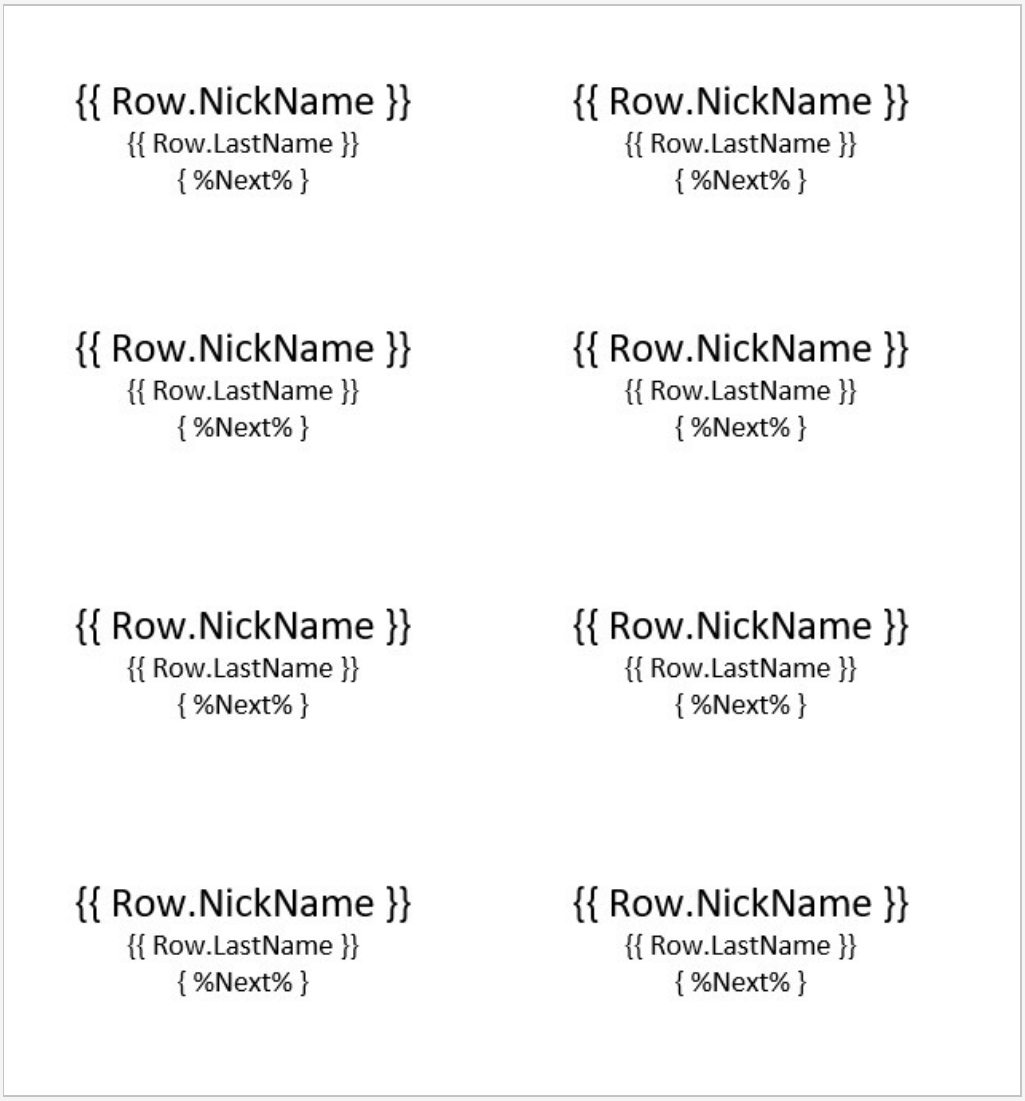
Sincerely,

Ted Decker
Associate Pastor

With this type of document you can simply open Word, type your letter and then add in the Lava where you want the dynamic text to show. Note that you have access to most of Lava's capabilities in Word. So things like `{{ 'Now' | Date:' MMMM d, yyyy ' }}` will place in the current date and time.

The second merge document strategy is for occasions when you want more than one record to be displayed on a single page. This is often the case for tasks like creating mailing labels. When creating these types of documents add a `{%Next%}` code to move to the next record in the list.

Sample Merge Label Template



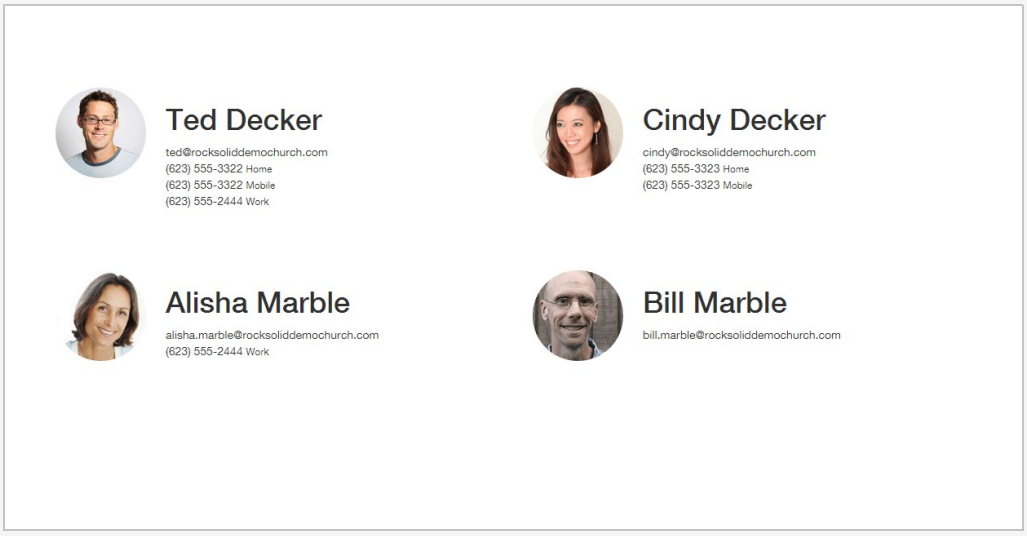
Rock will automatically figure out what strategy your document is using so there's no extra configuration.

HTML

You might be wondering, "Why would I ever want to use HTML for a merge document?" At first blush it does seem a little odd. HTML, however, is a great tool for incorporating rich media into a format that can easily be printed. It's often the best choice when you need to print a report that requires showing maps (easy to display using Google's static map API) or person photos (links to their photo in Rock).

Below is a quick example of some HTML/Lava that will present a list of people with their photos (this assumes that the merge document is passed a list of people).

Output of HTML Template




```
<html>
    <head>
   <title>Group Roster</title>
  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.
5/css/bootstrap.min.css">
  </head>

  <body>
     <div class="container" style="margin-top: 100px">
      <div class="row">

        {% for row in Rows %}
        <div class="col-xs-6 clearfix" style="margin-bottom
: 24px; min-height: 200px;">
          <div class="pull-left" style="margin-right:
 24px; width:20%;">
             <img src="{{ 'Global' | Attribute:'
PublicApplicationRoot' }}{{ row.PhotoUrl }}" style="width: 100%; border-radius: 100px;" />
                        </div>
            <div class="pull-left">
              <h1>{{ row.FullName }}</h1>
                {{ row.Email }}  <br />
            {% for phone in row.PhoneNumbers %}
                {{ phone.NumberFormatted }}
 <small>{{ phone.NumberTypeValue.Value }}</small> <br />
                      {% endfor %}
                        </div>
                    </div>
          {% endfor %}

          </div>
     </div>
  </body>
</html>
```

Note a few things in the code:

- **Line 4:** We link out to a hosted version of the Bootstrap CSS file. This provides an easy way to get a default set of styles.
- **Line 11:** Now we simply run through each of the rows that were passed to us.

- **Line 14:** Inserting a photo is simple! The *PhotoUrl* property for a person even returns a generic image if the person doesn't have a photo.

As you can see, creating HTML merge documents is easy. Here are a few additional tips:

- Adding map images to your merge documents is also fairly simple. Use the following links for more information:
  - Google Maps API
  - Static Map Helper
- HTML merge documents are usually printed. While most people think of HTML as an online-only file format, it actually does have several print capabilities like page breaks. Here are a few links to point you in the right direction:
  - Styling for Print
  - CSS Page Breaks

> **Cloud Flare**
>
> Enabling Scrape Shield with Cloud Flare will block email addresses in HTML merge documents. If you're using this service it will need to be disabled.

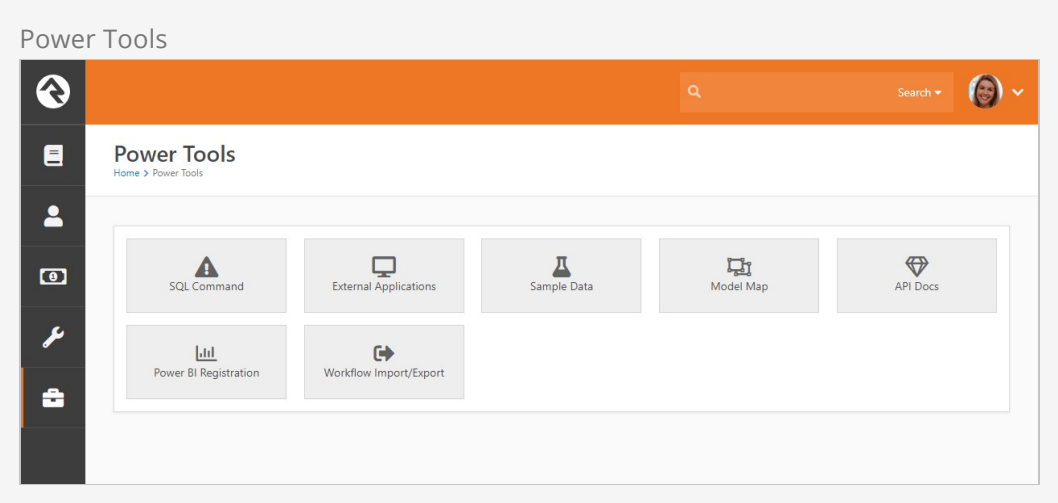
Lava Tips With Merge Documents

For the most part your mad `Lava` skills will all work with Merge Templates. There are a couple of tricks, though, that we'll outline below.

- While merge templates can be used on any entity type, they'll most often be used on people. To help make your templates work with as many 'grids' of people data as possible we convert group member entities to people.
- Should you need access to the group member data (e.g. group member attributes) you can use the GroupMember property on the person like: `{{ Row.GroupMember | Attribute:'attributekey' }}`

Power Tools

Tools that are not used very often, or that need to be used with caution, can be found in the Power Tools area.

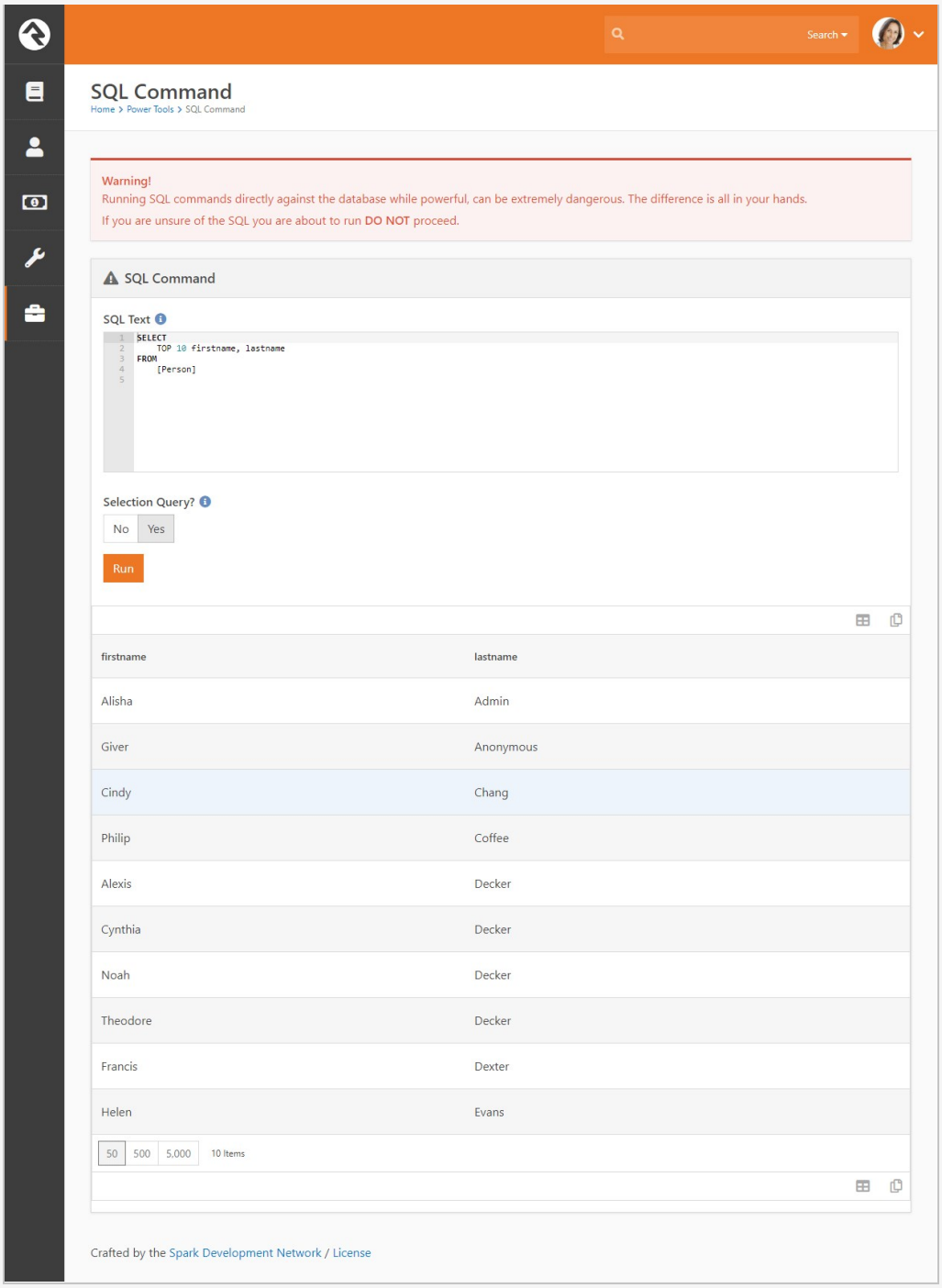


SQL Command

The *SQL Command* page is very powerful, and should therefore be used with great caution. Rock is built on top of Microsoft's SQL Server database. While for most people this is a detail they don't need to know, at times administrators may want to use SQL to get direct access to their data.

The *SQL Command* block allows you to write SQL statements and have them executed directly in the database. When used with a `SELECT` command, the results of your query will be displayed in a grid below the command.

SQL Query



You can also enter `UPDATE` and `DELETE` commands if you wish. For them to work, you'll need to flip the *Selection Query* toggle as an additional fail-safe.

> Warning:
> Whatever SQL command you type in this box will be run on your database. Treat it as a loaded gun. If you're unsure of SQL, you might stay away from this page.

External Applications

We've worked hard to make as much of Rock available through a web interface as possible. Some functionality, though, requires interaction with devices, like check scanners, that don't work through today's web browsers. Other times there are situations, like creating giving statements, where the processing of a request could take awhile to complete. In these cases, we've developed Windows applications to run on your desktop. These applications can be downloaded from the links provided in this section.

Sample Data

Whether you're just starting out with Rock or setting up a training environment to share your expertise with others, it's helpful to have some sample data to play with. The *Sample Data* block is a one-step way to import a consistent set of sample data. You'll recognize many of the names from the examples in the Rock documentation. Feel free to run the import repeatedly to keep time-sensitive data like attendance current.

> Warning:
> We do not recommend that you import this sample data into your production database. This will cause fictitious data to appear in unexpected places like reports.

Model Map

The *Model Map* is used to access a complete list of every property an entity has. Feel free to explore this area, but keep in mind it's pretty much only used by developers.

API Docs

This area shows you all entities that have REST endpoints you can use with your custom code. Like the *Model Map*, as an admin you should be aware that this page exists, but it's really for developers to use.

Power BI Registration

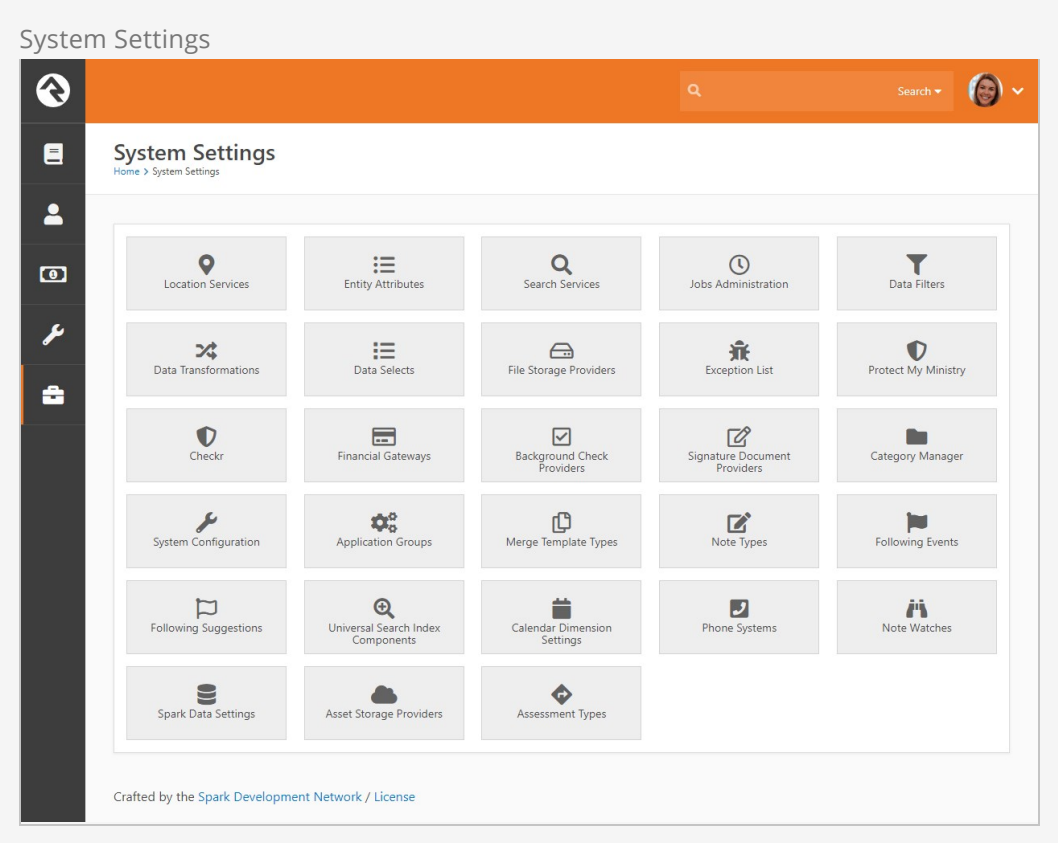
Business Intelligence (BI) is a buzz term for tools that allow you to quickly analyze data and present actionable information to leaders. The *Power BI Registration* page is where you'll go to set up and register your Power BI account. If you want to learn more about BI, start with our `Business Intelligence` manual.

Workflow Import/Export

This tool allows you to share workflows with individuals outside your organization, and to import workflows created by other organizations. There's a whole chapter dedicated to this feature in the `Blasting Off With Workflows` guide.

System Settings

While system settings are rarely modified, understanding them will give you better insight into how Rock works and what's possible.



Location Services

Knowing the locations of those who engage with your organization can be very powerful. In order to do this, you need to be able to convert a person's address (3120 W Cholla St Phoenix, AZ 85029) to a latitude / longitude point (33.590795 , -112.126459). To do that, you'll need to run your addresses through a geocoding process. Rock will handle all of the work, all you need to do is provide a geocoding service to handle the requests. Rock has a couple of services for you to pick from. More information on geocoding can be found in the Locations section of this document.

Like the geocoding services, you can also send your addresses through a standardization process. These processes can fix the following for your addresses:

- Fill in any missing items (555 W Main to 555 W Main St)
- Fix any case issues (555 w main st to 555 W Main St)
- Standardize elements (555 West Main Street to 555 W Main St)
- Append Zip+4 info (85383 to 85383-3622)

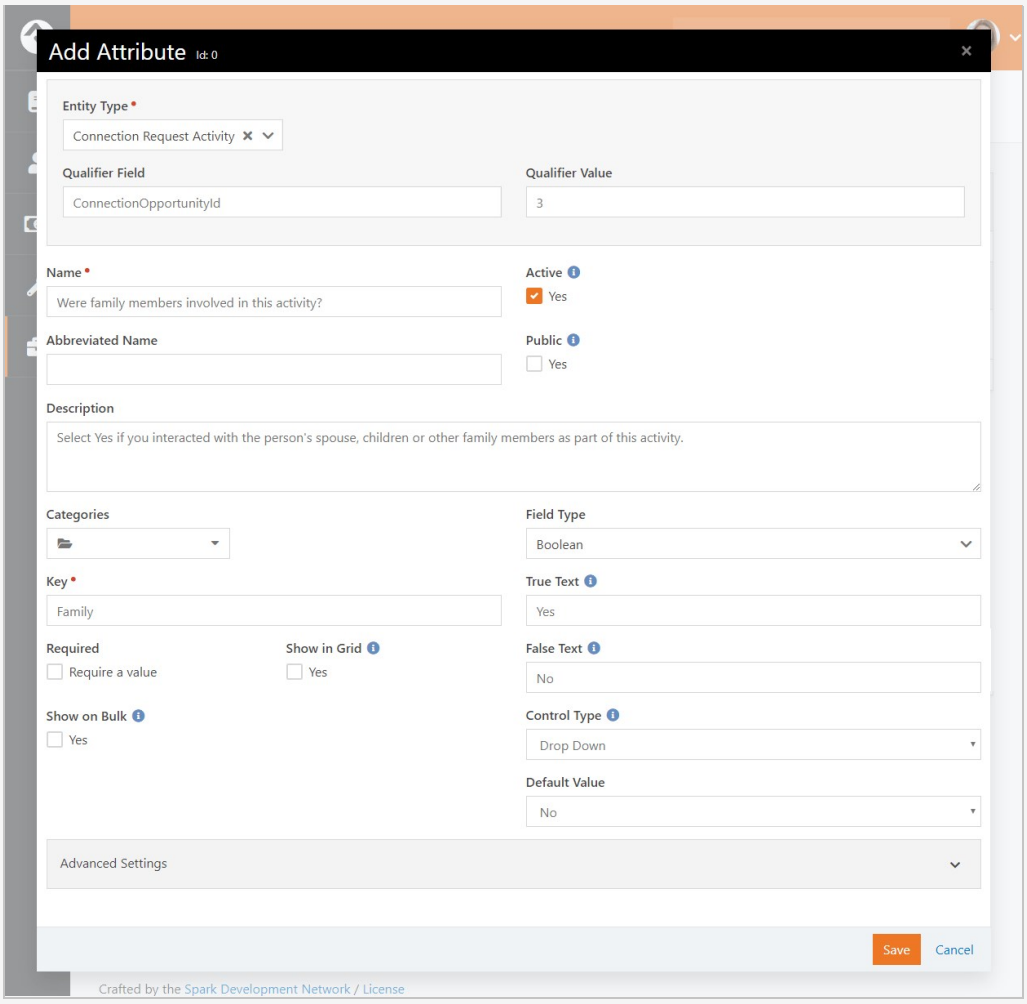
The standardization process helps increase the quality of the addresses in your database. More information on address standardization can be found in the Locations section.

Entity Attributes

We've already discussed how attributes can be attached to common entities like people or groups. By now you know about those attributes and the power they bring to Rock. But that's only the tip of the iceberg. From the *Entity Attributes* page you can add attributes to any entity that exists in Rock.

Sometimes you won't want the attribute applied everywhere the entity exists. For instance, you might want a group attribute to apply only to groups of a certain type. You can narrow the scope of the attribute using the *Qualifier Field* and *Qualifier Value* fields. Using these fields, the attribute pictured below will only be attached to Connection Request Activity entities within the "Children's" connection opportunity. Rock's Model Map can help you identify what properties you can use as qualifier fields.

Entity Attributes



Although there's a dedicated page for this, you can also create *Global Attributes* from the *Entity Attributes* page. For the most part, you shouldn't need to do this unless you're writing your own code to run inside Rock. To add a *Global Attribute*, simply create a new entity attribute that isn't tied to any entity.

> ### Adding Defined Values from Attributes
> When adding an attribute with a *Field Type* of "Defined Value" you'll be given the option to *Allow Adding New Values*. If enabled, this lets you add to the *Defined Type's* list of values from anywhere the attribute is accessed.

Search Services

Rock's *Smart Search* box at the top of every page allows you to search for people and groups using various criteria like name, phone and email. These screens allow you to manage those search types. For the most part you'll want to leave them set as-is, but you can inactivate one if you find it isn't helpful. A key concept is that you can write your own search services with some custom coding. If you do, they will appear on this list for you to enable and configure.

Jobs Administration

While much of Rock works through the interaction of individuals within the system, there are times when you'll want to run functionality in the background. For example, you may want to run a process to clean up or update data in the system in an automated fashion. These background tasks are called *Jobs* and can be managed and scheduled through the screens in this area. See the Jobs section for additional details.

Data Filters

Data Filters are an integral part of Rock's reporting strategy. Hopefully you've already read about them in the `Taking Off With Reporting` guide. At a high level, data filters allow you to narrow down your view of data by providing specific criteria. These filters can be enabled, disabled and secured in this set of screens. Like many things in Rock, you can develop your own *Data Filters* that can be managed here.

Data Transformations

Once you've filtered your data, you can add a transformation to it before it's displayed. Say you've filtered to see only children who have attended twice in the last two months, but you really want to display information about the parents of these children. A transformation (in this case the *Person Parent Transformation*) would convert the child data to parent data. You can manage these transformations here. Just like with filters, you can also develop your own transformations.

Data Selects

Data selects are used in reporting. When you create a report, you provide it with a data view to act as a filter. You also add columns to your report. Many of these columns will be attributes of the person or group. You can also choose to add some powerful dynamic columns. These dynamic columns are managed and secured from this screen.

File Storage Providers

In the File Types section we discussed file storage providers. These providers help Rock manage the saving and retrieving of files to different storage media. The two default storage types are *Database* and *File System*, but others like Amazon, Cloudinary, Azure or Google can be used. Under the *File System* configuration, you can change the default location for file storage. For the most part, you can leave these settings as you found them.

Exception List

Despite all of our work to eliminate bugs, some will sneak by us. Exceptions, also known as errors, can occur as a result of software bugs or when blocks and pages are misconfigured. While you can set these errors to be emailed to you (see `General Settings > Global Settings > Email Exceptions List`), you can also view the history of these errors here.

Exceptions are sorted chronologically. Instead of showing you every error in a large list, we've grouped them by type. This helps you determine how often an error is occurring.

Protect My Ministry

Rock provides a seamless integration with Protect My Ministry to provide reliable background checks for your organization. See the Background Checks chapter for specifics on this integration.

Checkr

Checkr provides modern and compliant background checks for use with Rock. With your Checkr token from RockRMS.com you'll be able to initiate background checks using Checkr's scalable, cost-effective and rapid screening solutions.

Financial Gateways

Financial gateways allow Rock to move money from individuals' accounts to the organization. Information on these gateways and their configuration is provided in detail in the `Rock Solid Finances` guide.

Background Check Providers

These screens allow you to configure different background check providers. You can read more about Rock's background check features in the Background Checks chapter.

Signature Document Providers

Digital signature providers create a reliable and legal way of gathering digital signatures. We plan to implement a native digital signing feature to Rock in an upcoming release. We recommend holding off for that solution instead of purchasing a subscription to SignNow.

Category Manager

The *Category Manager* allows you to add categories for any entity type in Rock. Think of it as your one stop shop for any category. To help simplify the process be sure to use the entity type filter.

System Configuration

This screen allows you to change some technical configuration settings in Rock. For the most part you should never need to worry about these settings, but we've provided this page to help you change them if needed.

> Warning:
> Changing these settings will cause Rock to restart. This means that all sites will be unavailable for a few minutes during the restart. Use caution when changing these settings.

- **Enable Multiple Time Zone Support:** Out of the box Rock assumes that all campuses are in the same time zone. There's typically not a big impact when

they're different, except for check-in. Enable this option to ensure check-in works as expected across different time zones.
- **Time Zone:** During the install you should have set your time zone. If you need to change it, you can do that here.
- **Enable Run Jobs In IIS Context:** By default, Rock's job engine runs on the webserver. This setting allows you to disable this in order to run jobs as a Windows Agent. See the *Jobs* section for more information on this topic.
- **Max Upload File Size:** For security reasons, webservers limit the maximum file size that can be uploaded. This helps to limit the impact of denial of service attacks. Rock has set the default value to 10 MB. If you need more you can update the size here.
- **Cookie Persistence Length:** Use this setting to override the authentication cookie length. The value you set will become the default for things like the REST API. This will impact how frequently a person needs to authenticate, so try to strike a balance between convenience and security.
- **Enable Database Performance Counters:** This setting should remain disabled unless you're actively troubleshooting a system performance issue. When enabled, and after the system restarts, Rock will start collecting data about the usage of your database "connection pool". Rock ships with a set of *Metrics* you can use to see the results of this data collection. These metrics can be accessed in Rock under `Tools > Metrics | Hosting Metrics` and will provide the information described below:

    - **Number Of Active Connections -** The number of active connections that are currently in use. This number will naturally jump up and down during the day.
    - **Number Of Free Connections -** The number of open connections available for use. This number will decrease as the number of active connections increases.
    - **Hard Connects Per Second -** This is a count of how many connections are being opened explicitly each second. You might expect this number to rise when first starting Rock or when there aren't enough available connections in the connection pool.
    - **Soft Connects Per Second -** The number of connections being obtained from the connection pool per second. Note, it's possible for this number to be larger than the number of connections in your pool because most connections are used for only fractions of a second.

Application Groups

Application groups are, as the name suggests, groups that are used by the Rock application. This way, Rock can refer to the members of a group instead of running through complex logic to identify certain individuals. These groups are listed here for administrator access.

Merge Template Types

Rock allows you to have several different merge template types (think 'HTML', 'Word',

etc.) You can manage these provider types with these screens.

Note Types Settings

Rock allows any entity type (People, Financial Batches, Prayer Requests, etc.) to have notes attached to it. In fact, you can even have different types of notes on a single entity. These screens allow you to set up this powerful feature. You can read more about these features in the `Note Types` chapter of this manual.

Following Events

This section allows you to define new *Following Events*. You can read more about these features in the `Person and Family Field Guide`.

Following Suggestions

This section allows you to define new *Following Suggestions*. You can read more about these features in the `Person and Family Field Guide`.

Universal Search Index Components

This page is used to view and maintain the available Universal Search Index Components. Universal Search allows you to search multiple types of data at once in a full-text manner. In a sense, it's like Google for Rock. To learn the ins and outs of Universal Search, check out the `Universal Search` guide.

Calendar Dimension Settings

These settings are used to support Rock's Business Intelligence (BI) features. In short, these settings relate to date-based information that may be impacted by your organization's fiscal year. Check out the `Business Intelligence` guide for full details.

Phone Systems

This page is part of the framework for linking Rock to PBX phone systems. The features added here allow for plug-ins to be created for specific phone systems to allow for features such as creating interactions from call detail records and click to call.

Note Watches

Here, administrators can see everyone who's watching a note, and can add new "watches". See the Watching Notes section for full details.

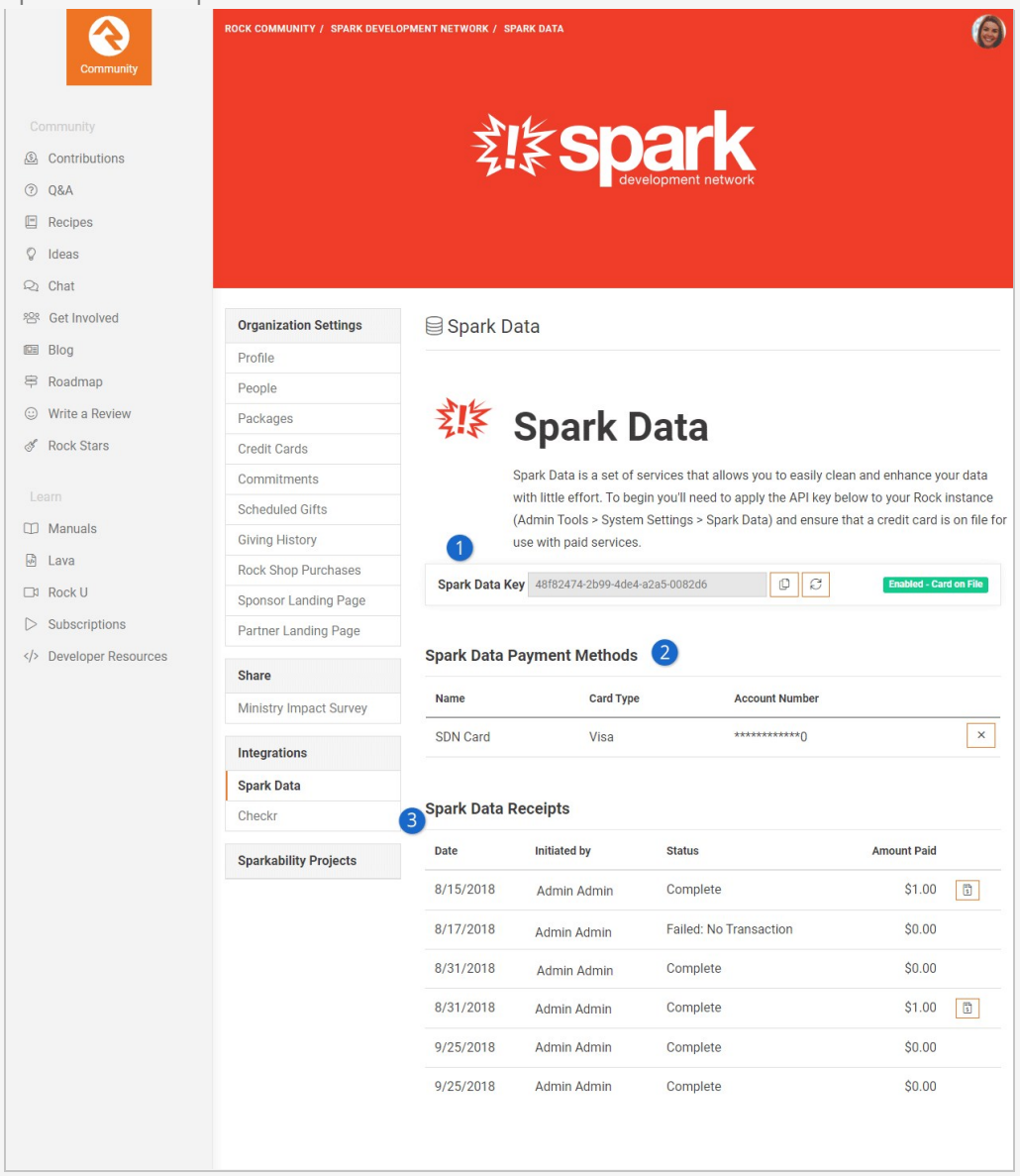
Spark Data Settings

Spark Data is a feature in Rock which manages paid services that are offered by Spark Development Network. This allows us to offer services to your organization, often at lower costs than if everyone had to go set up their own service individually, and without forcing you to compound the number of bills, accounts and API keys you have to keep up-to-date.

Initially, this includes the National Change of Address (NCOA) service, but more services will be added to this list over time.

To begin with Spark Data, click the `Sign-up Now` link and you'll be taken to rockrms.com/sparkdatalink (pictured below). If you don't have a rockrms.com login, you'll need to create one. If prompted, choose which organization you want to turn on Spark Data for. You'll then see a page like this:

Spark Data Setup



1. **Spark Data Key**
   Once you've added the credit card and enabled the service, a Data Key will be generated and shown here. Copy this key; you'll need it in a moment.
2. **Spark Data Payment Methods**
   Your organization will need to have a payment method (e.g. credit card) on file for any services you request.
3. **Spark Data Receipts**
   A summary of previous transactions is provided. Click the icon to view a detailed receipt for a single transaction.

Now you can return to your own Rock installation. Go back to your `Admin Tools > System Settings > Spark Data Settings` page, and paste in the Spark Data API Key where prompted. If you'd like, you can also choose a group of people who you'd like to be

notified about the success or failure of any Spark Data jobs. Click `Save` when you're done.

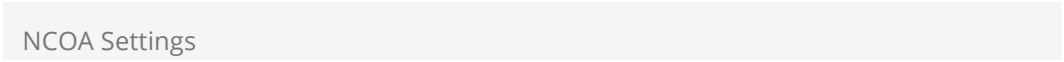
National Change of Address

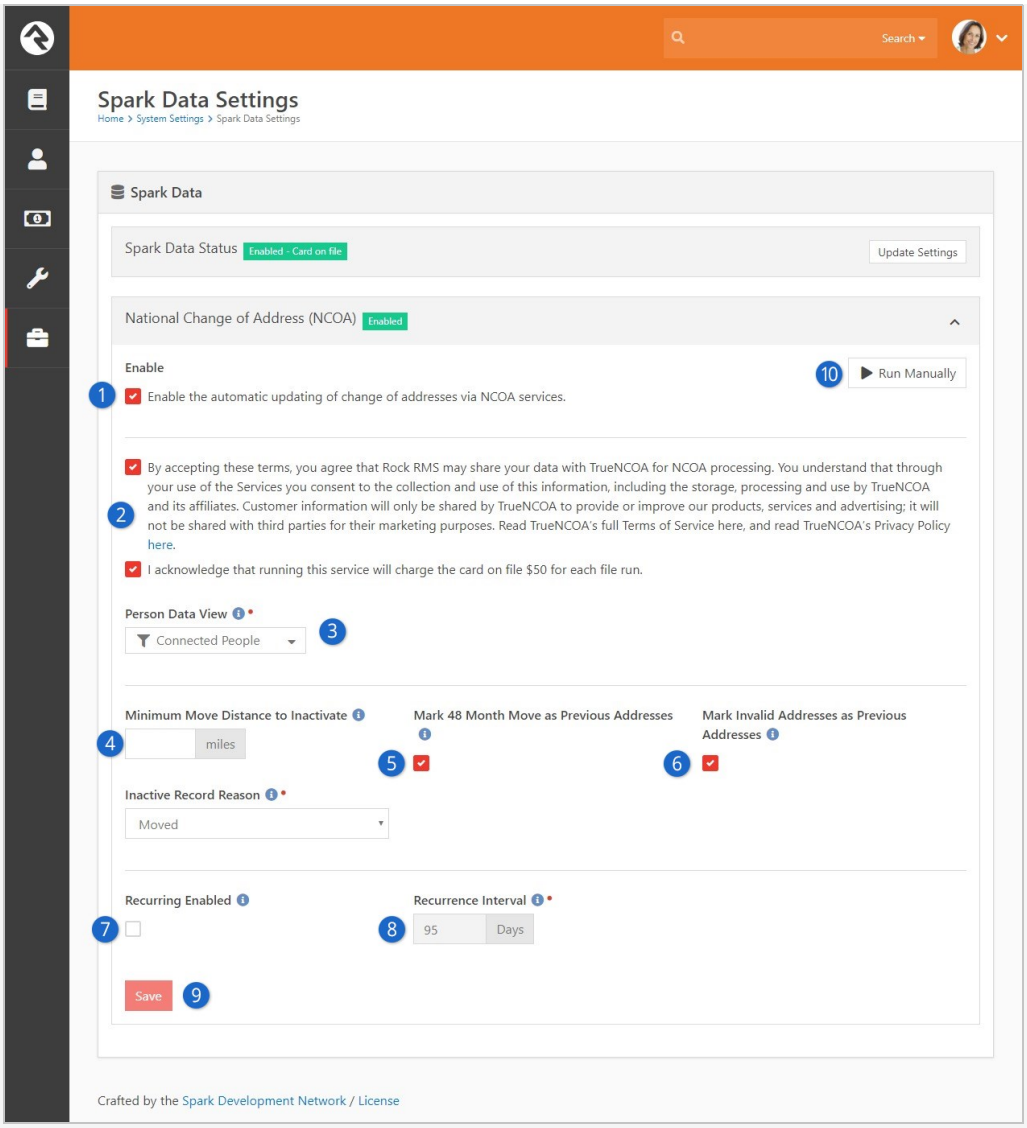
The National Change of Address (NCOA) list is a database that the United States Postal Service maintains to reroute your mail to a new address when you move. In other words, it's a big list of official address changes.

What does that mean for your organization? As you've probably experienced, people aren't always very diligent about letting you know when they move. Even if you notice someone has been absent, it could be that they're on vacation or have had a change to their work schedule.

Whatever the circumstances may be, as a Rock admin you want to ensure your data is clean and up to date. The NCOA service, brought to you through Spark Data, helps you do that by comparing addresses in your system with their list of address changes. When a match is found, it will respond according to the settings you choose.

NCOA is configured through the `Admin Tools > System Settings > Spark Data Settings` page - refer to the above section and make sure you've got Spark Data enabled before moving on.





1 **Enable**
Check this box to allow the NCOA service to run. The entire process of checking your addresses can take up to a few hours; once you've started the process be sure to not disable this setting before it completes.

2 **Agreements**
You'll need to accept the TrueNCOA terms of service and acknowledge that the cost of uploading your addresses for comparison is $50 each time. Most organizations choose to run this quarterly or yearly, which would translate to $200 or $50 a year, respectively.

3 **Person Data View**
Choose a Data View which contains people whose addresses you want to check. For example, you'll want to exclude inactive records.

4 **Minimum Move Distance to Inactivate**
Set how many miles away from their previous address people must move before their records are automatically inactivated. In larger cities, as few as 30 miles would sometimes be sufficient to assume they are no longer attending, while more rural areas might need a much higher limit.

5 **Mark 48 Month Move as Previous Address**

If someone has recently joined your organization you might use this option to add their former address as a Previous Address in Rock. Former addresses older than 48 months are not included.

6. **Mark Invalid Addresses as Previous Addresses**
   If the service finds that you've got an invalid address stored for someone, you can use this option to set it as a Previous Address. That way you can keep the address in your system for historical purposes, but you won't be sending mail to an invalid address.

7. **Inactive Record Reason**
   If a person's record is inactivated because of the distance they moved, you can specify which reason should be added to their record for why they were inactivated

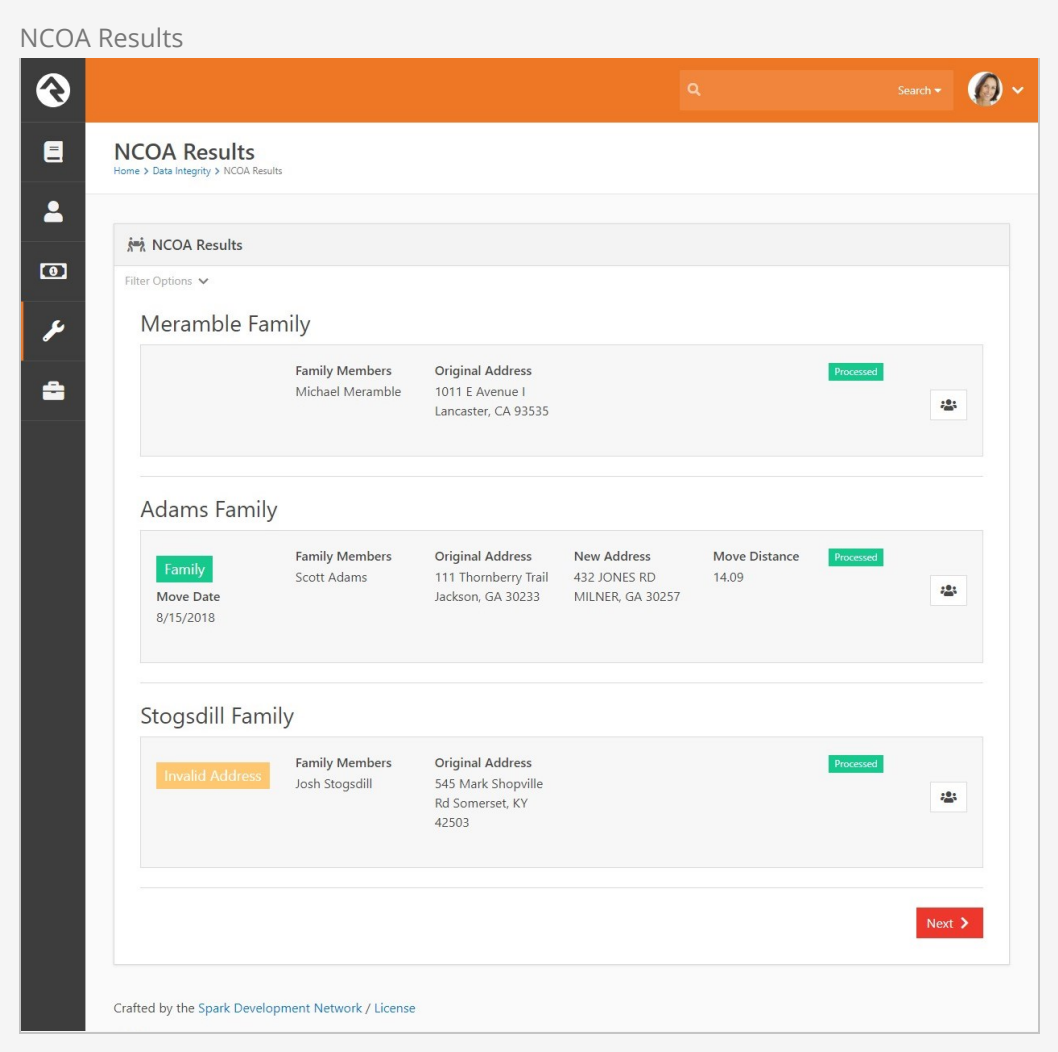
8. **Recurrence Interval**
   This setting governs how often the addresses for people in your Data View are checked against the NCOA list. Remember, every time this happens it costs $50, so budget according to your need for timely updates. If you only want to run this job manually, leave this box unchecked.

9. **Save**
   As always, when you're done configuring the service, don't forget to click Save!

10. **Run Manually**
    Once you have everything set up, you can click this button to run the job manually instead of waiting for the job and schedule you set.

> Don't forget!
> This tool isn't the only one helping you manage person statuses. Even if someone is inactivated by this job because of a move, if they continue attending they can still be automatically re-activated by the *Reactivate People* portion of the Data Automation job we covered above.

After your NCOA job has run, you can view your `Tools > Data Integrity > NCOA Results` page. It will look something like this:



This page will list every family whose address was checked, so it can get very long very quickly. Be sure to use the *Filter Options* to narrow the list to only the records you want to see.

Asset Storage Providers

An asset storage provider basically refers to storage space in the cloud for things like pictures or videos that are used by your website. Check out the `Designing and Building Websites Using Rock` guide for more information on configuring the asset manager.

Assessment Types

Rock ships with Assessment Types already configured and ready to use for each available assessment. Generally you won't need to change these settings, but you may want to adjust the *Minimum Days to Re-take* or *Requires Request* options.

- **Minimum Days to Re-take:** The minimum number of days after the test has been taken before it can be taken again by the same person.
- **Requires Request:** If enabled, a person is required to receive a request before the assessment can be taken.

Our `Assessments` guide has all the details you'll need on each of Rock's assessments.

Entity Documents

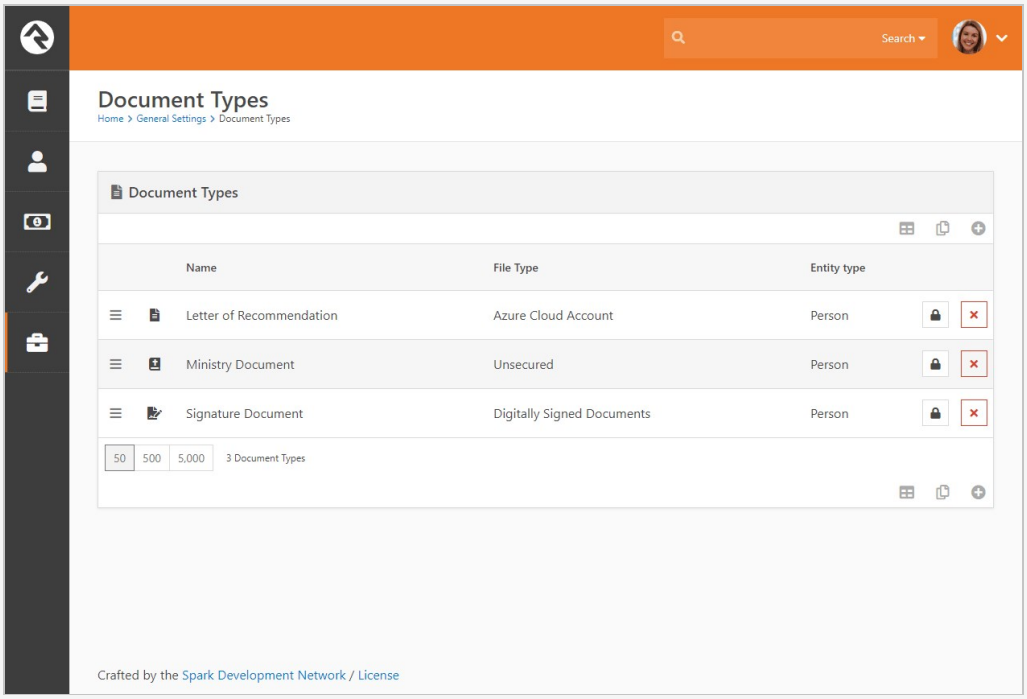
Want to track documents for a person or group? The *Entity Documents* feature lets you add documents just about anywhere in Rock. You can even add multiple documents of the same type to the same entity, quickly and easily.

If you want to cut to the chase and see what adding a document for a person looks like, we have an example in our `Person and Family Field Guide`. In this chapter we're going to dive straight into the configuration, and then see how that configuration can be used to add documents to other types of entities in Rock.

Configuring Entity Documents

The first step is to define what types of documents you can add to entities. Navigate to `Admin Tools > General Settings > Document Types` to manage the types of documents that can be stored for each entity. Pictured below, you can see we've already configured three types of documents, all for people.

Document Type List Block

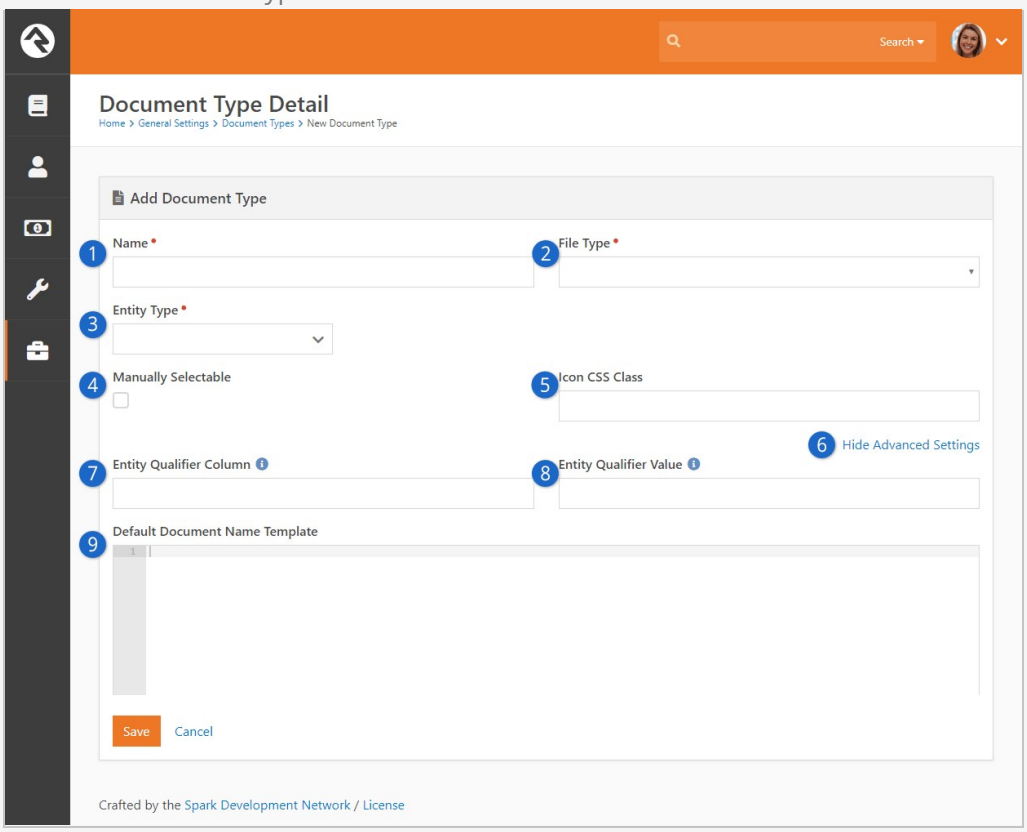


You might be wondering why we didn't mix it up a little and show you some example

document types for other entities besides people. We're starting with the Person entity on purpose, and you'll see why in a bit.

Click on any row to manage details about a document type, or click on the ⊕ button to add a new document type.

Add New Document Type



1. **Name**
   Provide a descriptive name for the document type.

2. **File Type**
   Each document type must be associated with a file type. See the `File Types` section above for more details.

3. **Entity Type**
   Select the entity type for this document type. Document types can be associated with people, groups or any other entity.

4. **Manually Selectable**
   Check this box if the document type can be manually added to an entity (e.g. by a staff person or volunteer).

5. **Icon CSS Class**
   This setting allows you to enter the CSS class for the icon you wish to use. When using Font Awesome, you should use the syntax `fa fa-[icon name]`.

6. **Advanced Settings**
   Click this link to show or hide the *Advanced Settings* fields described below.

7. **Entity Qualifier Column**
   If you want the document type to only apply to specific entities of the specified *Entity Type*, then you can provide a column to filter on for that entity. For example, if you would like the documents to be specific to a group of a certain type then you would enter 'GroupTypeId' here.

8. **Entity Qualifier Value**
   After you provide an *Entity Qualifier Column* you'll need to also provide a value here. In the example of groups of a certain type, the *Entity Qualifier Value* would be the *Group Type Id* value (e.g. 12) for the desired group type.

9. **Default Document Name Template**
   Use this field to provide default text that will automatically be populated in the *Document Name* field when adding a document of this type to an entity.

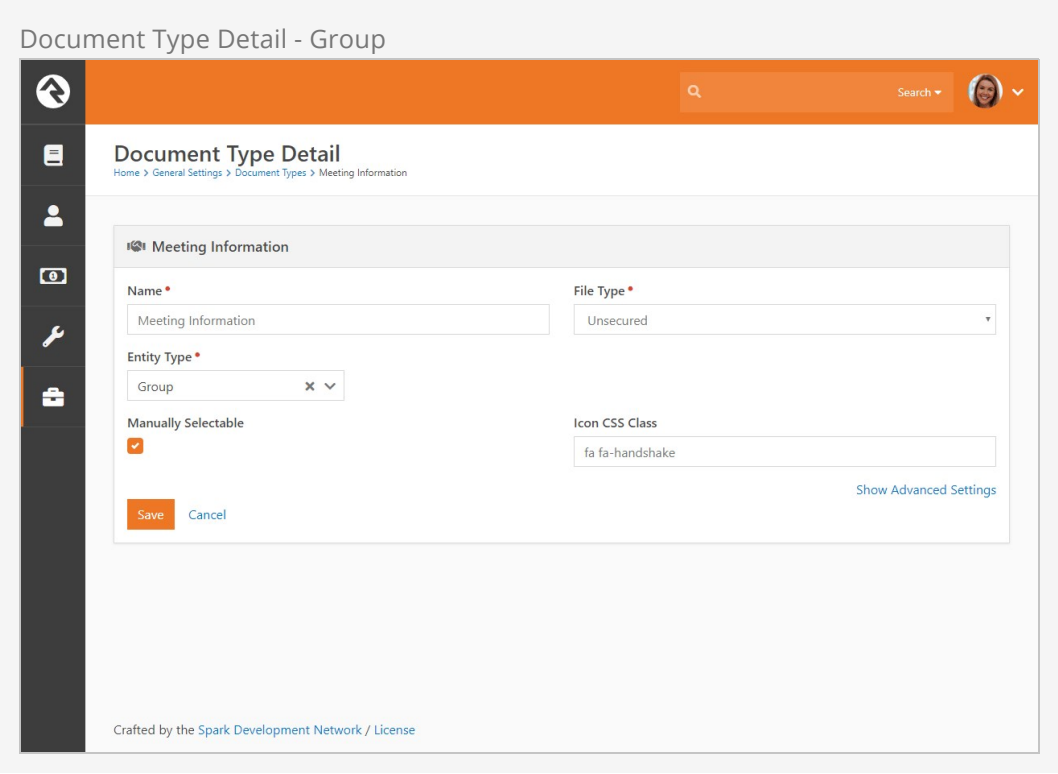
Person documents are the easiest to configure because all you need to do is define your document types as described above. Rock ships with everything else you'll need to start adding documents to people right away. See the `Person and Family Field Guide` for an example.

Setting up documents for other types of entities is still pretty easy, but there's an extra step or two you'll need to take. We'll show you what you need in the next section below.

Adding the Documents Block

In the above section we described how to configure types of documents. That's all you need for Person documents because the *Person Profile* page ships with a dedicated tab for managing documents. However, for entity types other than Person, there's a little more to it. In this section we'll show you what else needs to be done, using the Group entity as an example.

First, you still need to set up a document type as described in the prior section above. In this case, we'll add one with an *Entity Type* of *Group*.

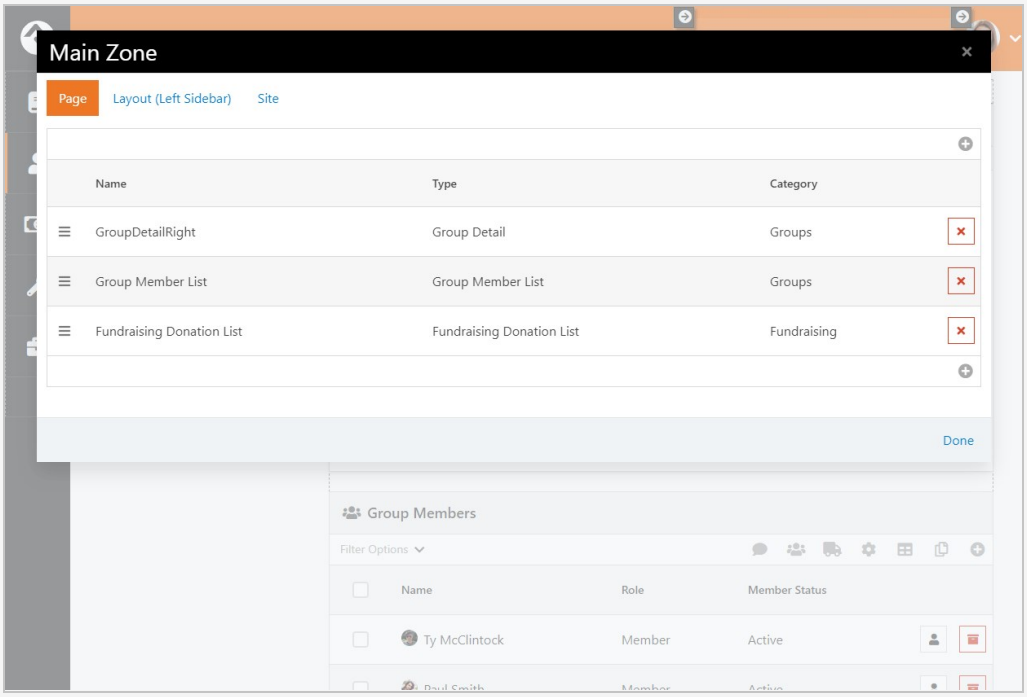


Now that we have a document type we can use with groups, we need a way to actually manage those documents. This is where the *Documents* block comes in.

Because we're working with groups in this example, we'll add the *Documents* block to the *Group Viewer* page in Rock. You can do this from the *Group Viewer* page by using the admin toolbar to edit the page's zones.

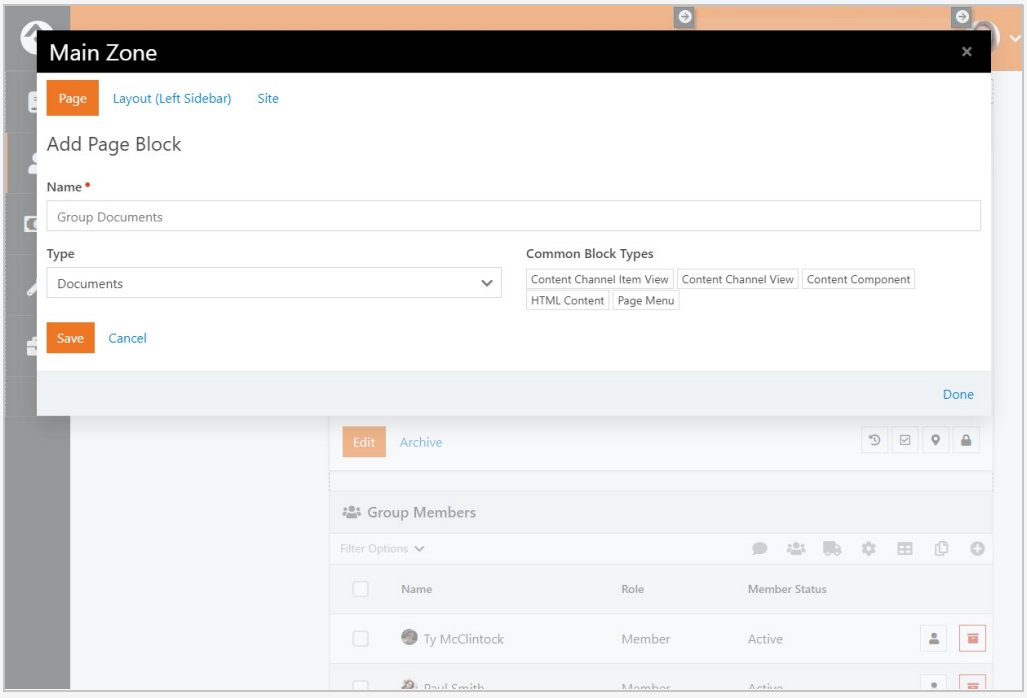
Pictured below, we'll add the *Documents* block to the Main page zone by clicking the button to add a row.

Add Block to Main Zone



Adding the block is easy. As pictured below, simply provide a name and select *Documents* as the *Type*. Click `Save` and then `Done` to finish.

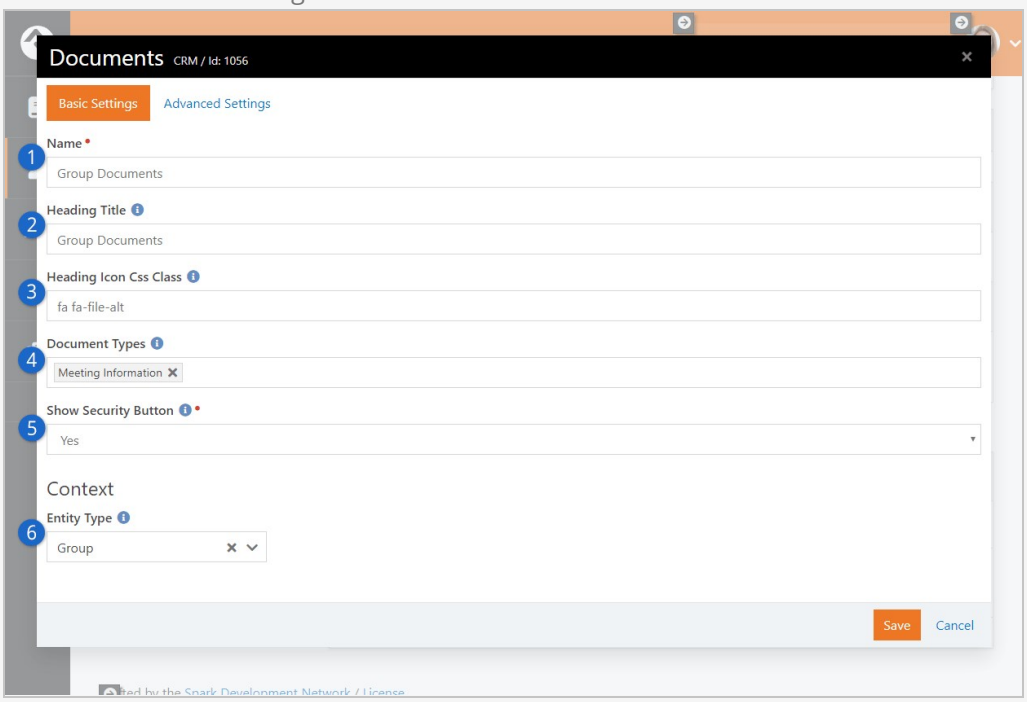
Add Group Documents Block



When you first add the *Documents* block to a page, there's a good chance you'll see a warning message telling you to "configure a valid context entity" for the block. That just means you need to let the *Documents* block know what kind of entity it's working with.

To do that, we'll use the admin toolbar again to access the settings for the *Documents* block. In this example you'll need to provide an *Entity Type* of "Group" to ensure the block works with groups. While we're here, there are some other block settings you might want to be aware of, as described below.

Documents Block Settings



1. **Name**
   Provide the block with a descriptive name.
2. **Heading Title**
   A title will appear at the top of the block if one is provided, otherwise the block will have no title in the heading.
3. **Heading Icon CSS Class**
   You can optionally assign an icon that will display in the block's heading.
4. **Document Types**
   If you want the block to only work with documents of certain types, you can list those types here. In the example pictured above, only "Meeting Information" documents will be accessible from the block.
5. **Show Security Button**
   Showing the security button allows you to manage security access for each document.
6. **Entity Type**
   This is where you tell the block what type of entity it's working with. In this example we're only interested in group documents, so "Group" has been selected.

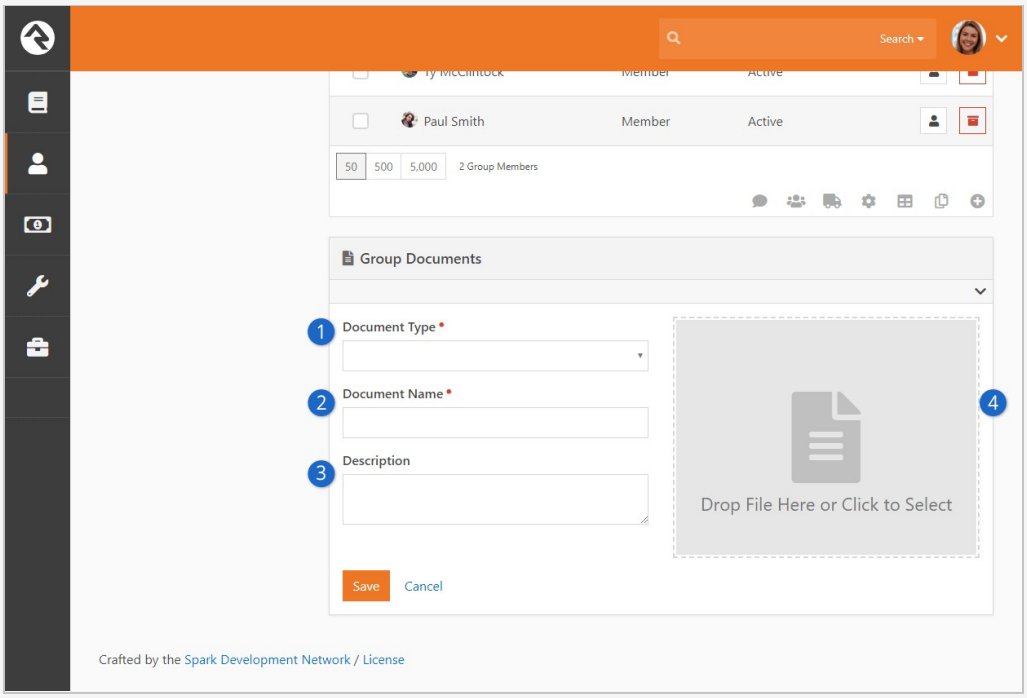
The *Documents* block is now ready to start handling documents for groups. We'll walk

through what that looks like in the next section below.

Managing Entity Documents

With the new block added, we can start adding documents to our groups. Start by clicking the ⊕ icon in the *Documents* block to add your first document as shown below.

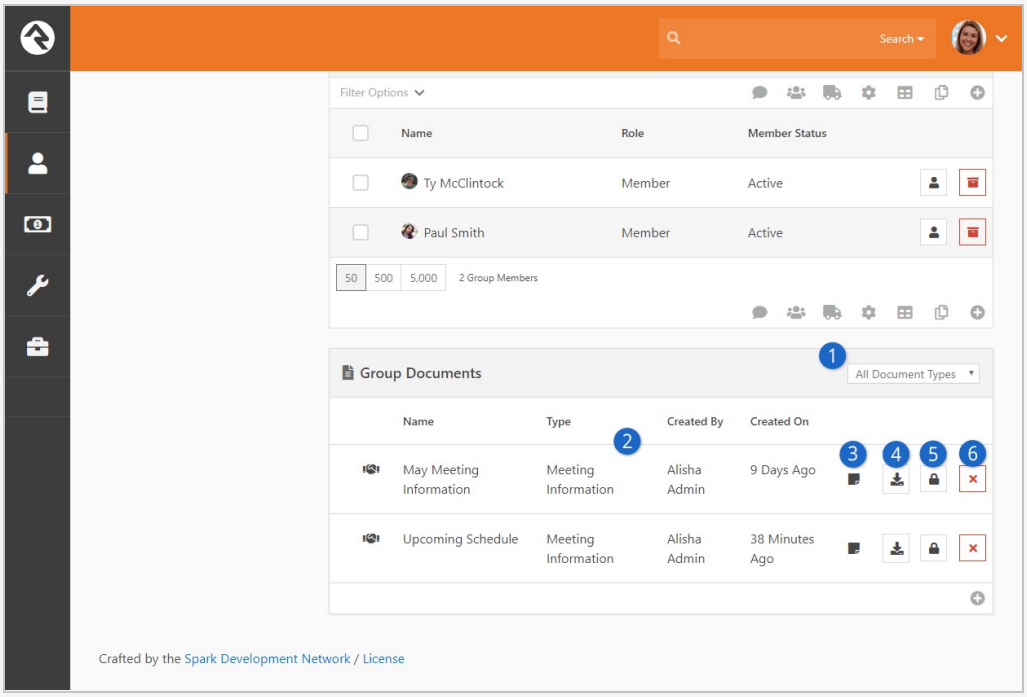
Add a New Document



1. **Document Type**
   Select the type of document that you want to add. The available items are controlled by the document type's configuration and by block settings.
2. **Document Name**
   If configured for the document type, a default name may be pre-populated here. Otherwise it will be blank. You can provide your own name or edit the default name.
3. **Description**
   You can optionally add a description to provide specific details related to this document.
4. **Add Document**
   This is where you attach the actual document for this entry.

After you add one or more documents for the group (or the entity you're working with) there are several ways to manage those documents from the block. In the example below, we've added two documents that we can now manage.

Manage Documents



1. **Document Type Filter**
   Use this drop-down menu to filter the document types are that are shown below, or to show all document types.
2. **Document Information**
   A summary of information for each document is shown for reference.
3. **Document Icon**
   You can hover over this icon with your mouse to view the document's *Description* if one was provided.
4. **Download**
   Click this icon to download a copy of the document.
5. **Security**
   Security settings can be applied to the document itself, allowing you to have different restrictions for different documents. This icon will only appear if it's enabled in the block settings.
6. **Delete**
   Click this icon to delete documents from the list. This action cannot be undone, so use caution when deleting documents.

We've been using groups in the above examples, but don't forget that the *Documents* block works with any entity in Rock.

Adding Documents Using Workflows

The Entity Document Add workflow action lets you add documents to any entity using a workflow. There are a few things to keep in mind when you're doing this.

As described in the sections above, each *Document Type* is associated with both an entity and a File Type. This means your workflow might get tripped up if it's working with the wrong type of entity or with a file that doesn't align with the File Type configuration.

For instance, if the Document Type is configured for the Group entity, and if your workflow is trying to add a document for a Person, it won't work. The workflow entity and the Document Type entity must match or else you'll get an error.

Similarly, the document you're trying to add needs to conform to the File Type configuration for the File Type that's associated with the Document Type you're using. This will probably only be a concern if the File Type configuration has *Preferred File Settings* that are required.

Lastly, don't be surprised if you're able to add a document in cases where you think you shouldn't be able to. For instance, the *Media File* File Type that ships with Rock is intended to be used for audio or video files but there's nothing stopping you from adding a Word document using that File Type.

Campuses

Many organizations operate out of more than one location. While there are many terms for these "sites" we've chosen to call them campuses within Rock.

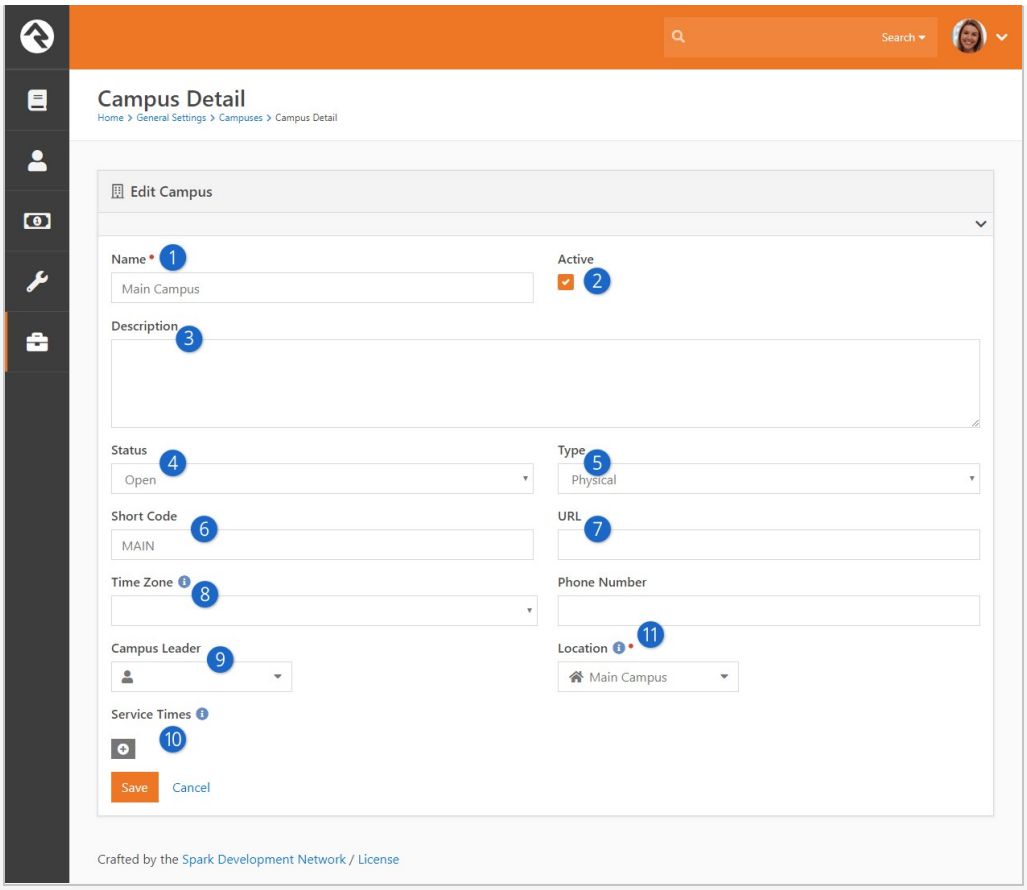
> **Single Campus:**
> Generally, the display and selection of campus information throughout Rock will be hidden if you have only one campus. If a campus value is required by a particular block, then the single campus you have configured is automatically used (otherwise it's left blank).

Managing Your Campuses

You can create or maintain campuses from `Admin Tools > General Settings > Campuses`. There you'll see a list of campuses that you can manage or add to. Selecting a campus will bring up the campus details screen.

> **Locations:**
> Before adding a new campus you must first add its address under `Admin Tools > General Settings > Named Locations`.

Campus Details Screen



1 **Name**
Even if you only have one campus, choose a name that will still make sense if you ever expand. A simple name like “Main Campus” typically works well.

2 **Active**
As you bring new campuses online, you may want to add them as inactive until you have time to configure them and prepare for the announcement.

3 **Description**
You can use this field to provide a description for your campus. This might be something you display to your website guests.

4 **Status**
Sometimes there are pending campuses are not yet open that you want to begin configuring, or which are now closed but important to keep for record-keeping. Campus statuses are stored in the *Campus Status* defined type.

5 **Type**
You may want to easily differentiate between different types of campuses – whether Physical, Online or some other type. Campus types are stored in the *Campus Type* defined type.

6 **Short Code**
When you grow beyond two or three sites, it's common to develop a shorter naming convention to help you refer to a campus. For example, if your campus is named “Main Campus” then you might choose “MAIN” as a short code.

7. **URL**
   The web address for the campus.

8. **Time Zone**
   You'll see this if you've enabled support for multiple time zones in the System Settings. You can leave this blank if campus time zones are all the same.

9. **Campus Leader**
   Here you can optionally indicate the person who's in charge of running the campus.

10. **Service Times**
    Here you can list the days and times that this campus offers services.

11. **Contact Information**
    If the campus has its own phone number you can provide it here. You must provide a location, which is why you have to set up the location before you add a campus.

Campus Status & Campus Type

A lot of the setup for Campuses is pretty straightforward, but there are some important points you'll want to keep in mind about the Status and Type fields.

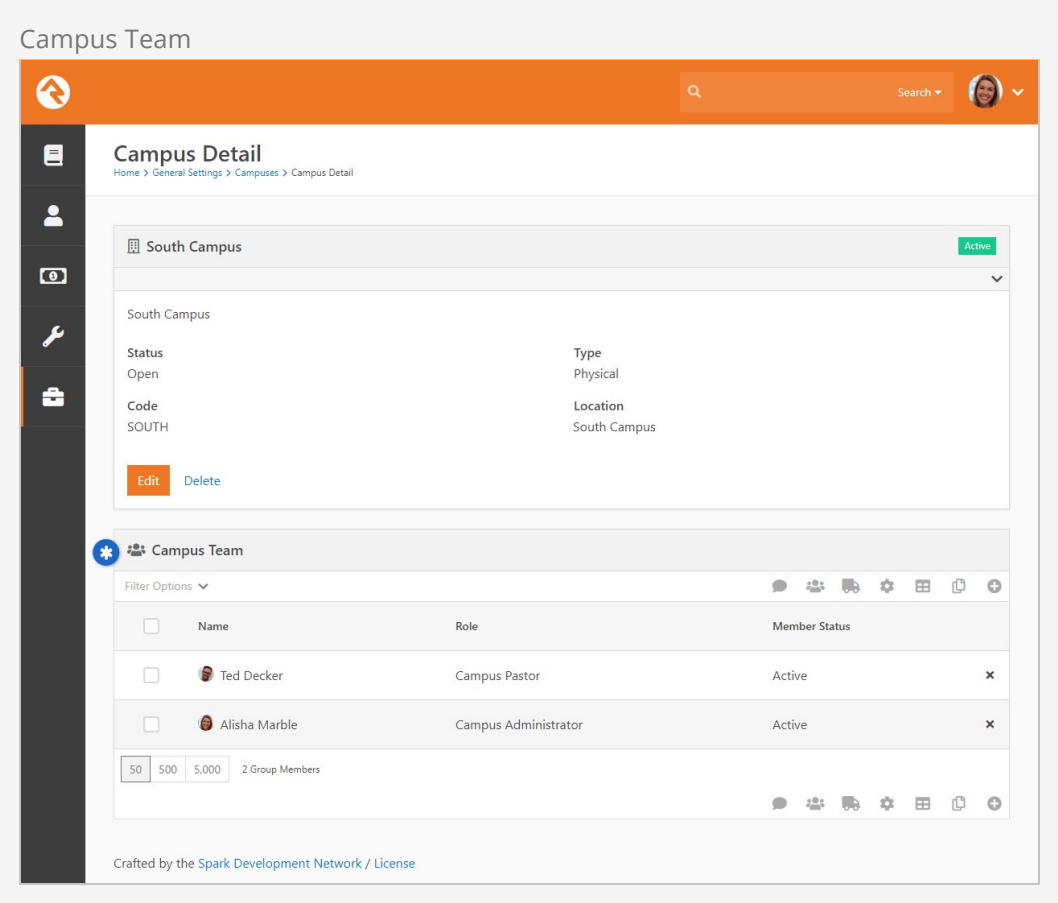
Rock ships with three Campus Status values (Closed, Open and Pending) and two Campus Type values (Physical and Online). These are ready for you to use out of the box as Defined Types. However, these values can't be deleted through Rock and shouldn't be deleted by other means. That said, how you use them is entirely up to you. If needed, you can add new values to the Defined Types lists, or change the names of the existing values.

> Note:
> Even if the Type is "Online" you're still required to have a Location value. As with any campus, the Location Type assigned to the Location you choose must be "Campus". If you're not sure what Location to use for an online campus, best practice is to choose the one most closely associated with the website.

> Upgrading from 8.8?
> If you're upgrading Rock from version 8.8 then your existing campuses will have Status and Type values automatically assigned. An active campus will get a Status of *Open* and an inactive campus will get a Status of *Pending*. The assigned Type will be *Physical* for all campuses, except *Online* will be assigned if the name of the campus has "online" or "on-line" in it.

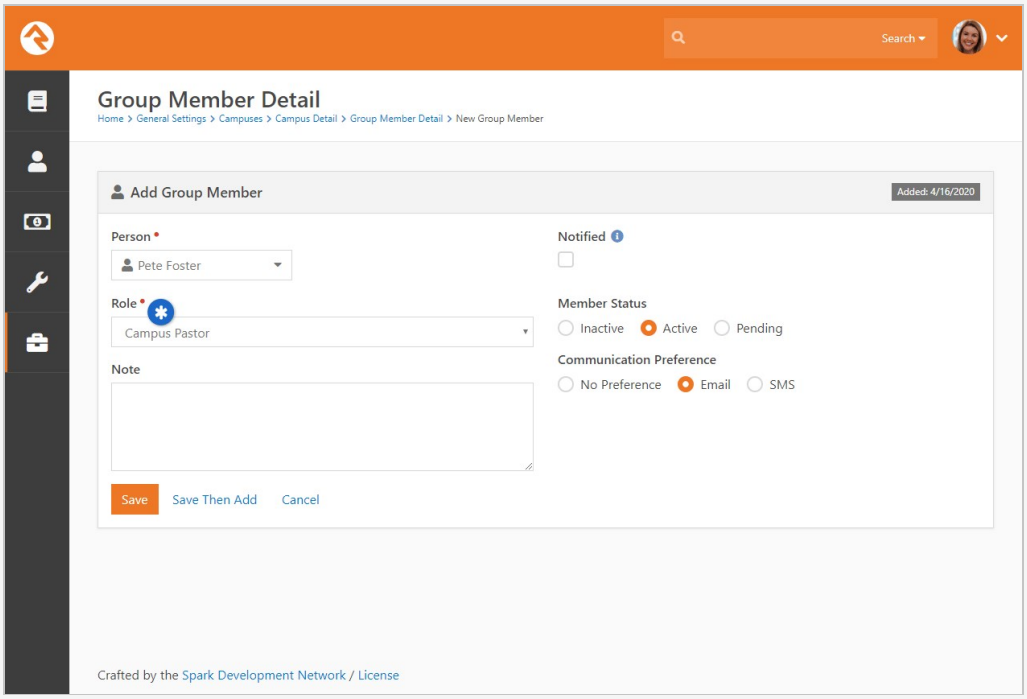
Campus Teams

Associating people with a campus helps you easily identify key staff, and their roles, at that campus. This is accomplished using the *Campus Team* system group type. Each campus functions like a group, with its own members and roles.



Adding a person to a campus is just like adding members to other types of groups. Click the ⊕ button on the grid to add new members and define their role at the campus.

Add Campus Team Member



Teams for your campus can be created with either single-campus or multi-campus setups.

Adding Attributes to Campuses

You can add attributes to your campuses to track information about them beyond the settings described above. To do that, just follow these steps:

1. Go to `Admin Tools > System Settings > Entity Attributes`.
2. Click the ⊕ button to add a new attribute.
3. Select the *Entity Type* of "Campus" and set up the attribute information. You don't need to add a value for the *Qualifier Field* or *Qualifier Value* fields.
4. After clicking `Save`, you can configure security for the attribute if needed.
5. You'll now be able to set a value for this attribute in the *Campus Details* page above.

Jobs

Jobs allow you to run a sequence of code on a defined schedule. A good example of this is the *Rock Cleanup* job that comes configured to run every day at 1:00 am. This job runs through a series of clean-up steps (like trimming the *Audit Log*) to help keep the Rock database clean and tidy.

Below is a list of jobs that ship with Rock.

Name	Description	Default Schedule
Job Pulse	Runs continuously to help monitor the jobs engine and keep the website responsive. Don't disable this job if you're running the job engine inside of IIS (more on this below).	Every 30 seconds
Send Communications	Sends out queued communications.	Every 10 minutes
Process Workflows	Looks at all active workflows and runs the activities of those that are active.	Every 10 minutes
Calculate Metrics	This job runs any metrics with a defined schedule. You can read more about this in the `Taking Off With Reporting` manual.	Every 15 minutes
Send Registration Reminders	Sends out reminders to registrants of upcoming events. You can read more about this in the `Event and Calendar Guide`.	Every hour
Group Sync	This job syncs any configured groups. You can read more about this in the `Rock Your Groups` manual.	None
Process Signature Documents	Sends any digital signature invites that need to be sent for groups that require a signed document. You can read more about digital signatures in the Digital Signatures chapter.	Every day at 9:00 am
Event Payment Reminders	Sends out payment reminders to the registration contacts when a balance is due. See the `Event and Calendar Guide` for more information.	None
Location Services Verify	Attempts to standardize and geocode addresses that haven't been verified yet. It also attempts to re-verify addresses that failed in the past after a given wait	Every day at 3:00 am

Name	Description	Default Schedule
	period.	
Rock Cleanup	Runs a series of cleanup steps to manage the Rock database. You can change the settings for each step but we recommend keeping the defaults.	Every day at 1:00 am
Calculate Person Duplicates	This job scours your Rock database on a nightly basis looking for possible duplicates. Those that are found are listed under Rock's data integrity tools. You can read more about these tools in the Data Integrity chapter.	Every day at 3:00 am
Send Attendance Reminders	This job is used to send attendance reminders for groups of a specified group type. You can read more about these features in the `Rock Your Groups` manual.	Every day at 4:00 pm for the Small Group group type.
Group Leader Absence Notification	This job sends an email to group leaders in the specified group type with a list of group members who haven't attended group meeting occurrences a specified number of times. See our `Rock Your Groups` guide for more information.	None
Spark Link	This job fetches Rock notifications from the Spark Development Network.	At 57 minutes past the hour, every 7 hours
Send Credit Card Expiration Notices	Notifies (by email) anyone with a scheduled credit card transaction that expires in the following month. It can also be configured to launch a custom workflow. You can read more about this in the `Rock Solid Finances` manual.	First of every month at 7:30 am
Database Maintenance	Performs routine SQL Server database maintenance. See the Care and Feeding of Rock section for more information.	None
Process BI Analytics	This job takes care of schema changes (dynamic Attribute Value Fields) and data updates to Person analytic tables. To read more about BI and Rock, see the `Business Intelligence` guide.	Every day at 5:00 am
Universal Search Re-Index	Re-indexes the selected entity types in Universal Search. See our `Universal Search` guide for more information.	Every day at 5:00 am

Name	Description	Default Schedule
Index Rock Site	Configures Rock to index a specified site. Includes the option to set login credentials to allow indexing of password-protected pages.	None
Communication Queue Alert	Sends an email to a list of recipients when there are communications that have been queued to send for longer than a specified time period. See our `Communicating With Rock` guide for more information.	Every 15 minutes
Calculate Family Analytics	This job populates Rock's family analytics. See our `Person and Family Field Guide` for more information.	At 8:00 pm, only on Tuesday
Get Scheduled Payments	This job downloads transactions from the payment gateway for any scheduled transactions. You can read more about this in the `Rock Solid Finances` manual.	None
Send Following Event Notification	This job sends out emails to specified individuals when following events occur.	At 7:00 am, Monday through Friday
Send Following Suggestion Notification	Calculates and sends following suggestions to people who are eligible for following.	At 3:00 pm, Monday through Friday
Calculate Group Requirements	This job processes group requirements defined in the system. You can read more about this in the `Rock Your Groups` manual.	Every day at 3:00 am
Complete Workflows	Closes all the Workflows of the configured type that are older than a certain number of minutes. You can read more about this in the `Blasting Off With Workflows` manual.	None
Launch Workflow	Will start a new workflow of the type selected in the configuration.	None
Run SQL	This job simply runs a SQL script on a given schedule. This is helpful if you'd like to automate the changing of data on a certain schedule.	None
Send Birthday Email	Sends an email to people in the database who have a birthday on that day.	None
Group Leader Pending Notifications	This job sends out emails to group leaders with pending notifications. You can read more about this in the `Rock Your Groups` manual.	None

Name	Description	Default Schedule
Send Group Requirements Notification	Sends out reminders to group leaders when group members don't meet all requirements. You can read more about this in the `Rock Your Groups` manual.	None
Send Group Email	Sends out an email to the selected group's active members using the template you choose, with an option to include members of descendant groups. If a person is a member of multiple groups in the tree they will receive an email for each group. This job works well for sending automated group email reminders.	None
Data Automation	Updates person and family information based on Data Integrity settings. To learn more about Data Integrity settings, see the Data Integrity chapter.	Every Tuesday at 4:00 am
Calculate Person Signals	Re-calculates all person signals to ensure that the top-most signal is still the current one. To learn more about signals, see the Person Signal Types section.	Every day at 3:15 am
Process Group History	Updates group history for enabled group types. To learn more about group history, see the Group History chapter of the `Rock Your Groups` manual.	Every day at 3:30 am
Update Persisted Dataviews	Runs Data Views marked as "persisted", and caches the results for much quicker data lookups.	Every minute
Send Note Notifications	Sends out digest notifications of notes which have been added as a reply to watched notes, as well as notes which were added and require approval prior to being displayed.	Every 2 hours
Get National Change of Address	Triggers a comparison of addresses with the U.S. NCOA list, looking for people in your database whose addresses have changed. This job will trigger new lookups as you schedule them, and will process the results after a lookup process is triggered. The lookup is actually a three part process (Export, Submit, Download/Process), which means the job must run three times in order to complete the full process. If your list of addresses is extremely small or extremely large, you may want to consider adjusting the run interval accordingly; it can take around five minutes for each thousand records the service processes (but that speed can vary based on many factors, obviously).	Every 25 minutes
Charge Future Transactions	Charge future transactions where the FutureProcessingDateTime is now or has passed.	Every 10 minutes
Send Assessment	Sends reminders to persons with pending assessments if the created date/time is less than the calculated cut	Every day at

Name	Description	Default Schedule
Reminders	off date and the last reminder date is greater than the calculated reminder date. See our `Assessments` guide for more information.	8:00 am
Send Group Schedule Notifications	Sends Group Scheduling Confirmation and Reminder emails to people that haven't been notified yet. See our `Rock Your Groups` guide for more information.	Every day at 4:00 pm
Send Prayer Comments	Sends comments added to prayer requests to the requestor. See our `Raising Up With Prayer` guide for more information.	None
Data View to Workflow	Starts a workflow for each entity in a specified Data View.	None
Send RSVP Reminders	Sends a reminder to people who have accepted an RSVP invitation.	None
Campaign Manager	Handles processing all configured campaigns, creating new connection requests and assigning them to connectors as needed.	Every day at 7:00 am
Send Group Attendance Digest	This job sends an email containing a summary of attendance data for certain groups. The groups must be structured a specific way for this job to work, so be sure to check out the Group Attendance Digest section of our `Rock Your Groups` guide for configuration instructions.	None
Collect Hosting Metrics	This job can only be activated by navigating to `Admin Tools > System Settings > System Configuration > Web.Config Settings` and toggling the *Enable Database Performance Counters* setting. This job will collect metrics related to the usage of resources like the database connection pool. See the System Configuration section for details.	Every 5 minutes
Steps Automation	When this job runs, new steps are created and completed for people in a Data View. The Data View is added to the Step Type configuration, so each Step Type may use a different Data View. This job respects the 'Allow Multiple' and 'Prerequisite Steps' configuration options of each Step Type.	Every day at 4:00 am
Connection Request Workflow Triggers	Connection Request workflows that are triggered by *Future Follow-up Date Reached* are launched by this job. The job also changes the state of these requests from *Future Follow Up* to *Active*. By default, the *Number of Days to Look Back* setting is set to '1'. This means if the job is run today, it will launch workflows and change states for connection	Every day at 7:00 am

Name	Description	Default Schedule
	requests where the Future Follow Up date was yesterday.	
Auto Open Locations	Related to check-in, this job will automatically reopen rooms that have been closed. This allows closed rooms for one service to be open for the next service. You can select a *Parent Location* to limit which rooms are opened. You can also set a *Re-open Period* which indicates how long the job should wait after a room is closed before opening it. This job only works for Locations that are of type *Room*.	None

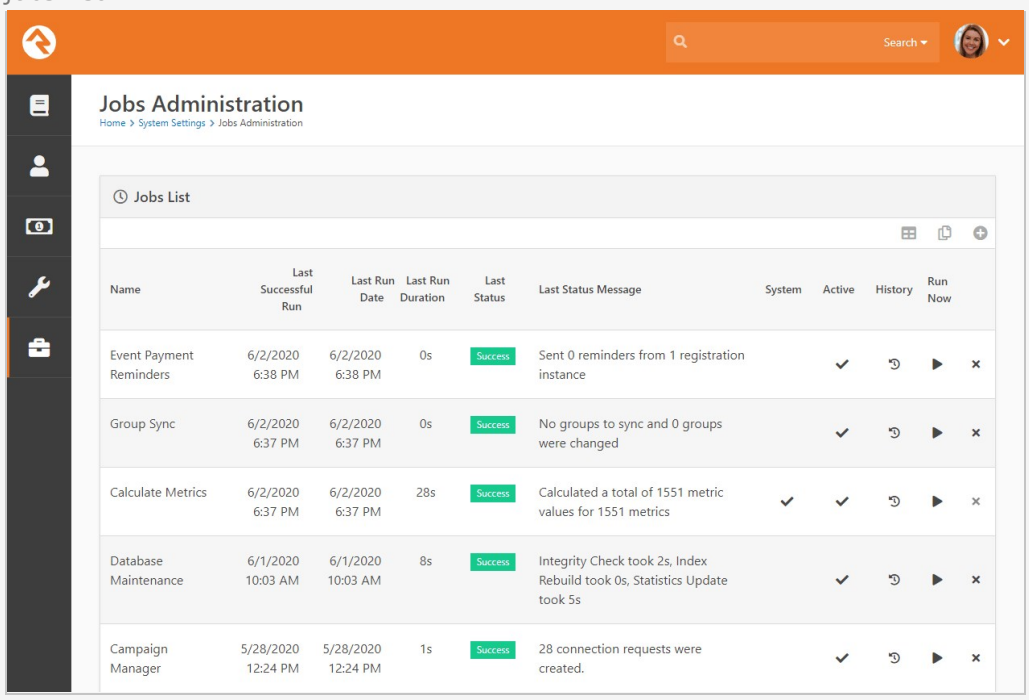
> **Note:**
> You can code your own jobs if you have access to a developer.

Configuring a Job

You can maintain current jobs or add new jobs under `Admin Tools > System Tools > Jobs Administration`.

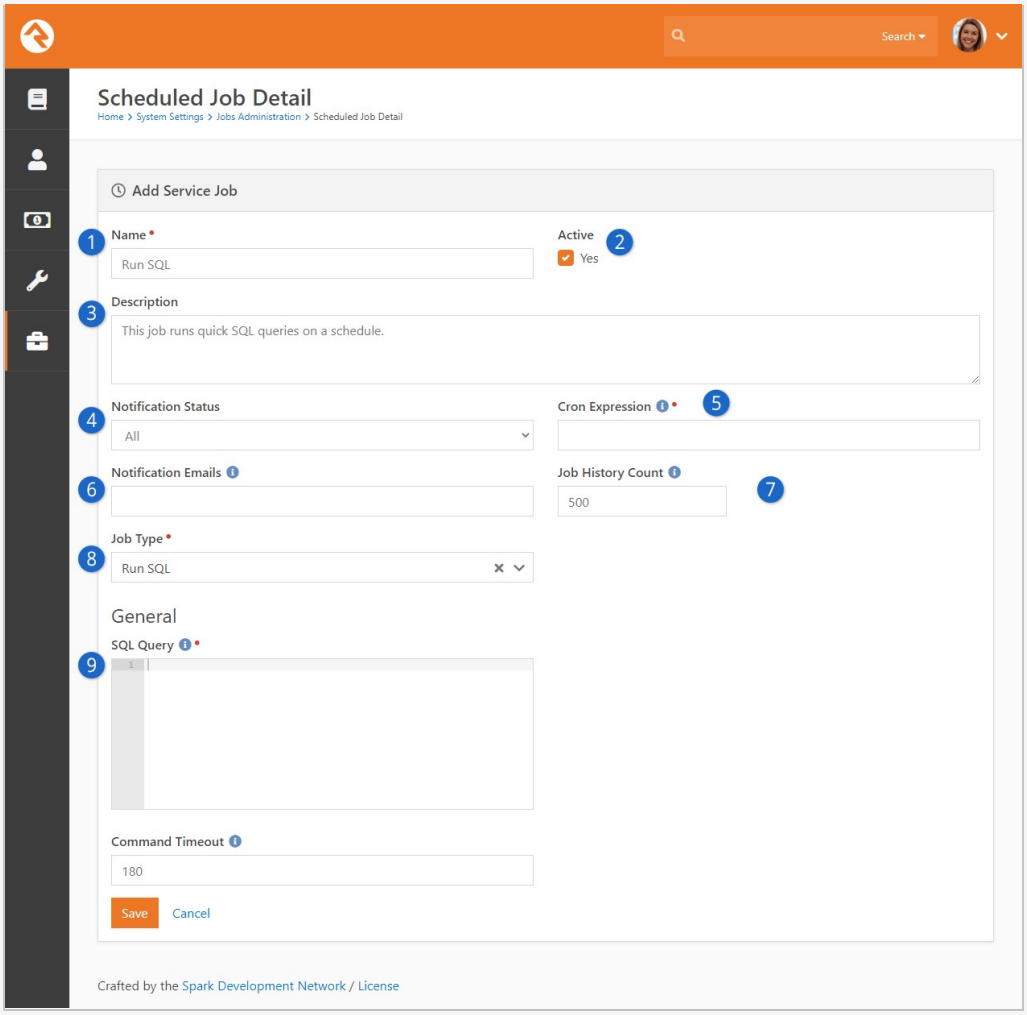
There you'll see a list of currently configured jobs. You can click a job to modify the configuration or click the `Add` button in the grid footer to create a new job.

Jobs List



Clicking on an existing job, or adding a new job, will bring you to the page pictured below.

Adding A New Job



1 **Name**
Provide a concise description of what the job is doing.

2 **Active**
Mark the job as active or inactive. Only some of the jobs that ship with Rock are active by default, so it's a good idea to check these statuses to make sure everything you need is active.

3 **Description**
Provide details about what the job does and any background criteria that you may want to know in the future.

4 **Notification Status**
This defines when a notification email should be sent. Options are:

- Success – when a job finishes successfully
- Error – when a job encounters an error
- All – for both Success and Error
- None – never

5 **Cron Expression**
Cron expressions are a concise schedule pattern that defines when the job is run. They can be difficult to write without help. We recommend using the CronMaker.com website to assist you in creating these

expressions.

6. **Notification Emails**
   This is a comma-separated list of emails for the job; used when a notification needs to be sent.

7. **Job History Count**
   On the *Jobs Administration* page you can view the history of runs for each job by clicking the icon. By default this is limited to the last 500 occurrences, but you can adjust how much history to retain here.

8. **Job Type**
   Select the type of job to run.

9. **Job Settings**
   Each job type will have a set of configuration items. In the example pictured above, the RunSQL job defines the SQL statement that you want to run when the job executes.

> Note: No Need to Restart
> When you add or modify a job there's no need to restart your website. Changes will be automatically updated within a few minutes.

> Pause Jobs
> There will be times when you'll need to temporarily stop running a job. Instead of deleting the job and re-creating it later, simply inactivate the job until you're ready to run it again.

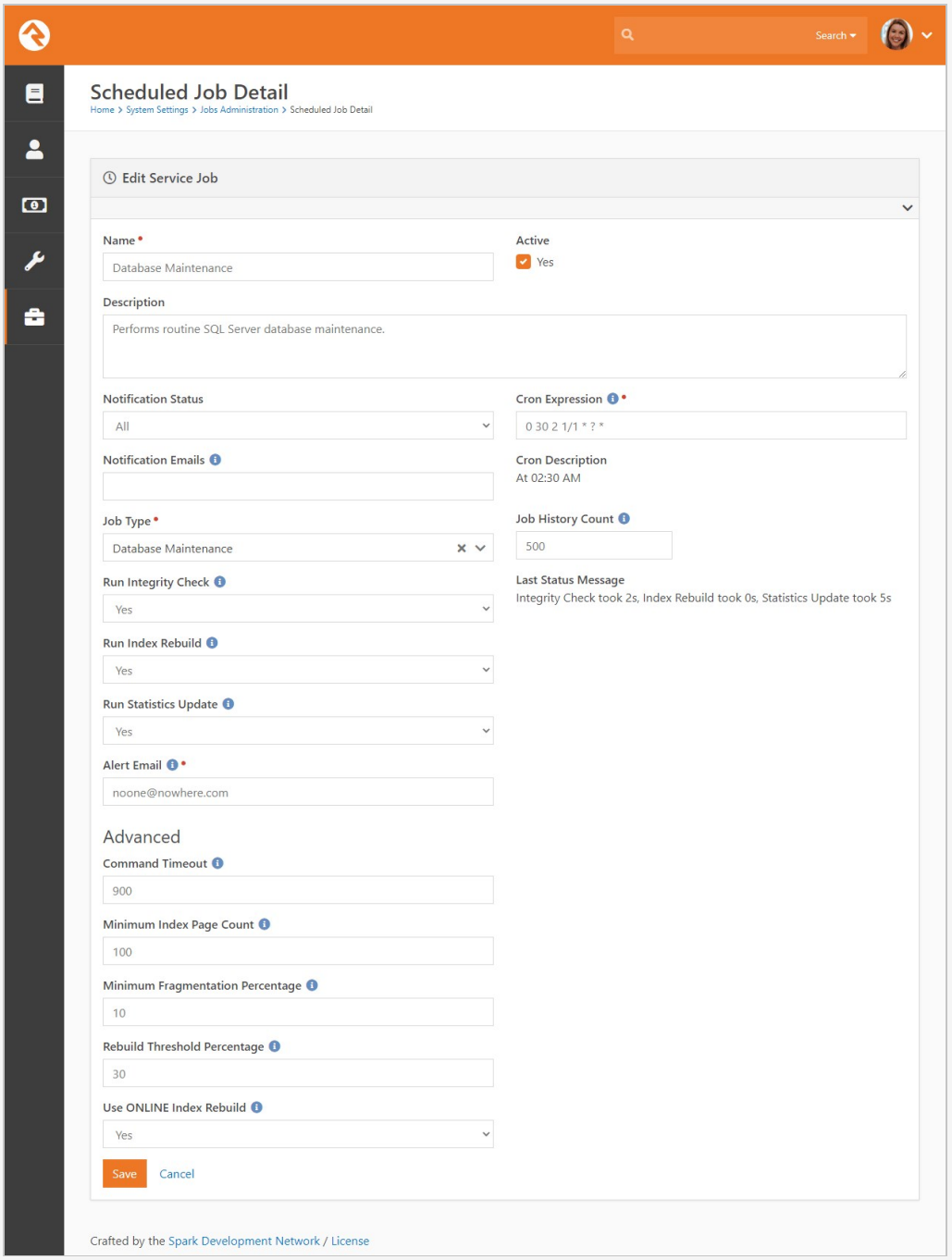
Under the Hood of the Jobs Engine

Fair warning, this part gets a little technical. By default, the jobs engine runs on the webserver under the IIS webserver's context. By default, IIS will shut down if no requests come in for a page. This will mean that your jobs may not execute late at night if no one is visiting your site. To mitigate this problem we created a special *Job Pulse* job that's set to run every 30 seconds. Its only purpose is to load a special *KeepAlive.aspx* page. Doing so always keeps IIS alive.

Care and Feeding of Rock

Just like car engines, sometimes databases get messy and need a tune up. Rock comes with the Database Maintenance job configured to do just that. Running on a schedule, this job rebuilds database indexes that need tuning. Because this job comes ready out of the box, you don't need to do any configuring. You can view the details and configuration options, though, by opening the Database Maintenance job from the Jobs List, located at `Admin Tools > System Settings > Jobs Administration`.

Database Maintenance Job Detail



Note Types

You've probably seen Rock's notes features in use on the *Person Profile* page and also with the workflow features. What most people don't know is that notes can do much more than you think. Rock allows any entity type (People, Financial Batches, Prayer Requests, etc.) to have notes attached to them. In fact, it even goes further to allow different types of notes on a single entity.

Adding Notes to a New Entity

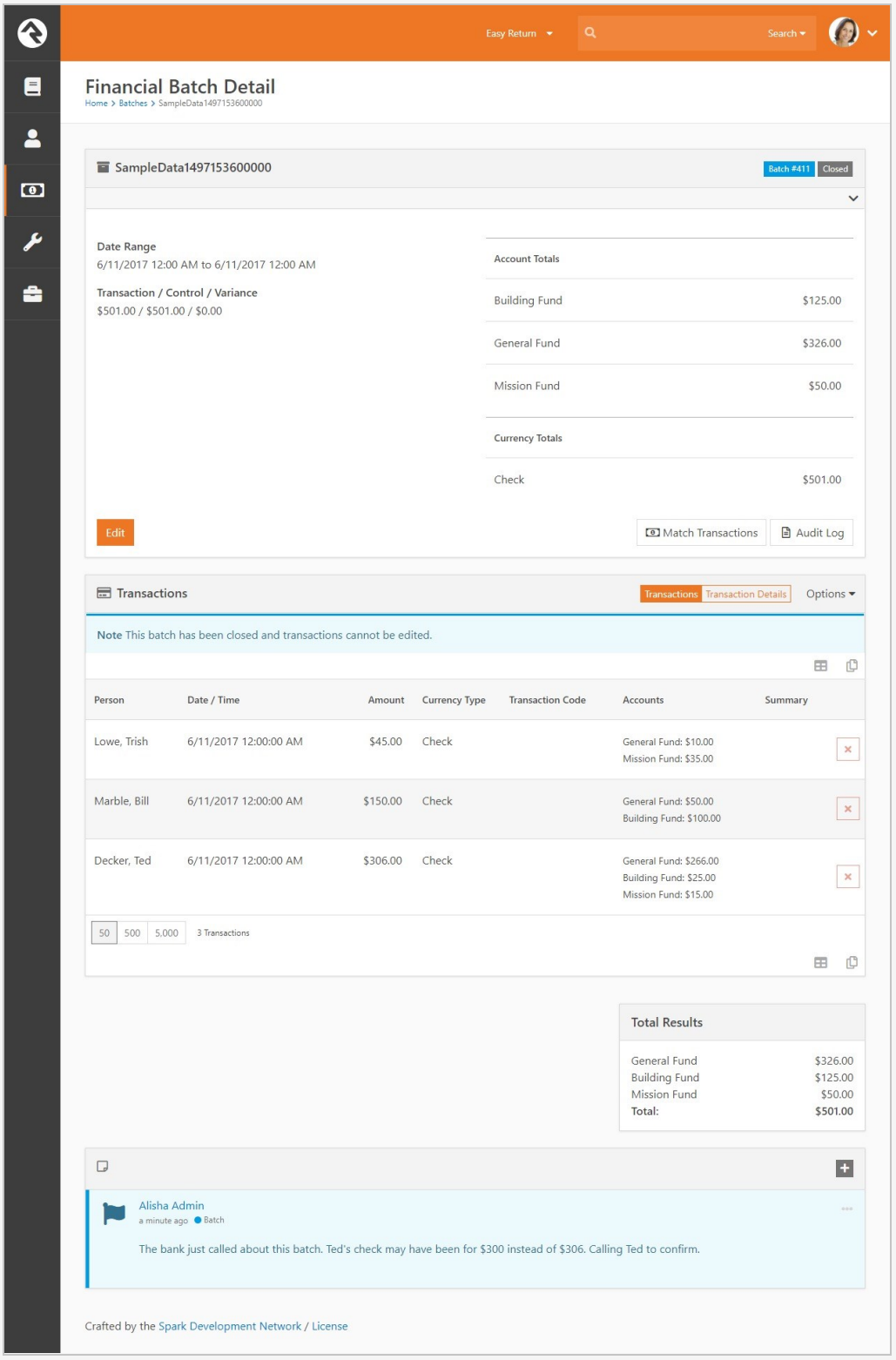
Let's say your finance team asks you to be able to enter notes on batches. Your first response might be that you'll have to *find a developer to add that functionality*. That in itself is a pretty cool option...right? The fact that you have a system that you can extend to meet any need...cool! But in this case you can play the part of the hero (that's the name of this guide, remember?) and configure it yourself.

Any entity detail page is a candidate for adding notes. Looking at the address for the page will tell you which entity you can attach the note on. For example, if the address has BatchId=X then the note can be on the batch entity. Let's walk through the steps of adding notes to the `Finance > Batches > Batch Detail` page.

1. Once you're on the batch detail page, add a new `Core > Note` block to the main zone (see the `Designing and Building Websites Using Rock` guide for details).
2. Edit the block settings of this new block. There are several possible configurations so look through the list. The key, however, is setting the *Context Entity Type* to be *Financial Batch*.
3. Reload the page for the block settings to be enabled. You should now see an empty note block.
4. The last step is to add the note type under `Admin Tools > System Settings > Note Types`. You can add a note type from the bottom of the grid. Be sure to set the entity to *Financial Batch*.

After following these steps your batch screen should look something like the one pictured below, with a shiny new place to put notes at the bottom of the page.

Batches Note Type



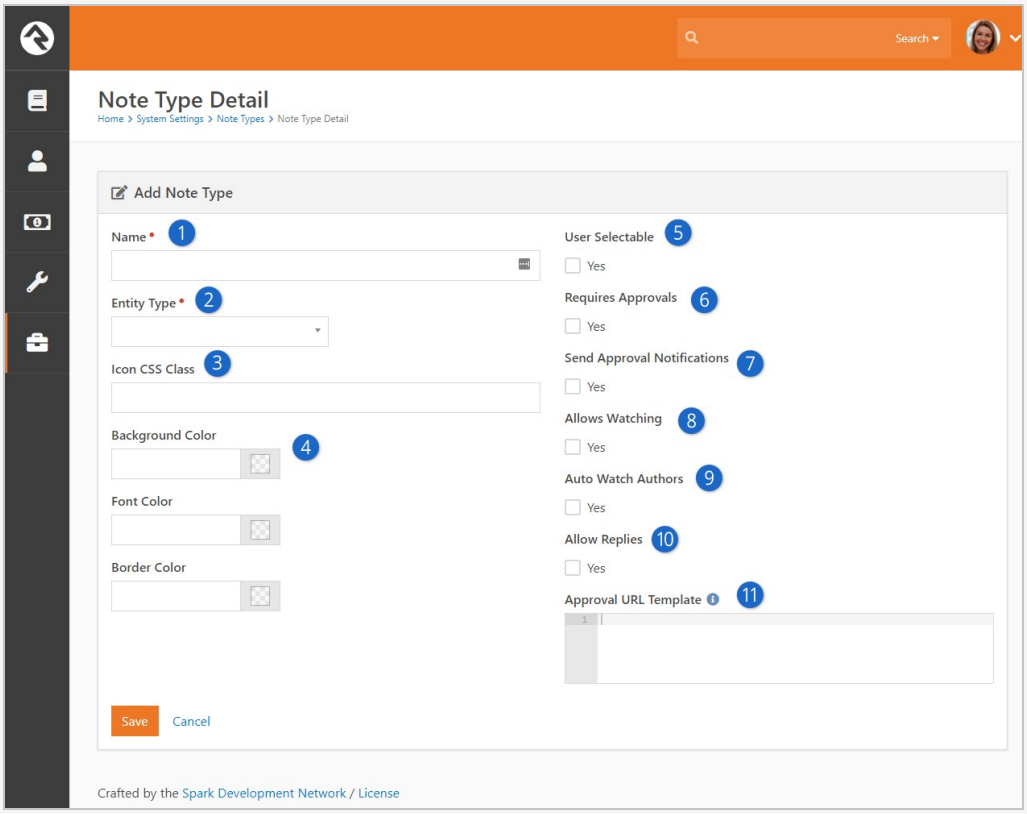
Adding Multiple Note Types to a Single Entity

When you add a note to a person on the *Person Profile* page you're adding a generic *Person Note* to the person entity. What if you wanted to be able to add a new type of note to a person? Say for instance your organization has a hospital visitation team and

they want to have their own notes that stand out from the default ones. Developer needed...? Nope! You got this. Let's walk through the steps of adding this new *Hospital Visitation* note type.

The first step is to add the new note type under `Admin Tools > System Settings > Note Types`. From the bottom of the grid select the `Add` button and the *Add Note Type* page will be displayed.

Adding a Note Type



1. **Name**
   Provide the name of the note type that will be used in the various input screens.

2. **Entity Type**
   Select the type of object/entity the note is for. In this case the note is for an individual, so we'll select *Person*.

3. **Icon CSS Class**
   This is the icon to display next to the note.

4. **Colors**
   These color options allow you to control the look of your new note. You can use hex colors (such as #0000FF for blue) or use the color picker to use a color wheel to choose a color for each of the three parts of the note: the background color, the font color of the note text and the border color around the note.

5. **User Selectable**
   This flag enables the note type to be selected from the note entry screen. There are times when you won't want a certain type of note to be selected

through the user interface. Other note types may only be added through workflows or custom code.

6. **Requires Approvals**
   Check this box if you would like someone to have to approve notes before they show up. For instance, you could use notes to allow people to leave comments on your blog. If you wanted these comments to require approval before they show up on your external site page, you would check this box.

7. **Send Approval Notifications**
   If you require notes to be approved before they show up, you may want to notify someone that there has been a new note which they need to review. You can designate the person to receive these notifications by adding them to the "To" field of the Note Approval Email template in *System Communications*.

8. **Allows Watching**
   This option will allow people to get a notification when a reply is made to a note; see the Watching Notes section for more details.

9. **Auto Watch Authors**
   This option will automatically notify the person who added a note if someone replies to their note. See the Watching Notes section for more details.

10. **Allow Replies**
    If you would like people to be able to reply to notes with a note of their own, check this box. You'll be prompted for how many "replies of replies" are permitted.

11. **Approval URL Template**
    If you want to provide an alternate page for your note approver to review notes, you can provide that address here. Otherwise, it will take them to the page where the note was added (and scroll to the note itself).

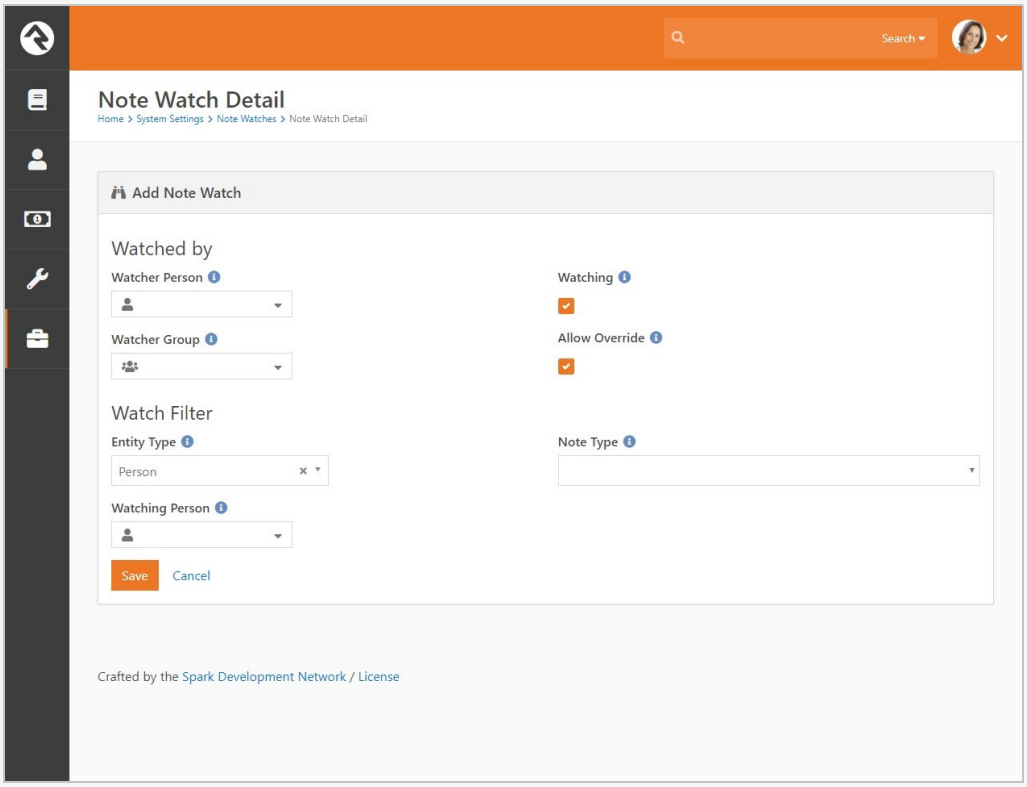
Once your new note type has been defined it's ready to be used. At this point you may consider adding security to it to control who has access to view and edit these notes.

Watching Notes

You can specify whether a note type *Allows Watching*. If it does, anyone who can view a note can choose to “watch” it. This means they will automatically be notified if the note gets any replies. You can also specify whether authors will automatically watch their own notes.

But that's not all! There's a page in *System Settings* called "Note Watches". Here, administrators can see everyone who's watching a note, but you can also add new "watches".

New Note Watch



You can select either a single person or all members of a group to watch the notes you specify, by selecting them in either the *Watcher Person* or the *Watcher Group* fields.

Next, we can specify a specific person to watch by picking them as the *Watching Person*, or we can instead choose a note type to watch. If you want to get very specific, you can select both a person and a note type to watch; that will serve to only notify people of that type of note when it's added to that specific person.

You can also create exclusions to the note watch by creating a new note watch and un-checking the *Watching* option. For instance, if you wanted a group of your staff to be notified whenever a communication type note is added to anyone, you would set that up as normal using the process described above. But maybe you don't want them to know when someone said they contacted your senior pastor. In that case, you'd add a second note watch and select your staff group as the *Watcher Group*, but un-check *Watching* and specify your senior pastor as the *Watching Person*. Now your staff group won't be notified of any notes added to your senior pastor's profile, but they'll still be notified of all other communication type notes added to other people.

Exceptions to the Rule

In the above example, if the Note Watch that caused your staff to get notifications of all communication notes had *Allow Override* un-checked, the second rule with "Watching" un-checked would no longer apply to the first rule. Use this option if there's a watching rule you want to be really sure won't get turned off by another rule.

All note notifications use the *Note Watch Notification* System Communications template, so edit that template if you'd like. You can specify additional recipients of all notifications by adding them to the *To* field in the template, or on the *Send Note Notification* job itself. Note notifications will always be sent as a digest, rather than sending one email for every single watched note reply, which could quickly overwhelm your inbox.

Digital Signatures

> **Holding Off**
> We plan to implement a native digital signing feature in an upcoming release. We recommend waiting for that solution instead of purchasing a subscription to SignNow. This new solution will have no cost as it will be self-hosted in Rock. It's possible that as a part of the project we'll be removing SignNow support in order to clean up the codebase.

Many events and activities require legal waivers and documents to be signed by participants. Rock allows you to easily gather digital signatures. The requirement of a signed document can be added to either a group or a registration. We'll cover how to configure both of these later, but first we'll walk you through the configuration of the digital signatures environment.

Setting Up A Digital Signature Provider

Digital signature providers create a reliable and legal way of gathering digital signatures. As it does with many other services, Rock allows multiple digital signature services to be configured. Out of the box it ships with support for SignNow, although others could be made available in core or the Rock Shop in the future.

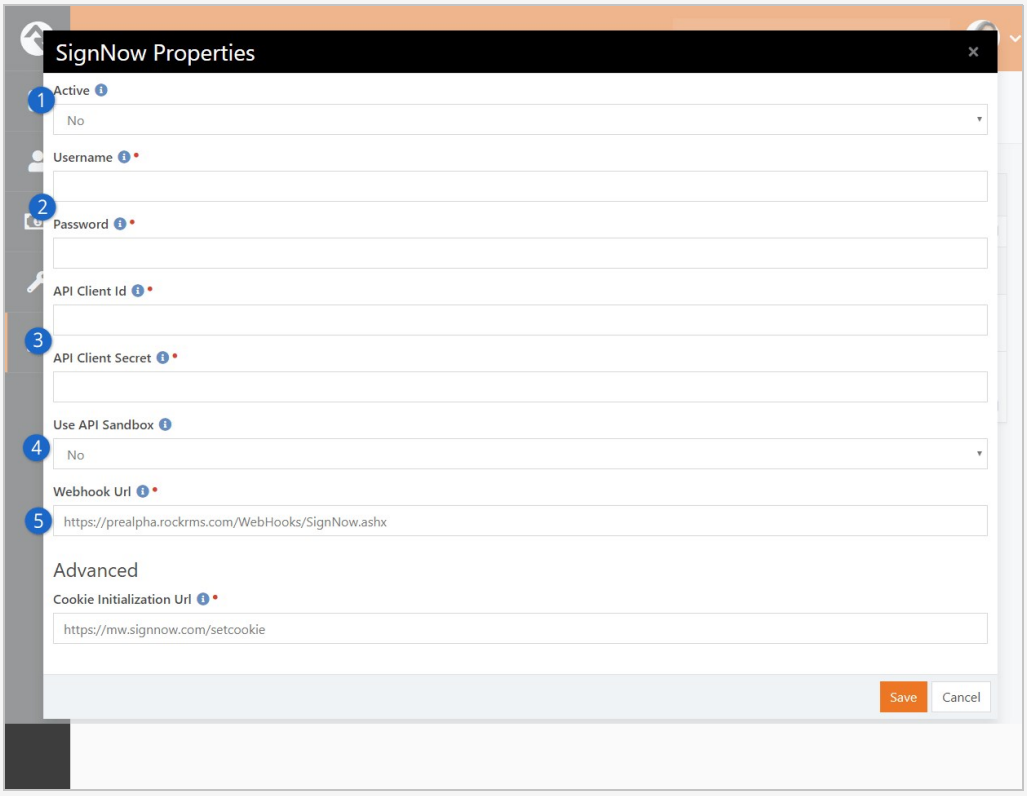
Creating A SignNow Account

The best way to configure a SignNow account for Rock is to create an account from their website signnow.com and then call the sales phone number and request that your account be granted API access. Once API access has been granted for your account, you'll be emailed the API Client ID and Client Secret.

Linking Rock To Your SignNow Account

With your Client ID and Client Secret in hand, you're ready to configure Rock to talk with SignNow. Head to `Admin Tools > System Settings > Signature Document Providers` and select the *SignNow Digital Signature Provider*. That will bring up the screen pictured below.

Digital Signature Provider



1. **Activate**
   Ensure that you *Activate* the provider by selecting Yes.
2. **Sign In**
   Enter your SignNow username and password.
3. **ID**
   Enter the Client ID and Secret from the SignNow email you received.
4. **API**
   The API Sandbox should be set to *No*. This is a development setting that should not be enabled.
5. **Webhook**
   Finally, check the webhook address. This is the address on your Rock server that the SignNow service will call when a document is signed. We've configured the address to use your organization's external application address.

At this point Rock and SignNow will be able to communicate with each other. The next step is to configure document templates that will be used in the signing process.

Document Templates

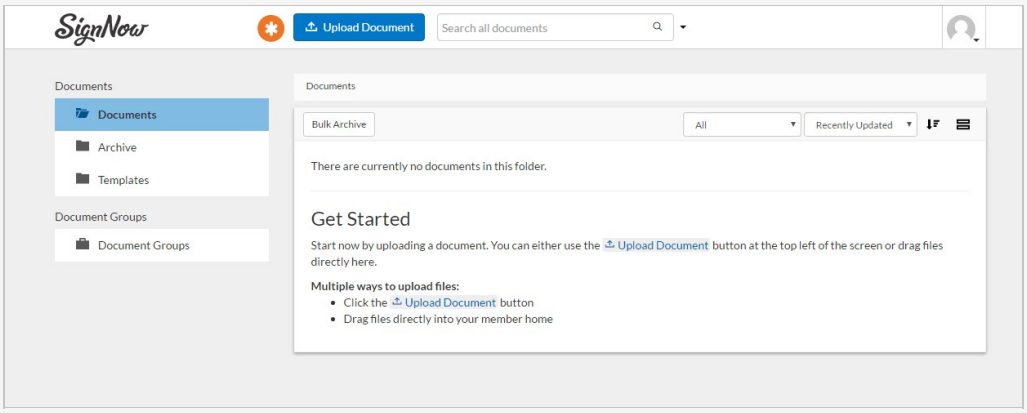
Document templates are created on the SignNow website. You can think of document templates as Word templates that you configure to send to individuals to obtain their signatures. When they sign, a document will be created with their signature embedded.

You'll create a template for each type of document that requires a signature (e.g. *Summer Camp Waiver*).

There's a bit more to templates than just a Word document. For instance, you'll also need to configure where in the document the individual must sign. Let's walk through the creation of a new SignNow template.

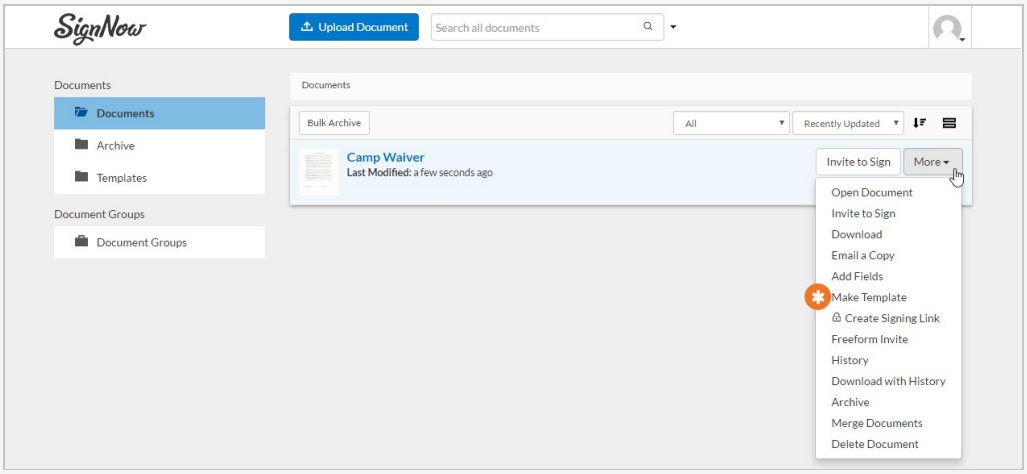
Once you're logged in to SignNow, you should see a screen similar to the one pictured below. From here you'll want to click the `Upload Document` button near the very top of the page. This will allow you to select a Word or PDF document to upload. The file you select will then appear under the *Documents* tab.

Uploading A Document



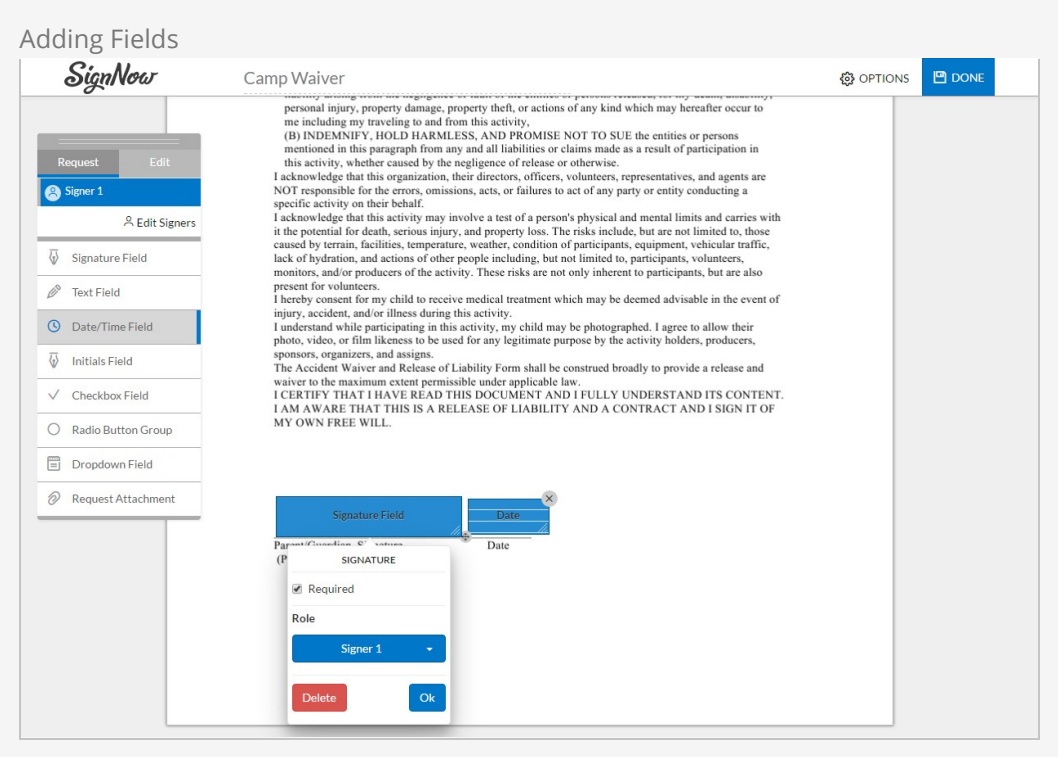
But...wait... we wanted a template right? That's true. We'll convert our document to a template by selecting `More > Make Template`. After providing a name, you'll see your new template under the *Template* menu item.

Making A Template



Next, we'll add the signature location to the document. Technically, you don't need to do this. You can skip the step of specifying a signature location but, if you do, the signer will be able to sign anywhere on the document. This can be a bit confusing for some, so it's best to identify a location for them. To proceed with adding the signature location,

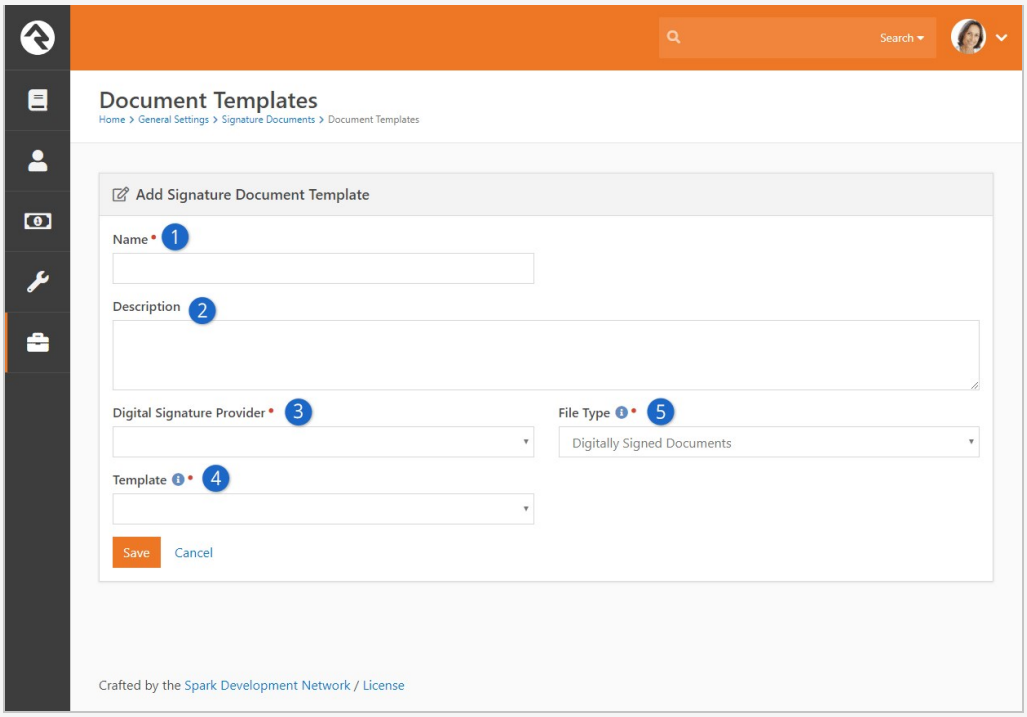
click on the template name. This will take you to the template editor. Here you can add the signature location as well as any other fields you would like to collect.



To add the signature location, simply click on the document where you'd like it to appear. Don't worry; you can drag the location to a precise position after clicking. Now you'll see that there's a concept of *roles*. *Roles* allows you to have several different people sign documents in a specific order. Rock only supports a single role so just leave the default of *Signer 1*. Select `Done` and your template is ready for signing! Well... almost... one more step.

Now that your document is created in SignNow, you must set up a Rock signature document template that links to it. Let's do that next. Start by navigating to `Admin Tools > General Settings > Signature Documents`. From here you can add a new template.

Rock Signature Template



1. **Name**
   Provide the name of the template in Rock.
2. **Description**
   You can optionally add supplemental information about the template.
3. **Digital Signature Provider**
   The service you'll be using for digital signatures.
4. **Template**
   Rock will go out to the service you're using and pull a list of templates that you've configured. You should see the template you made in this list.
5. **File Type**
   Rock will download each of the signed documents and store them. This file type allows you to configure how you'd like them stored.

Anatomy of a Digital Signature

Before we jump in to see digital signatures in action, let's look at what makes up a digital signature in Rock.

- **Signing Document:** We've already briefly discussed the concept of document templates and documents. Each digital signature will produce a signed document.
- **Applies To:** Since the documents that go out for signatures can often be for minors, Rock distinguishes between the person to whom the document applies and the person who needs to sign the document. In the case of a camp waiver, the *Applies To* field would be the child going to camp.
- **Assigned To:** The *Assigned To* field represents the person who has been assigned

to sign the document. In the camp example, this would be the parent or person who completed the registration. We'll look at these fields in more detail as we discuss how event registration and groups works with digital signatures.

Digital Signatures and Event Registrations

One common use for digital signatures is with Event Registrations. With this feature, you can enable a signature request to be sent after the completion of a registration.

You can define the signature document that's required for an event registration on the registration's template. You can find this under `Tools > Event Registration` and then by selecting the registration template you wish to configure.

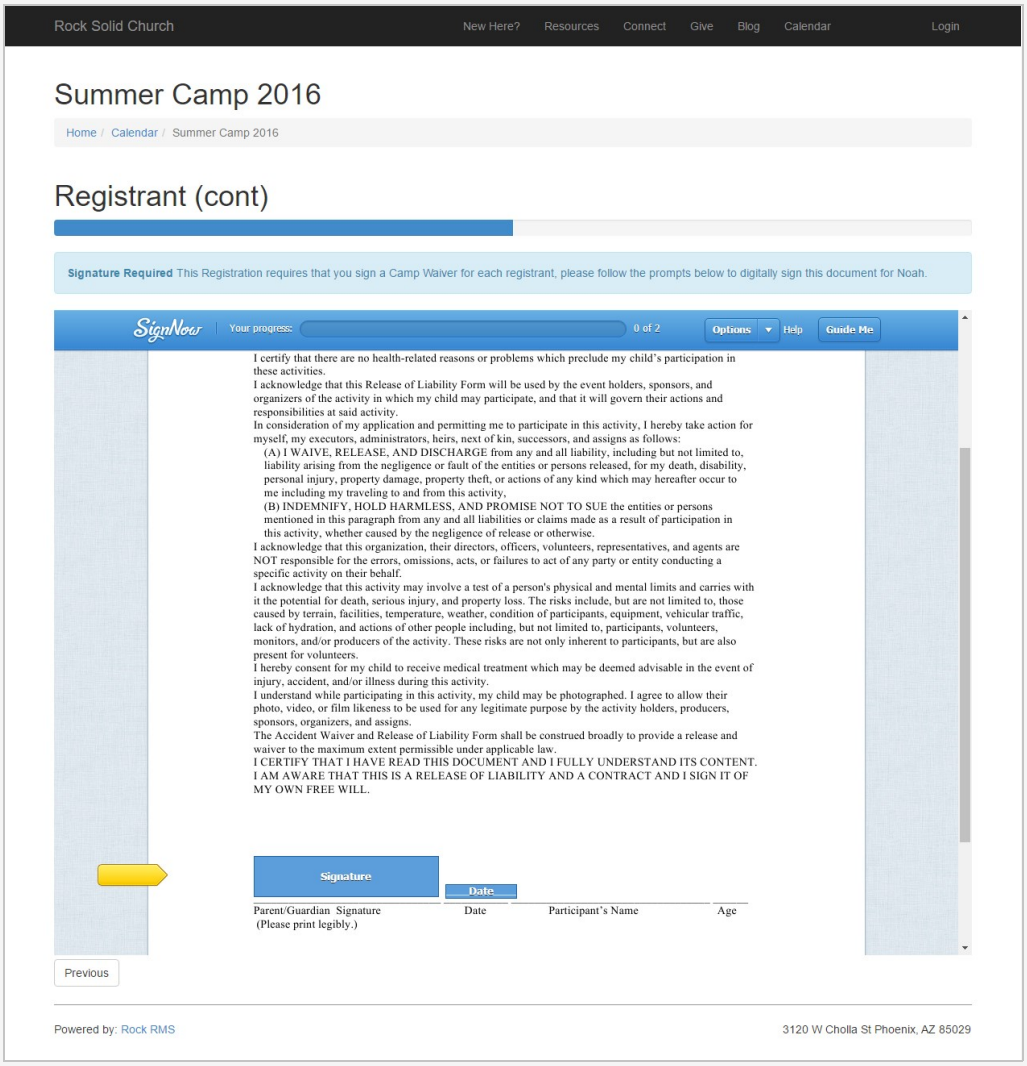
Once a registration of this type is completed, digital signature requests will go out for each registrant. The logic for determining the *Assigned To* and *Applies To* is as follows:

1. **Applies To:** Will always be the registrant of the registration. A signing request will be sent for each registrant.
2. **Assigned To:** This is a bit more complex. If the registrant is an adult, then the *Assigned To* will be the registrant. If the registrant is a child, the *Assigned To* will be the person completing the registration.

You can monitor the results of the digital signature from the event registration detail screen. From this screen you can not only resend signature requests, but also see the completed documents.

When using digital signatures with registrations you can choose to have the signature captured during the registration process (after entering each registrant) or wait to have the signature request emailed after the registration. When using in-line signatures the document will be embedded into the registration form (sample below).

In-line Registration Example



In-Line Signatures Requires Additional Configuration

For in-line digital signatures to work properly you'll need to get your site's public domain whitelisted by the signature provider.

Digital Signatures and Groups

You can also use digital signatures with groups. Let's see how that works.

You'll notice a setting on a group that allows you to require a signed document. Selecting a document template type here configures this feature. When it's set, each group member will be sent a signature invitation when they are added to the group (current group members will also get this invite). Since signatures can take some time to receive, Rock will warn you of group members with missing signatures by placing a small red signature icon next to their name on the group member list.

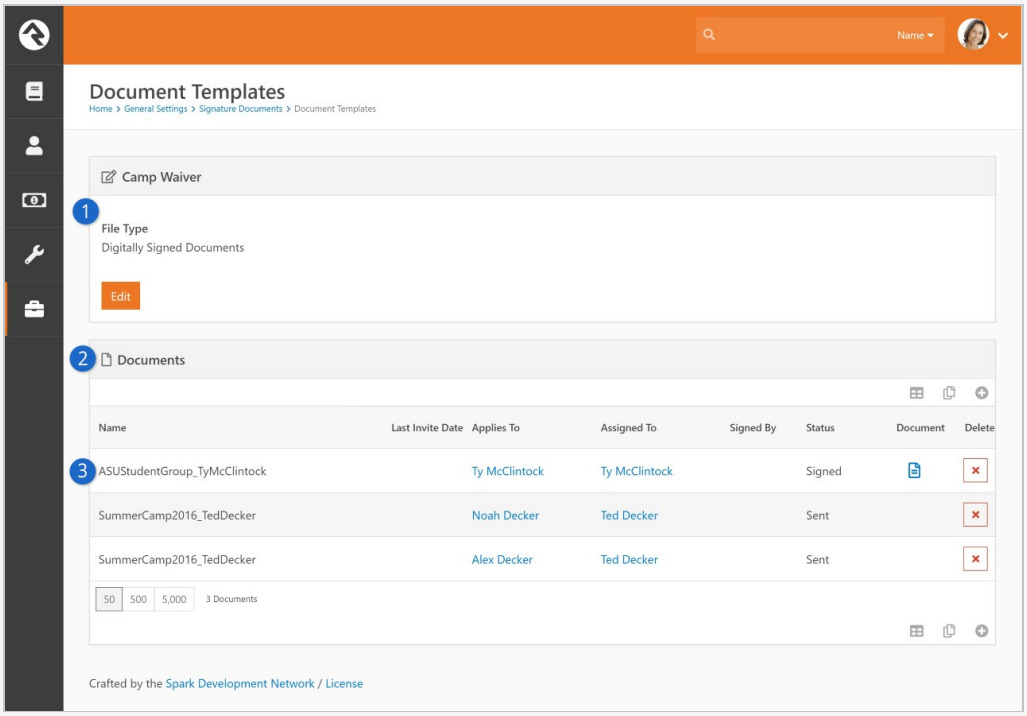
Selecting a person with this warning will allow you to resend the signature invitation.

Managing Signing Requests and Documents

OK, so now we've seen how to create digital signature templates and how to send requests for signatures. Let's wrap it up by looking at how you can manage the signing requests and documents.

To manage signing requests and view signed documents, navigate to `General Settings > Signature Documents` and select the document template you wish to view.

Managing Requests and Documents

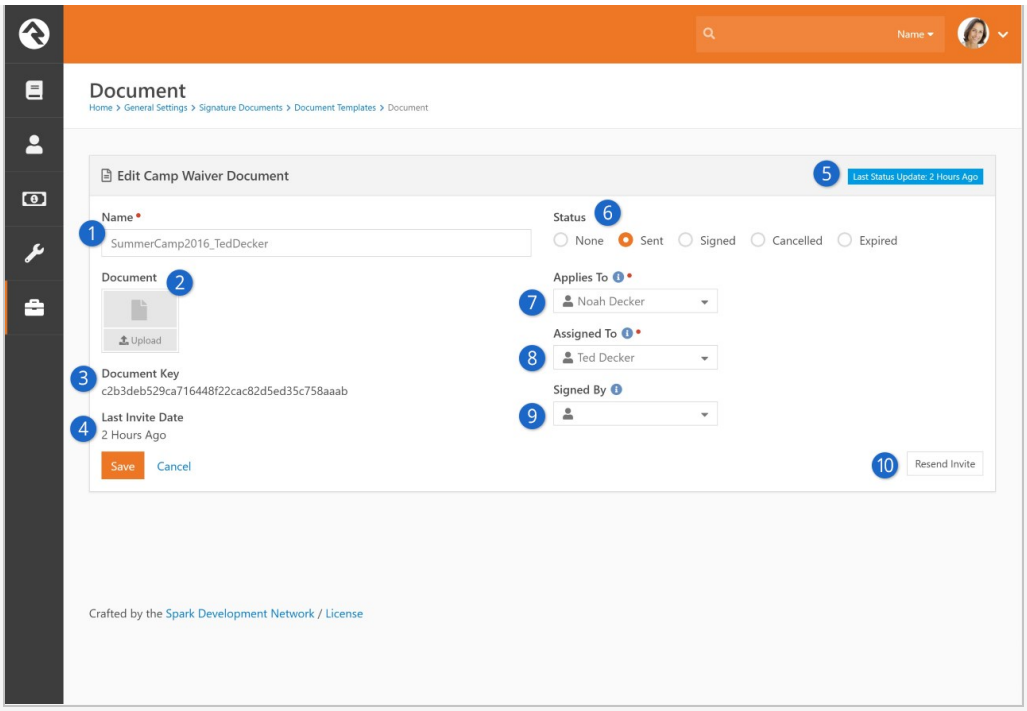


1. **Document Template Detail**
   From here you can edit the template details.
2. **Documents**
   This is a list of document requests for the template. Note that the name of the document is a combination of the source and the person's name. The source is either the group name or registration instance name.
3. **Completed Request**
   Note that the first request has been completed. You can click the document icon to see the signed document.

Manually Editing Documents

You can manually add new signed documents by clicking the add button on the *Document Template Detail* screen above. If you'd prefer to manually edit one, you can do so by clicking the document row.

Manually Editing Documents



1. **Document Name**
   The default here is a combination of the source and the person's name. The source is either the group name or registration instance name.

2. **Document**
   If you'd like to upload a manually signed document you can do so here.

3. **Document Key**
   This is the unique identifier of the document in the signing service. You shouldn't need this, but we provide it in case you need to work with the service on an issue.

4. **Last Invite Date**
   This is the date that the last invitation to sign was sent.

5. **Last Status Update**
   This shows you when the document's status was last updated.

6. **Status**
   The current status of the document. If you set the status to *Cancelled*, the request will be cancelled in the signing service.

7. **Applies To**
   The *Applies To* setting refers to the person for whom the document is created. For example, in a camp waiver, the *Applies To* would be the child going to camp.

8. **Assigned To**
   This setting denotes who should be signing the document. In the camp example, this would often be the parent of the child.

9. **Signed By**
   This field is only used for signed documents that are entered manually. While Rock knows the person to whom the request was sent, the *Assigned To* individual, we don't know who actually signed the document. To get

this information you'll need to view the document and read the signature.

10 **Resend Invite**
If the document hasn't been signed yet the `Resend Invite` button will be available to resend the invite.

> **Reporting Signatures**
> You can use Lava entity commands to report on signature data using the `SignatureDocument` entity.

Document Signature Invite Emails

The formatting of the invite emails will vary depending on the signature service. Below is an example of the email for SignNow. Note that there isn't a lot of customization available. We've highlighted the parts that are custom to Rock.

Digital Signature Job

The digital signature feature in Rock relies on a single job named *Process Signature Documents*, to help Rock manage the digital signature process. This job performs three tasks:

1. Sends invites to new members of a group that requires a signed document.
2. Downloads any signed documents from the service that are still marked as *Sent* in Rock. The webhook should update the status immediately but the job will double-check its work.
3. Sends reminders for requests that haven't been signed. The job has settings that allow you to modify the configuration, but out of the box it will send a reminder every five days until there have been three emails sent (the first invite email counts as one, so a value of *3* represents the initial invite plus two reminders).

Invite Emails

External Authentication Services

Rock allows individuals to log in using several different authentication services. The only one active after an install, however, is the Rock database provider. This provider gives individuals their own Rock username and password. For many organizations this will be the default service they'll use for authenticating an individual, as no additional configuration is required to enable it. Each of the additional services is discussed in more detail below.

Active Directory

Many organizations already have a Microsoft Active Directory (AD) infrastructure in place for their employees to log into the network, email and other resources. Rock can use this as an additional authentication source once configured.

You can set up Rock to use your Active Directory under

`Admin Tools > Security > Authentication Services > Active Directory`

Active Directory Setup

1. **Activate**
   Be sure to activate the security service by selecting Yes.
2. **Server Name**
   Provide the server name of one of your Active Directory Domain Controllers.
3. **Configure**
   Configure the AD Domain on the server to authenticate to.

Once the service is configured, you're ready to create logins in Rock. Active Directory logins can't use the normal Rock registration process. Instead you must add the login manually to the user on the *Person Profile* page.

Facebook Authentication

Password fatigue is a common problem with sites that require registration. In fact, a recent study found that 92% of shoppers abandon a website rather than go through the process of recovering a lost or forgotten password! However, if the website has a social media login option, they are 65% more likely to return. The same study showed that a majority of individuals prefer Facebook as their credential of choice. Luckily setting up a Rock website to use Facebook authentication is quick and easy.

Step 1: Create a Facebook App

Before you can add a Facebook login, your organization will need a Facebook "App". Visit the Facebook Developer website (https://developers.facebook.com/apps) to see the Apps that have been configured for your Facebook account. You'll need to designate someone's personal Facebook account in your organization to use as the 'admin' but you can choose an organization's email to be the contact email when setting this up. If you don't already have an App, follow these steps in the Facebook site to add one:

1. At the top of the screen click the `Register Now` button. This will begin the quickstart setup.
2. You might need to verify your account with a phone number, and provide some

additional personal information.

3. Click the `Create First App` button.
4. You'll be presented with a screen asking for a Display Name and Contact Email for your app. Once you've entered a name and email, click `Create App ID.`
5. You'll then have to go through a "captcha" step, just to make sure you're not a robot.
6. The next screen will be the Product Setup screen. Click the `Set Up` button for "Facebook Login".
7. Next, choose the "WWW" Web option.
8. On the "Tell Us about Your Website" panel, enter in your site URL and click `Save` and then `Continue`.
9. You can then just keep clicking `Next` to continue past the "Set Up the Facebook SDK for Javascript", "Check Login Status", "Add the Facebook Login Button" and "Next Step" panels. Rock takes care of all these things for you.
10. Now that you've navigated through all the panels under the "Web" setup, over in the left sidebar under Products, under "Facebook Login", click the `Settings` option.
11. In the Client OAuth Settings section, enter the URL for your site in the "Valid OAuth redirect URIs" field. You need to include the port your website runs on (default is 80) such as http://rocksolidchurch.org:80/. Currently, Facebook has Force HTTPS enabled by default. As of October 6, 2018 this is required. Port 443 will need to be used instead of 80. You'll also need to add the page that has the Facebook login button onto the end of the domain (i.e. https://rock.rocksolidchurch.com:443/page/207 https://rock.rocksolidchurch.com:443/Login) (Note: Only the Web OAuth Login needs to be enabled in this section. You can turn off the 'Client OAuth Login' option). Click Save Changes when you're finished.
12. Now, back in the left sidebar, click the "Settings" option (not the "Settings" option under Facebook Login, but the main "Settings" section above). From the "Basic" screen, note the "App ID" and "App Secret" values. You'll need these two values when configuring Rock.
13. Before you make your app public, Facebook recommends submitting any additional features or permissions for App Review -- user_friends is one such feature that will need to be submitted if you would like to use the Facebook Friend Known Relationship within Rock.
14. To submit an item for approval click App Review on the left-hand menu and then click “Permissions and Features”.
15. A new page will present you with a list of available Permissions and Features. Permissions you can submit. Scroll down to user_friends and click the `Request` button.
16. Click the “Continue” link that appears in place of the `Request` button.
17. You'll be redirected to a Request for App Review page. You may need to add Business Verification.
18. Click each section on the page to provide the requested details according to the instructions provided.
19. Provide "App Verification Details" by describing how a person can test the

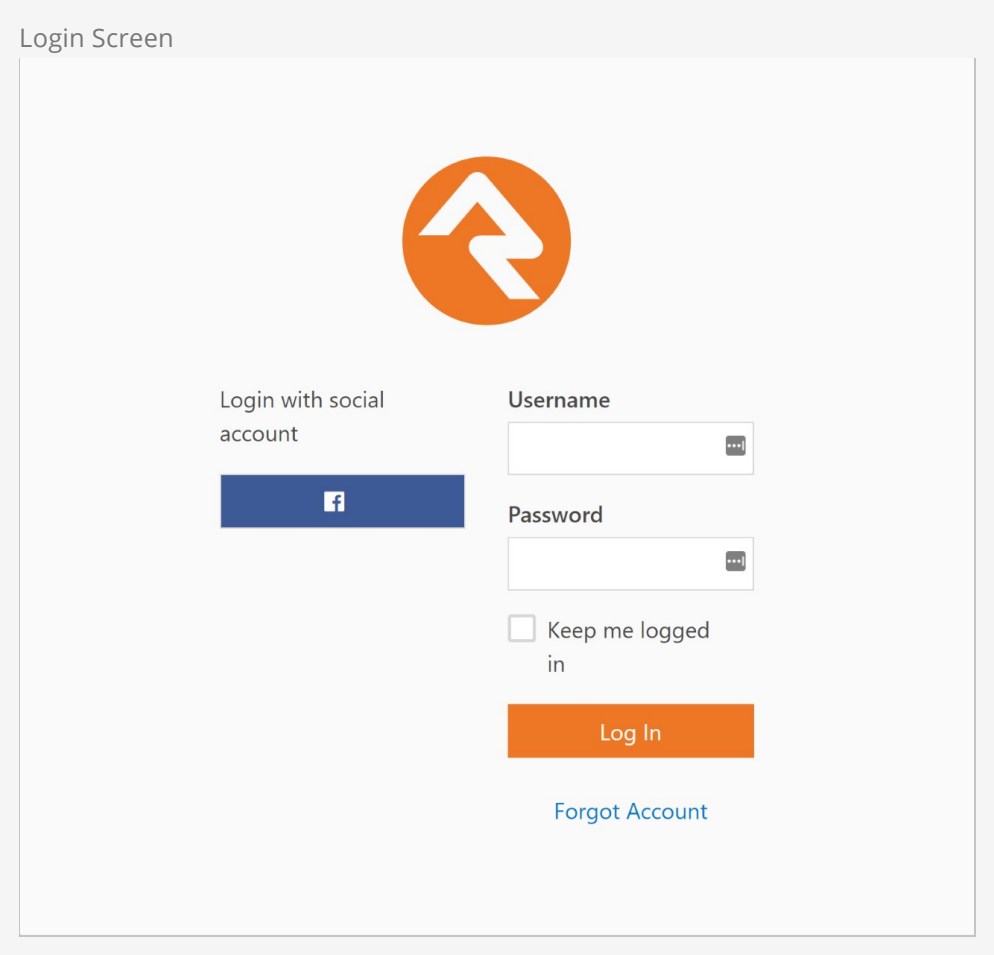
integration. An example template is provided.

20. For "Requested Permissions and Features" you'll need to tell Facebook how you'll use the desired permission. You'll also need to upload a screencast demonstrating how the permission is being used. For user_friends, for example, we did a quick 10 second screencast showing a Facebook Friend Known Relationship in the Known Relationship block on the person profile page (essentially just scrolling down the page and highlighting the known relationship). You'll need to do this for each requested permission.
21. For "Complete App Settings" you'll need to provide several configuration pieces. Add an icon for your app, and provide the URL to your privacy policy for the app. Then, select the appropriate "Business Use" (probably "Support my own business"). Lastly, you'll need to select an App Category from the list provided.
22. After all of the steps on the Request for App Review page have been completed, you can click the `Submit for Review` button at the bottom of the page.

Step 2: Configure Rock

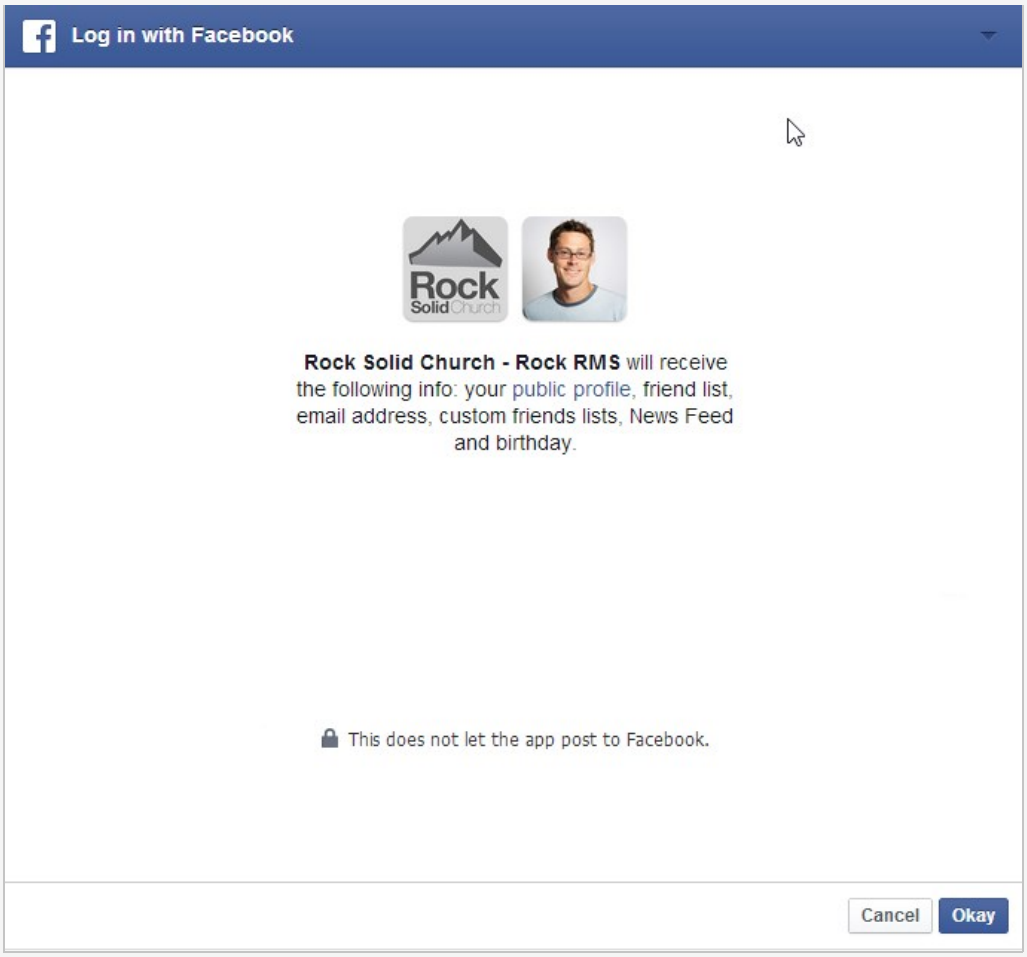
Now that you have a Facebook App, you can start configuring Rock to use the Facebook authentication. Follow these steps:

1. Activate the Facebook Authentication Service by navigating to the `Admin Tools > Security > Authentication Services > Facebook` page.
   Enter the Facebook "App Id" and "App Secret" that you saved from the previous steps, and make sure that the service is Active. Save your changes.
2. Now enable the Facebook login on any of your login pages by updating the block settings of the login control to enable the "Facebook" external service provider. Having this block setting allows you to decide which of your sites allow Facebook to be used (some organizations may prefer not to allow Facebook to be used to login to their internal Rock site). Also make sure the "Redirect Page" setting is pointed to the default home page for your site. Once enabled, your login screen will now have an additional button to allow individuals to login using their Facebook account.



Now that you've enabled Facebook login, when someone logs in using Facebook they will see a screen similar to the one below that links their Facebook account to your server.

Facebook Account Link Page



When an individual's Facebook account is used for the first time Rock will apply the following logic to attempt to match the Facebook account to a Rock record.

1. If a person record can be found with the same First Name, Last Name and Email, the login is attached to this record. As an extra bonus, if no photo exists in Rock for this person their photo from Facebook will be added to their record in Rock.
2. If an exact match can't be made, a new record is created in Rock using the information from their Facebook account. The record status of this new individual is set to "Pending" so they will show up under the "Pending Individuals" report `Tools > Reports > Data Quality > Pending Individuals`.

When a new person record is created as a result of a Facebook login we'll pull the following information from Facebook:

- First Name
- Last Name
- Email
- Gender

Whenever they log in, we'll also do the following:

1. If the person doesn't have a photo in Rock and they do in Facebook, their Facebook photo will be added to Rock.

2. Their Facebook Media Link will be updated.
3. Any of their friends that have also logged into Rock using Facebook will be added as a *Facebook Friend* known relationship.

Google Authentication

With the popularity of Gmail, Google authentication is an attractive alternative for many guests. Below are the steps necessary for Rock to use your guests' Google passwords for authentication.

1. Visit console.developers.google.com/start and create a new project for your organization. If you already have a Google Maps API key, then you'll want to use that project.
2. On the left hand of the screen expand the *APIs and auth* menu, click on *Credentials*, and at the top of the screen click on *OAuth consent screen*.
3. Fill out this screen with your organization's information. The information given here will be presented to your users when they sign in for the first time. A preview of the screen your users will see should be on the righthand side of your screen. You'll want to include branding that your users will recognize and trust.
4. At the top of the screen click on the *Credentials* tab then click on the *Add Credentials* dropdown, select *OAuth 2.0 client ID*, and then select *Web Application*.
5. Under *Authorized redirect URLs*, you'll need to place the full URL of all the login pages you configure to use Google authentication. For example, *http://rock.rocksolidchurch.com/page/3* for the internal site. When you've finished adding URLs click *Create*.
6. You should be presented with a Client ID and a Client Secret. Note these values and add them to the Google service configuration under `Admin Tools > Security > Authentication Services > Google`.

Twitter Authentication

Rounding out the list of popular sites to use for authentication, we also support Twitter. The directions below will get you up and running quickly.

1. Visit apps.twitter.com and create a new app for your organization.
2. Give your app a name and a description. This will appear to your users, so make it recognizable. Also put in your organization's forward-facing website URL, and in the callback URL field put the URL for your primary login page. This will be overridden but the callback URL field needs to have a value for the authentication service to work (for example: *http://rock.rocksolidchurch.com/page/3*). Click *Create*.
3. Navigate to the *Keys and Access Tokens* tab at the top and note the Consumer Key and Consumer Secret values. Add these to the Twitter service configuration under: `Admin Tools > Security > Authentication Services > Twitter`.
4. In order for your application to connect Rock user accounts to Twitter accounts, you need to request elevated permission for your application to access email information associated with Twitter accounts. You can do this via this link https://support.twitter.com/forms/platform and select the *I need access to special permissions* option.

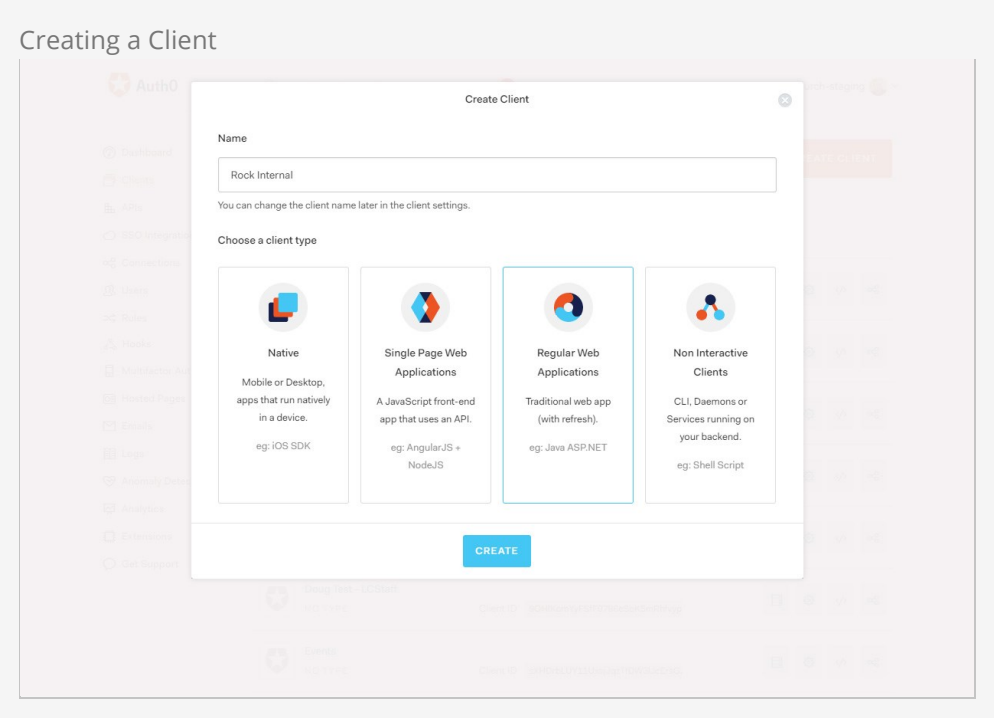
Auth0 Integration

Auth0 is a single-sign on service that provides a layer of extensibility to your authentication strategy. Why would you need a service like this? Auth0 solves three primary needs:

1. It allows for a centralized authentication service outside of Rock. For most organizations centralizing their authentication inside of Rock is a great feature. Others prefer to have all authentication reside in an independent service. This is often desirable if you have several other systems needing shared authentication and you don't want to write Rock integrations for each.
2. The second scenario where Auth0 makes a lot of sense is enabling social logins. Out of the box Rock supports most of the popular services, but Auth0 supports far more.
3. Finally, if you need passwordless authentication (via SMS, email, etc.) or two-factor authentication Auth0 can provide that for you.

Enough talk, let's get Auth0 configured for Rock. The instructions below assume that you have an Auth0 account with the desired connections and administrative settings pre-configured.

1. The first step is to create a new 'Client' in the Auth0 administrator site. Select 'Clients' from the left-hand navigation to get started.
2. Give your client a name and select the 'Regular Web Applications' option.

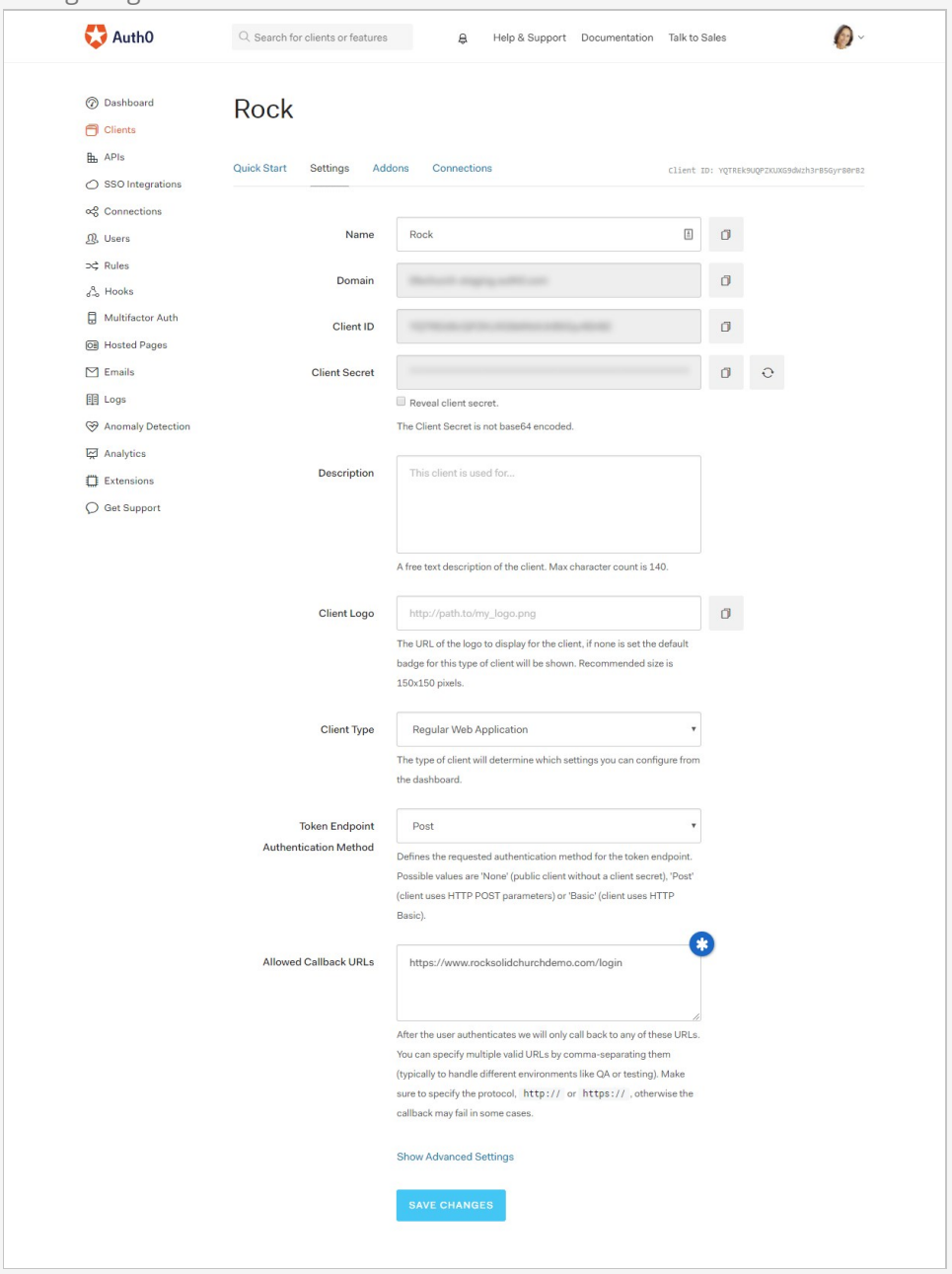


3. The next screen will show 'Quick Start' options. It's much easier to just fill in the settings so head over to the 'Settings' tab. Here you'll find the 'Domain', 'Client ID' and 'Client Secret'. Keep track of these as you'll need them in the Rock configuration. On this screen you'll need to provide the following settings:
    - Allowed Callback URLs – This is a list of Rock Login URLS that will be using

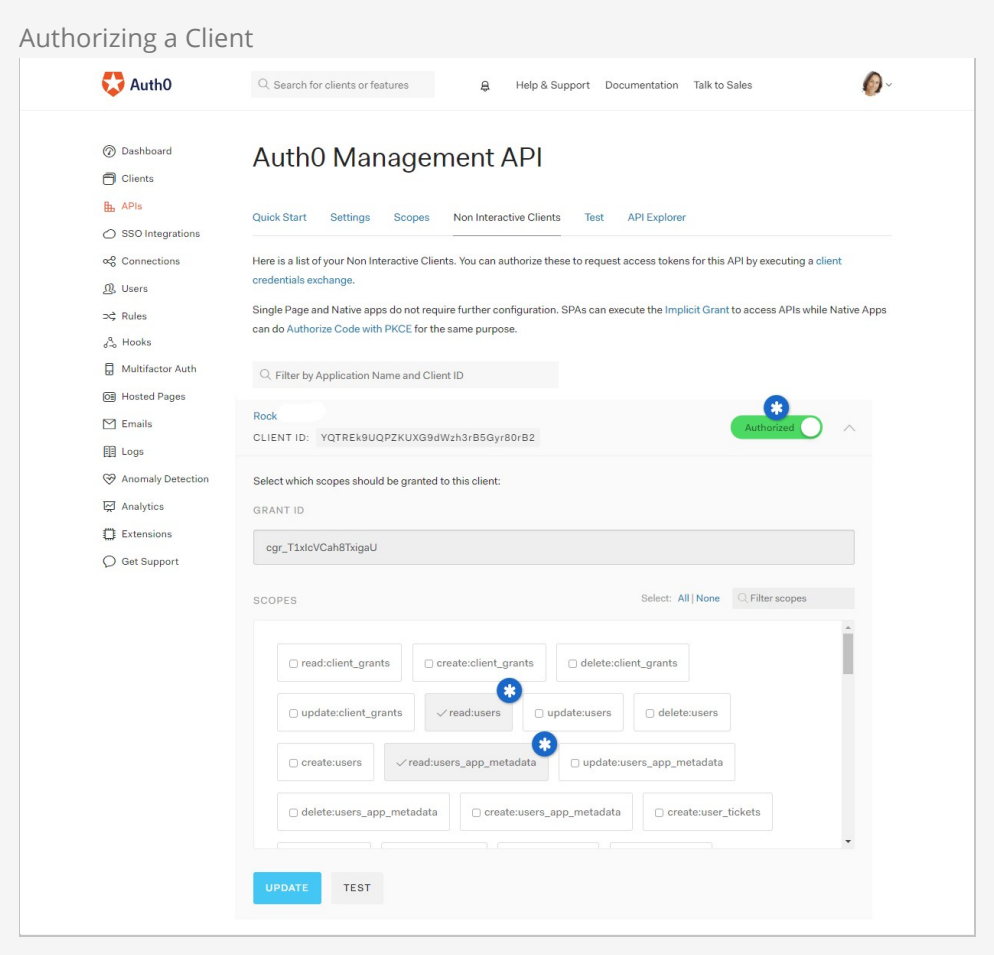
Auth0. You can provide as many URLs here as you need, separated by a comma.

- You can also optionally add logos for the connection. This will help the individual logging better understand what's happening.

Configuring a Client



4. Finally, you need to give your client some extra permissions. In the Auth0 manager head over to the APIs link and select the 'Auth0 Management API'. From the tabs at the top select 'Non Interactive Clients'. You should see your client listed here. Be sure that your client is 'Authorized'. Next, select the down arrow to authorize specific scopes. You'll need to enable both the 'read:users' and 'read:users_app_metadata' scopes.



External Authentication Services

After activating the service in `Admin Tools > Security > Authentication Services`, open the login pages you wish to enable the authentication on (/page/207 for External Login and /page/3 for Internal Login), edit the *Login Block Property*, and turn on *Remote Authorization Types* for the services that you activated.

Person Tokens

There may be times when it's useful to view either the internal Rock site or the external organization site as an individual other than yourself. For example, if someone calls needing technical support because of a problem with their person profile, an admin may want to view the page while logged in as that person. This allows the admin to see exactly what the person sees. Rather than creating a new login—which can result in duplicates in the database—Rock uses person tokens, which allow Rock admins to login as (i.e. impersonate) users without requiring passwords. This not only makes troubleshooting easier, but it also helps keep your database tidy. Anytime an admin impersonates another user, a record of the login is kept in the user's history tab.

Tokens are configurable, so you have control over how long they're valid for and how many times they may be used before expiring. Let's take a look at how to do this.

Configuring Person Tokens

Person tokens come preconfigured in Rock and can be found in the Global Attributes screen
(`Admin Tools > General Settings > Global Attributes`).
There are three Person Token attributes: Person Token Expire Minutes, Person Token Usage Limit, and Person Token Use Legacy Fallback. Click on an attribute to open its configuration settings.

The **Person Token Expire Minutes** attribute is the length of time the person token is valid, configured in minutes. The default setting is 43200, or 30 days. If you want the person token to be valid for a shorter amount of time, enter the value in minutes in the Person Token Expire Minutes Value field.

The **Person Token Usage Limit** is the default maximum number of times a person token can be used. By default the value is blank, meaning there's no limit to the number of times the token can be used. If you want to set a limit, enter a numerical value in the Person Token Usage Limit Value screen.

The **Person Token Use Legacy Fallback** tells Rock whether or not to use pre-v7 legacy person token settings if they come through the system. If the Person Token Use Legacy Fallback Value is set to No, those legacy tokens will be rejected. We recommend keeping the value set to Yes for a few months after updating to v7, just to be on the safe side.

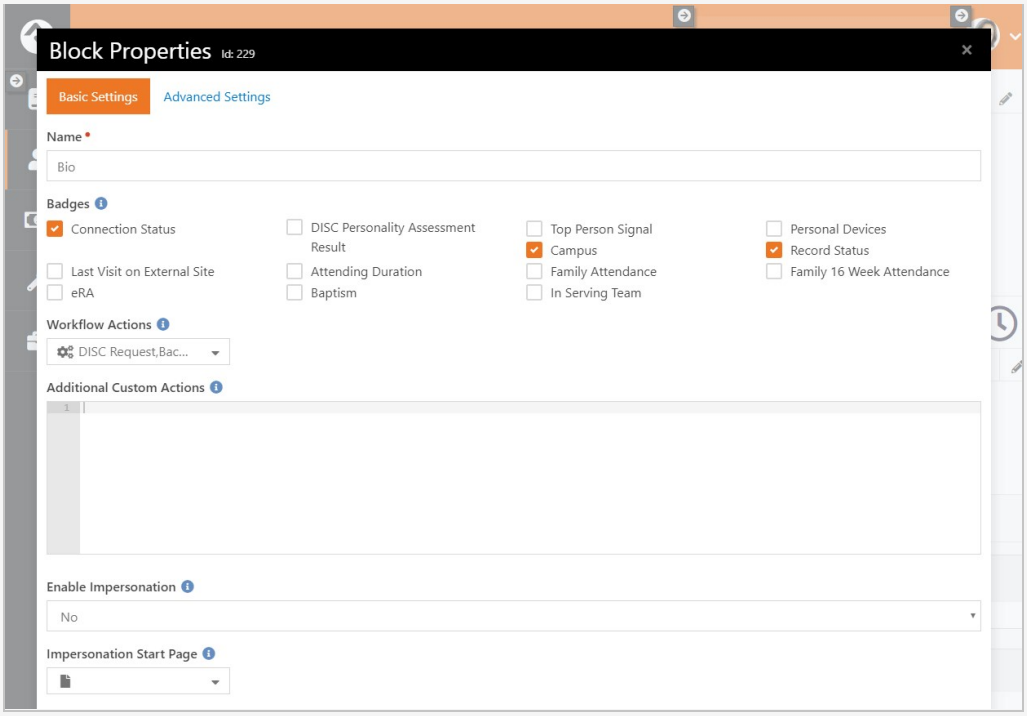
You can also configure and read person tokens using the PersonTokenCreate and PersonTokenRead Lava filters. To learn more about how to use Lava for Person Tokens, see the Lava guide.

Now let's look at how you put the person tokens to use by impersonating another user.

Impersonating Another Person

Impersonation is enabled in the Bio block settings of the Person Profile page.

Enable Impersonation

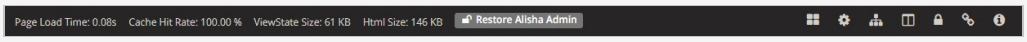


To enable impersonation, select Yes in the *Enable Impersonation* field.

You can configure Rock to automatically take you to a different page when you impersonate someone. Typically you would want to set this to your public Rock site (see note below), but it can be any Rock site/page you desire. You set this page in the *Impersonation Start Page* dropdown menu.

Once you've saved your block settings, you're ready to impersonate another person. To do this, search for the profile page of the person you want to impersonate, click the `Actions` button in the upper right corner of the screen, and select Impersonate from the menu options. Rock will take you to the page specified as the Impersonation Start Page, and you'll now view the site as that person. Keep in mind this means you'll only be able to see what that person can see based on their security roles and permissions.

Admin Toolbar Restore Button



Impersonation remains in effect until the browser session ends, you log out of Rock, or you click the `Restore` button in the admin toolbar at the bottom of the screen.

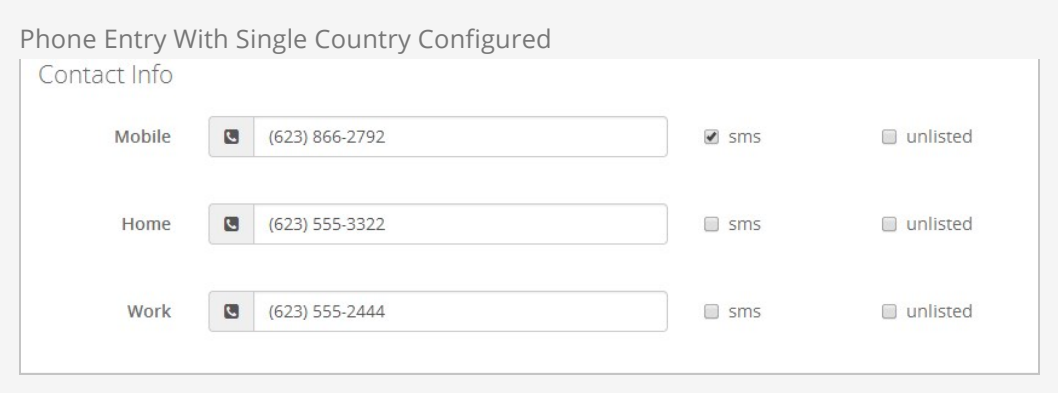
> **Note**
>
> It's recommended that you set the *Impersonation Start Page* on the block to point at your public-facing Rock site if your primary use of this feature will be to impersonate attendees interacting with your public Rock pages. Failure to set a start page will cause Rock to remain on the internal site when you impersonate someone, which can lead to "access denied" errors necessitating a browser restart, because the person you're impersonating (most likely) doesn't have rights to the internal Rock site.

Internationalization & Localization

While true internationalization is beyond the scope of the Rock project, we do want to make Rock friendly for organizations outside of the United States. Each localization topic is discussed separately below.

Phone Numbers

Post-install, Rock is configured to support only US-formatted phone numbers. When only one country is configured, the phone entry field looks like the example below.

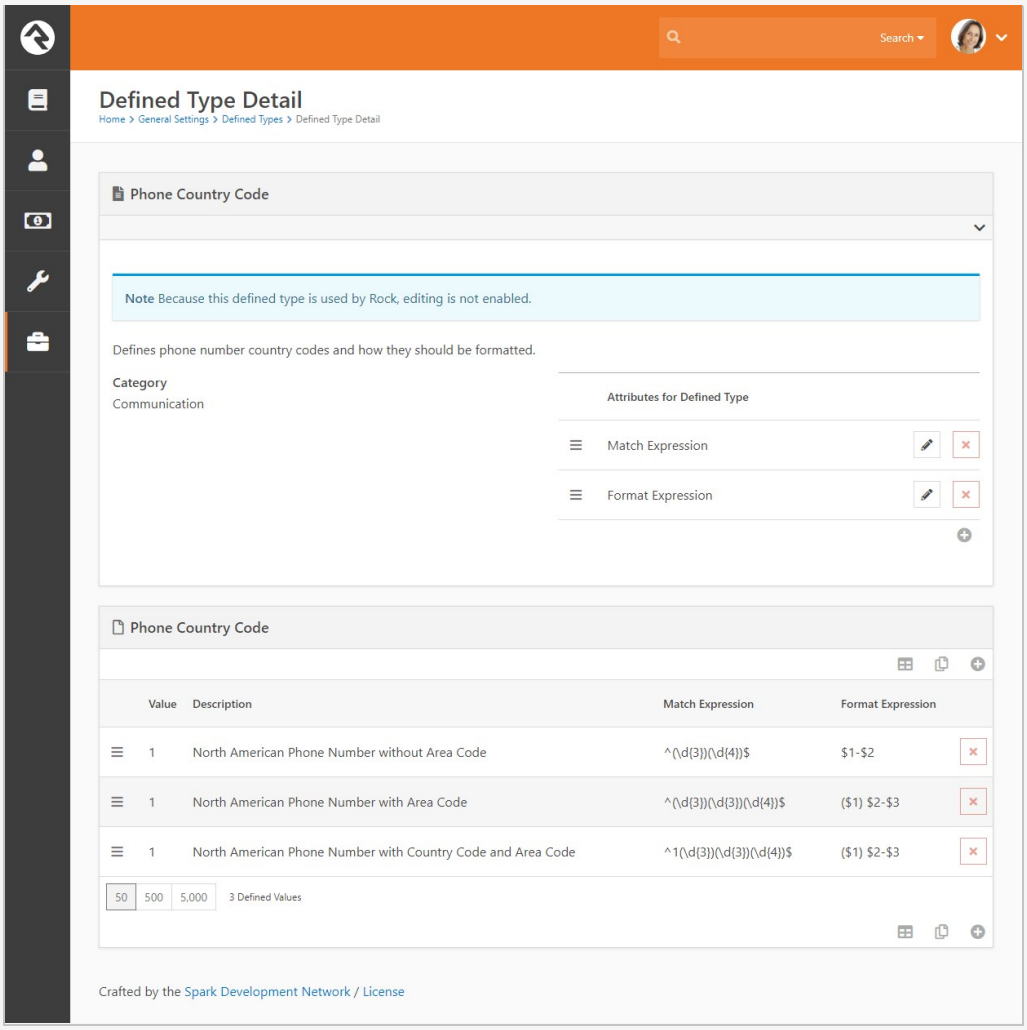


This field can easily be adjusted to support other countries. Simply add country specific formatting fields to the `Admin Tools > General Settings > Defined Types > Phone Country Code` defined type.

Each new entry should have the following values.

- **Value:** This is the country code that's used when dialing the number.
- **Description:** A short description of the phone formatting pattern.
- **Match Expression:** This is a regular expression that's used to match the value you entered and apply the correct formatting to it. For instance, a seven-digit number in the US would match the formatting rule 555-5555 while a 10 digit number would match to (555) 555-5555.
- **Formatting Expression:** This string is used to apply the formatting to the matched number. Each grouping of numbers is represented by a $#.

Phone Configuration



> **Tip**
>
> You can find more information on the formatting of phone numbers for specific countries on Wikipedia.
>
> We've also started a short list of best practices that have been shared by other Rock community members. You can check them out at http://www.rockrms.com/InternationalPhones.

Once you add a second country, the phone number field will change a bit in look. You'll notice the addition of a country code selection at the beginning of the input. The phone country code listed at the top of the defined type list will become the default country code, so in the screen shown above grab the hamburger grips to the left of each entry and drag them up and down the list as you desire.

Phone Entry With Multiple Countires Configured

> **Formatting Phone Numbers on the Person Profile Page**
> There's a setting on the Bio block used on the *Person Profile* page that enables the country code to be prepended to all phone numbers. Enabling this setting may help the formatting for many international organizations.

Dates & Times

We believe the .Net framework that Rock is built on should handle the formatting of dates and times correctly across regions. If you find an area of Rock that shows a date and/or time in a US format, please let us know by opening a Rock issue. Before opening a request, be sure to check the server's culture setting. This can be found on the 'System Information' dialog access from the Admin Toolbox at the bottom of each page.

Currency

There really isn't any magic in Rock's implementation of local currencies. Behind the scenes, currency is stored simply as a number. You can change the currency symbol displayed within the application under `Admin Tools > General Settings > Global Attributes > Currency Symbol`.

> **It's Important To Understand...**
> Changing the currency symbol doesn't have any other effect than changing the symbol in front of amounts when displayed. Be sure that your payment gateways are properly configured for the same currency as the symbol you're displaying, otherwise individuals will be incorrectly credited in their account.

> **Symbol Cheatsheet**
> Looking for the proper symbol for your region? Try starting with this currency cheatsheet.

International Address Support

By default, Rock is set to accept and display US-formatted addresses. For most

organizations operating inside the US, this will be the preferred configuration. Enabling support for international addresses is simple and remarkably powerful. Let's take a look.

Enabling International Addresses

The first step is to tell Rock that you would like to use international addresses when editing and viewing addresses.

1. Navigate to `Admin Tools > General Settings > Global Attributes`.
2. Select the Attribute *Support International Addresses Value* and select the value *Yes* on *Support International Addresses*.

Rock will now display the inputs required for storing international addresses. It will also display addresses in an internationally-friendly way.

That was the simple part—now for the power!

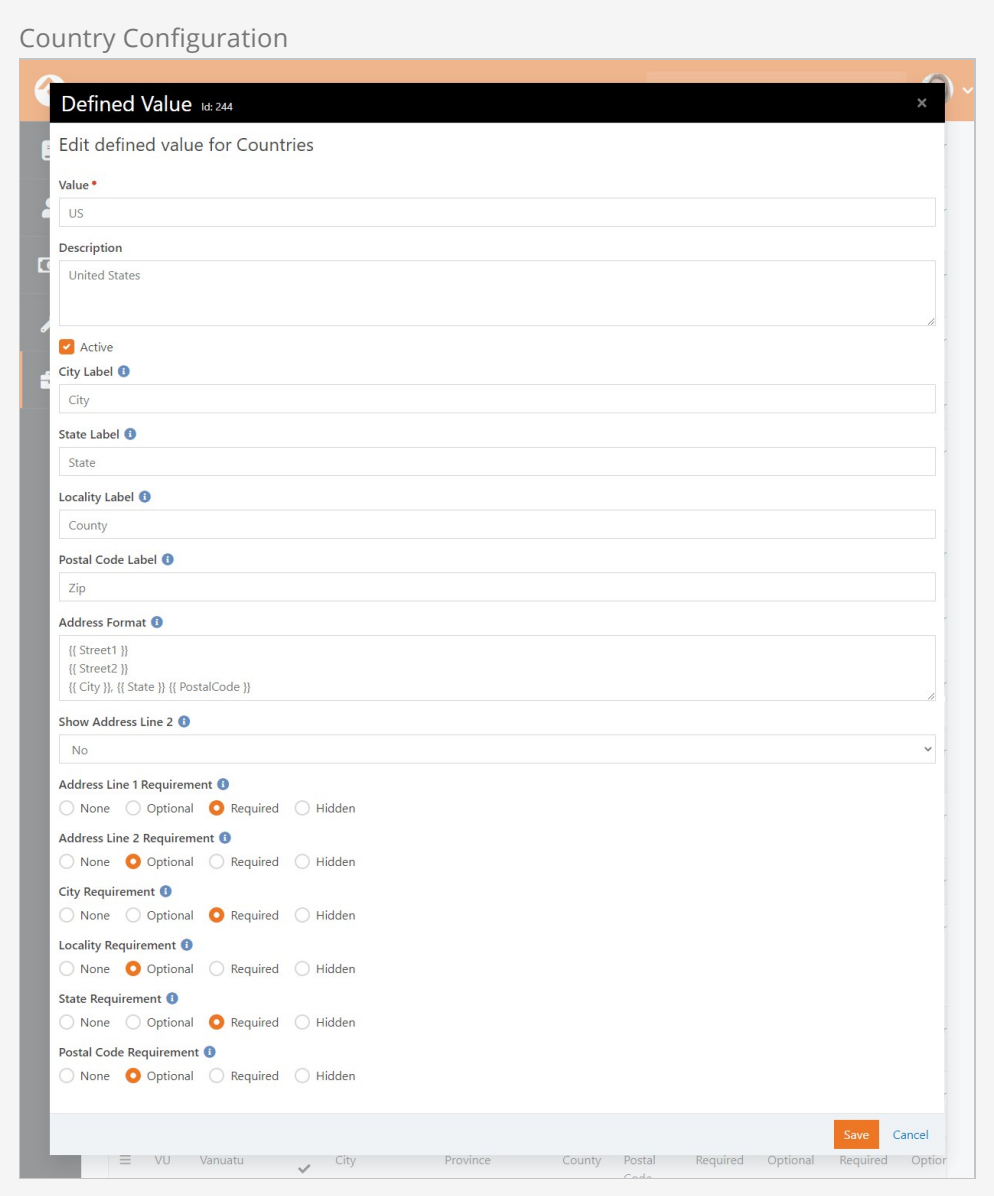
Configuring International Addresses

Unfortunately, we live in a world with few standards. Why the world hasn't accepted the mile is beyond us (5,280 feet in a mile makes perfect sense. Brilliant really...) Perhaps nowhere is this more evident than with addresses. Some countries have 'states', others 'provinces'; some 'zips', others 'postal codes'. Some put the zip first; others put it last.

Rock allows for a good deal of configuration on how international addresses are entered and displayed. With a few exceptions, the configurations for each country will need to be adjusted as they change on a seemingly daily basis. To complete the configuration, follow these steps.

1. Be sure that the countries you need are in the country list `Admin Tools > General Settings > Defined Types > Countries`.

   Also ensure that the correct abbreviation is in the *Value* field and the proper terms for City, State and Postal Code are correct. Also adjust the *Address Format* as needed to fit the requirements of the country. This format is what will be used to display addresses inside of Rock for the given country.



2. Next, enter the *Address States* for the countries that will be commonly used. You'll find these under

   `Admin Tools > General Settings > Defined Types > Address States`.

   When entering new states, be sure to match them to the country using the country dropdown.

   When entering states you'll enter the state abbreviation (e.g. 'AZ') in the *Value* field and the full name (e.g. 'Arizona' in the *Description*. Both values are required.

Rock will now display the inputs required for storing international addresses. It will also display addresses in an internationally-friendly way.

> **Country Preference**
> When showing a list of countries, Rock will put the country of the organization both at the top of the list and also in alphabetical order. This allows the most commonly-selected country to be an easy selection for your users.

School Grades

Rock provides a customizable system for determining the educational grade/year an individual is in. You can read more about how this grade system works in the `Person & Family Field Guide`.

Strategies for Full Localization

Full localization, including the support for multiple languages, is outside of the scope of the Rock project. However, it's possible for someone to fork Rock's source and localize the code and database contents. If you're interested in starting an internationalized port let us know and we'd be happy to help share your work.

Things You Should Not Do

Learning from the mistakes of others is a painless way to avoid making mistakes of your own. Based on real-life experiences within the Rock Community, we have some suggestions for things not to do.

Creating Lots of Fake People

There's no denying that it can be useful to have fake person records in your production Rock instance. There are times when you want to try something out, but don't want to risk changing or damaging a real record. That's understandable, and fairly common. However, having too many of these records can negatively impact things like reporting, communications and system performance. Eventually you'll want to clean up, and that's where you'll run into some challenges.

If you must have fake records then we strongly recommend that you keep the count as low as you possibly can. Adding even a single person impacts many different tables and data throughout Rock. From attributes to addresses, think of all the things you associate with people and families in Rock, and then consider having to identify and undo all those things. It's like shooting a shotgun into a bale of hay and then having to find and remove all the pellets without missing any. It's a manual process; we don't have a magnet for you.

> ### Need Some Help?
>
> Removing fake records is very challenging, to the point where you might need to hire outside help. If you do, our partners are ready and able to assist you. However, even for Rock experts this is a difficult and complex task, so we don't expect our partners to guarantee every fake record can be removed entirely from all areas of your system. The only way to ensure a clean system is to avoid adding these records in the first place.

Changing Blocks

It's possible to inject custom CSS / JavaScript to modify Rock's core blocks or to change the user interface on a block. While that may be tempting if you have the technical resources to do it, we advise against modifying blocks that ship with Rock or come from the Rock Shop. Trust us, your future self is screaming at you right now to not do this.

Injecting custom code dramatically complicates future troubleshooting and

maintenance for yourself and others. The Rock Community is always willing to help and support you, but it's very challenging if you're using a different block than everyone else.

Also keep in mind that new Rock releases or fixes could overwrite or conflict with the changes you've made, possibly resulting in broken functionality. Rock upgrades assume that the core blocks are unchanged. There are ways to mitigate this risk, but they all require time and resources you wouldn't otherwise need.

We have a few other suggestions for things to avoid with your website in our `Designing and Building Websites Using Rock` guide.

What To Do When Things Go Wrong

In life there will always be problems. The key is how you go about solving them. Below are a few tips to help you successfully navigate issues as they arise.

Your best resource in dealing with problems is knowledge. The more you know about how Rock works, the better off you'll be. We strongly recommend reading each manual that comes with Rock. You even might make it a habit to re-read manuals more than once. With each reading, your understanding of the material will grow. You may find that new ideas come to you as you cover the material on multiple reads.

What to Do When Rock Won't Load

You make a configuration change and next thing you know Rock's not loading any longer. What should you do?! First, relax. A calm mind will lead to a quicker resolution while stress might only dig you in deeper. Below are some things you should try first.

Check for Exceptions in The Database

First check the exceptions log in the database. This is made a bit tricky because you can't use Rock's built-in screens to check the logs. Instead, you'll have to use SQL Server Manager or a similar tool to view the errors.

Once you connect to your database, look into the *ExceptionLog* table. You can also try running the SQL statement below to view the error.

```
SELECT TOP 100 *
    FROM [ExceptionLog]
    ORDER BY [CreatedDateTime] DESC
```

Check for Exceptions in The File System Log

When things are so bad that Rock can't even write to the database, we'll write the exception to a comma-delimited file on the web server's file system. The file is located at ~/App_Data/Logs/RockExceptions.csv.

Getting 500 Errors to Display

When all you get back from Rock is a server 500 error, you can modify your web.config to return a more detailed error message.

> **Be Very Careful**
>
> Incorrectly editing your web.config file can cause serious problems. Be sure to make a copy of the original file before editing. Also be sure to change these settings back when you're done.

Two changes will need to be made before a detailed error will be displayed.

1. Immediately after the line `<system.web>` add a new line with this text `<customErrors mode="Off"/>`
2. Next you'll need to comment out the custom error configuration. To do this, simply edit the existing comment from this:

```
<!-- Add a custom handler for 404 errors to load Http404Error page.
The Http404Error page will check to see if the site has a configured 404 page, and if
so, it will then redirect to the custom page.-->
<httpErrors errorMode="Custom" existingResponse="Replace">
   <remove statusCode="404" subStatusCode="-1" />
   <error statusCode="404" path="/Http404Error.aspx" responseMode="ExecuteURL" />
</httpErrors>
```

   to this:

```
<!-- Add a custom handler for 404 errors to load Http404Error page.
The Http404Error page will check to see if the site has a configured 404 page, and if
so, it will then redirect to the custom page.
<httpErrors errorMode="Custom" existingResponse="Replace">
   <remove statusCode="404" subStatusCode="-1" />
   <error statusCode="404" path="/Http404Error.aspx" responseMode="ExecuteURL" />
</httpErrors>-->
```

What To Do Next

At this point, you should now have more information about what's going on behind the scenes. Hopefully you can fix it from here. If not, you might try:

- Posting into the Rock Q&A. Be sure to include any error message you're getting.
- Posting on the Rocket Chat.
- Seeking help from a Rock consultant. You might ask in the Q&A section for a recommendation. We hope to build a rating system for external resources soon.

Scaling Rock

Large organizations may be interested in scaling Rock using multiple servers. This not only provides extra capacity but provides failover in case a server goes down. Before you jump to adding a new server, there are a couple of things you should know about.

Caching

Rock uses a very sophisticated and fast caching sub-system. The cache greatly reduces the need to read from the database. Tuning this cache is so important to us that we even show the Cache Hit Ratio in the bottom admin bar. Rock's cache is very fast because it uses the server's memory. Unfortunately, this makes running on multiple servers somewhat difficult. How? Let's walk through an example.

Say you're running two Rock servers, A and B. While connected to server A you make some security edits. These edits are updated in the database and in server A's cache. Unfortunately, the original security settings are also in server B's cache and it has no idea they've been updated. So what's an admin to do? Well, we have you covered!

Redis to the rescue! Redis is a very fast NOSQL database that many large websites use to increase performance. Redis has two features that make it a great solution. The first is the NOSQL database. Many people use the Redis database for caching. The second feature is a messaging system that allows you to publish and receive small messages. Think of it as a chat room of sorts. Because Rock's in-memory cache is so fast, the architects decided not to use the Redis database. Instead, when enabled, Rock servers can use Redis to share when they update or flush their cache. If you think back to the chat room analogy, think of the servers as connecting to the chat room to send messages to each other whenever they update their cache. Pretty simple right?

Let's walk through how you can configure multiple Rock servers.

1. Install a Redis server on your network. Because Rock doesn't use it for storing cache, it doesn't need to be a beefy server, but it should be reliable and always on. See Redis for more information on the various server options. Since Redis is open source, many free options are available. If you're mainly a Windows shop you should consider using the Microsoft Redis server available at: https://github.com/MSOpenTech/redis/releases. It's recommended that you use the 3.x version of this server.
2. Install your Rock websites. Be sure that the same versions of Rock are installed on each server and that they use the same web.config. Each install of Rock has its own encryption keys located in the web.config. These keys must be the same on each server.

3. OK, we said the web.config files should match... except for one small setting. Be sure that only one of your servers has the *RunJobsInIISContext* setting set to true. Running the Rock jobs on two servers at once can lead to some interesting (read: bad) situations.
4. To enable the Redis caching notifications you'll need to set the *EnableRedisCacheCluster* setting to true in the web.config. You'll also need to set the *RedisConnectionString* to point to your Redis server. An example of this connection string would be *redis.rocksolidchurchdemo.com:6379*.

> **Pro Tip**
>
> At some point you might want to know which of your servers are connected to the Redis 'chat room' for caching messages. If you open up a Redis cli terminal window and subscribe to the chat room using 'subscribe rock-cache-instructions' in one window and publish the command 'PING' in another cli window (using publish rock-cache-instructions PING) each Rock instance will PONG back with their hostname and application.

Under The Hood

While Rock comes preconfigured to run optimally on most systems, here's a few things you should know.

Initial Slow Response Times

Here's the scoop on slow initial Rock load times. Rock uses a database access technology called Entity Framework (EF). On first load (the very first page that's started when the application loads) it can take a few seconds for EF to check the database to see if any changes are required. Subsequent pages will load much faster. You'll notice that once a page loads the second load of that page is super-fast. That's Rock's caching engine kicking it. So that's all fine and good until...

IIS's AppPools (think of it as the engine that powers Rock) need to be refreshed on occasion. By default this happens every 29 hours (you should reset yours to always occur at a specific time, like 1am). When the AppPool recycles the whole EF start up happens again. For more information on configuring the AppPool see this blog post.

We'd recommend that you use an HTTP status tool like Pingdom to constantly poll your site. Not only will this notify you went it's down, but it will also be the first to load your page after an AppPool recycle.

Once Rock is started there's an internal keep-alive process to ensure your site doesn't go into a sleep-like mode. Once the initial page is loaded this process will ensure that Rock stays awake and responsive.

Phone Number Lookup

The *Phone Number Lookup* feature is a great alternative to traditional methods of identifying a person. Instead of logging in or providing personal information, all the person needs to do is enter their mobile phone number and confirm they're in possession of the device with that number.

Overview

To start, the person enters their mobile phone number in the screen pictured below.

Phone Number Lookup Block

After clicking `Lookup` the person will receive a text message with a verification code. They'll need to copy or type that code into the next screen pictured below. This confirms they are in possession of the device with that phone number.

Enter Confirmation Code

If the person didn't receive the text, or needs to re-enter their number, they can tap the `Resend` button pictured above to try again.

After providing the confirmation code and clicking `Next` in the screen above, the person will be returned to the area where they started the process. For instance, if this is being used with Mobile Check-In then the person would be automatically directed to the next steps for checking in.

Phone Number Matching

Behind the scenes, Rock will check the provided phone number against records in the system. If only one person has that phone number then Rock's job is pretty easy. But, sometimes more than one person has the same phone number in Rock. Or, the person's phone number might not be in Rock at all. Rock can still handle either scenario.

If more than one person has the phone number, Rock will ask the person with the device to indicate who they are. Remember, this happens *after* the confirmation code is entered in the prior screen above.

Select Person

After tapping their name, the person will then proceed with next steps for the process they originally started (like Mobile Check-In).

If Rock can't find the provided phone number in the system, then the person will see the screen shown below. Again, this only happens after they've provided the confirmation code.

Phone Not Found

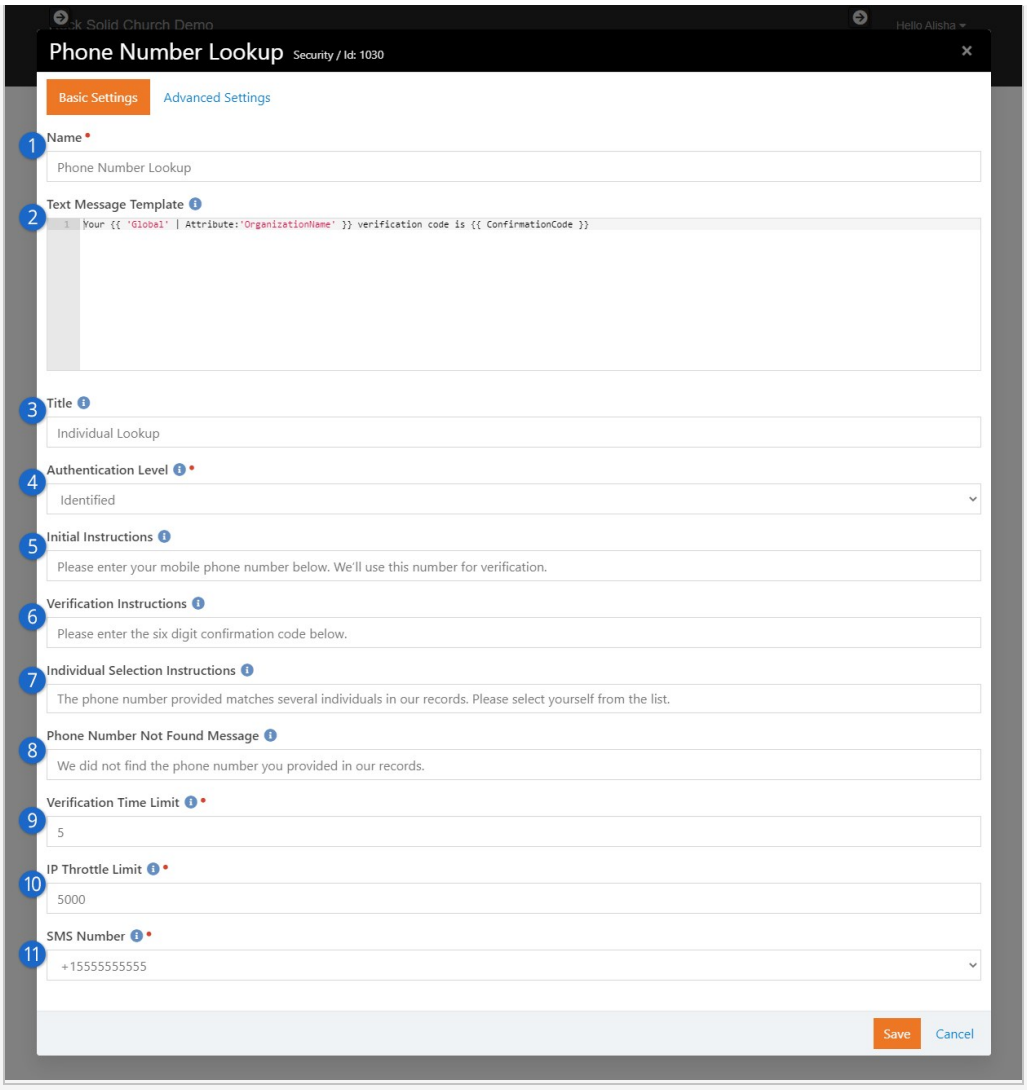
In the next section we'll show you how to configure the instructions that appear on this screen.

> **Not Just Mobile**
> Don't forget that this block can be placed anywhere on your site. It can be accessed from a computer, laptop or other types of devices.

Phone Number Lookup Block Settings

Now that you're more familiar with the process, let's look at some of the configuration options you have. These settings let you tailor the experience to your needs.

Phone Number Lookup Block Settings



1 **Name**
The name of the block appears on each screen.

2 **Text Message Template**
This is where you can configure the confirmation code text message that gets sent to the person. In this example we've used Lava to provide the organization's name and the confirmation code itself. We strongly advise against adding any personal information here (like "Hello Ted!") because we don't know for sure who has the device until they submit the confirmation code.

3 **Title**
The title you put here will show on each screen. This helps indicate we're looking for an individual and not a family.

4 **Authentication Level**
This setting is very important. It decides what access the person has after they have submitted the confirmation code (and after selecting themselves, if necessary). You can choose from one of two settings:

- Trusted Login - This setting will formally log the person into your Rock website if they have a login account. If they don't have a login, they'll be able to do most (but not all) of the functions a logged-in

person could do.
    - **Identified -** This is the safer setting of the two, but it's also more restrictive. In this case the person will be identified for specific areas of your site, like Attendance Self Entry or Mobile Check-in, but most secured areas will still require them to log in.

More details on this setting are provided below.

5. **Initial Instructions**
These instructions provided here will appear on the first screen of the block, where the person enters their phone number.

6. **Verification Instructions**
Here you can change the instructions that are shown when the person enters their confirmation code.

7. **Individual Selection Instructions**
These are the instructions that will show on the screen for selecting which person is in possession of the device. This screen only appears if more than one person in Rock has the provided phone number.

8. **Phone Number Not Found Message**
If the provided phone number can't be found in Rock then these instructions will appear. You might use this area to request that the person create a profile so they can be identified in the future.

9. **Verification Time Limit**
This is the amount of time, in minutes, before the verification code expires. If the code expires, the person will need to resubmit their phone number and get a new code.

10. **IP Throttle Limit**
This is the maximum number of times, per day, that a single IP address can submit a phone number for verification. In many cases, this is helpful to help keep SMS messaging costs down. An exception will be written to the Exception Log if the limit is reached.

11. **SMS Number**
This is the SMS Number that will be used to send the confirmation code text message to the person.

Authentication Level - Identified or Trusted?

Just like a bank, your external website has certain areas that are open to the public and other areas that are restricted to known people. Anyone can walk into a bank's lobby, claiming to be a customer of that bank, but the bank (hopefully) won't just take their word for it when they ask to make a withdrawal.

This is why Rock has different *Authentication Levels*. Sometimes it's enough that the person has simply *Identified* themselves, but in other cases we want to fully *Trust* that they are who they say they are. In other words, these levels decide who stays in the lobby for a nice chat, and who gets to make a withdrawal from the vault.

Identified

If a person is only *Identified* it means they're claiming to be someone and we're pretty much taking their word for it. This is the safer of the two *Authentication Levels* described above in the Phone Number Lookup block. This means they can do certain things like check in or report attendance in a service, but not much else. In other words, you recognize they might not be who they claim to be, but their access is restricted so they really can't do much damage.

Trusted Login

The next level of authentication is *Trusted Login*. This opens the vault, and means you truly trust that the person is who they claim to be. A *Trusted* person has access to their profile, giving and other potentially sensitive areas of your site.

The appropriate *Authentication Level* will vary depending on your organization and your community. If a person really wanted to impersonate someone else in your external site there might be ways to do it, but those risks can be minimized with certain data policies and practices. If you're not sure which *Authentication Level* is right for you, play it safe and use *Identified*. The person can still log in like normal if there are secured areas of the site they need to access.