

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. Let's walk through some things you can do to make this page a useful resource.

The screenshot displays the Rock Homepage interface. On the left is a dark sidebar with navigation icons. The main content area features a 'Staff Updates' section with a large image of a woman working, followed by a sub-section 'Let The Adventure Begin' with introductory text and links. Below this are three featured articles: 'Superhero Training', 'Partners, We All Need A Hand', and 'Our Community Rocks'. A 'Metrics' section shows 'Active Records' (49), 'Active Families' (1), and 'Active Connections' (0). At the bottom is an 'Administrator Checklist' with items like 'Update Your Install' and 'Create Your Account'. The right sidebar contains 'Quick Links' to the Rock RMS Website and External Website, and sections for 'Active Internal Users' (0) and 'Active External Users' (0).

Staff Updates

The main area of the homepage is allocated to Staff Updates. Here is where you can post a feature article, as well as an unlimited number of additional articles below the feature. This is a great place to post news items and announcements for your staff to see. To learn how to customize this section for your organization, read 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. To learn more about these metrics and how to customize this section, see the [Configuring the Metrics on Your Rock Homepage](#) section below.

Quick Links

You'll see a Quick Links section on the right side of the screen. This is a great place to organize links that your organization uses most often. Some churches have used this section to provide links to:

- The online catalog for ordering office supplies
- Referral lists for counseling and pastoral needs
- The organization's webmail site
- Project management tools the organization uses like Basecamp or Asana
- Facility management tools like ServiceU
- Common Forms

Tip... Be Careful

When adding these links, be careful with the HTML since its format is fairly specific. It's best to edit it on the source view. To add a new link, simply copy-paste an existing list item (``) and change its link and name. Don't worry, HTML may look complex but it's super easy.

Active Users

Under the quick links section you will see two sections that list active users on the internal and external website. This allows you to see who is active on the site. Clicking on the name will take you to their *Person Profile* page.

Administrator Checklist

After install you will see an Administrator's Checklist on the homepage. Don't worry; only administrators will see this block. The Staff Updates block below it will greet a majority of your colleagues.

The Administrator's Checklist block gives you a list of things you'll want to complete before you get too far along in your deployment of Rock. Once you've checked all of the items off, this block will disappear, but not forever... After an update there may be additional configuration steps required before you're able to use a new feature. These steps will show up in this block after the update. 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 was provided out of the box. While we'll be providing new

blocks for you to add to your homepage (like staff anniversaries and birthdays), you can get started today with some simple, but powerful, tools. Below are some ideas to help get the juices flowing.

Customizing Your Rock Homepage

To customize and update your Rock homepage, go to

[Tools](#) > [Content](#) > [Internal Communications - Homepage](#).

Internal Communications - Homepage

Content
Home > Content

My Content All Items Pending

- External Website Ads
- Internal Communications - Homepage
- Podcast Message
- Podcast Series
- Service Bulletin
- Website Blog

Internal Communications - Homepage Items

Filter Options

Title	Feature Title	Date	Created By
Let The Adventure Begin	Let The Adventure Begin	5/8/2018	

50 500 5,000 1 Item

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From here you can edit existing or add new content items in the *Edit Content Channel Item* screen.

Content Detail
Home > Content > Let The Adventure Begin

Edit Content Channel Item Internal Communications - Homepage

Title
Let The Adventure Begin

Active
5/8/2018

URL Slug
welcome

Feature Image
Upload

Feature Title
Let The Adventure Begin

Feature Text
Adjust that cape, because it's time to fly. Prepare to unlock your inner superhero as you learn and discover what Rock can do for you. With a little effort and help from the community, you'll soon be faster than a locomotive and able to leap over a building of any height.
Your first step... Update the content on this page to engage your peers in the adventure ahead. You can [edit this content here](#), or [watch this video](#) for more information on Rock's Staff Update feature.

Feature Link

Articles

Article Image	Article Title	Article Content	ArticleLink
	Superhero Training	Increase your knowledge in all things Rock with our wide array of training materials. No...	Link ✕
	Partners, We All Need A Hand	Every superhero has a sidekick. Pick yours from our list of Rock partners. Together you can...	Link ✕
	Our Community Rocks	Rock isn't a product, it's a community of like-minded individuals banded together to make a...	Link ✕

Save Cancel

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Viewing the added Item

Once you have completed a new content channel update. Back on the main homepage it might not display right away. If this is the case and you want to see the updates right away then change the block setting caching duration to 0, otherwise it will be updated depending on what the caching duration is set to. Default is 3600 seconds so 1 hour.

Configuring the Metrics on Your Rock Homepage

Rock ships with three areas of metrics ready to display on your Rock homepage: Active Records, Active Families and Active Connections. Active Records is the number of active person records in the database. Active Families is the number of active families in the database. Active Connection Requests is the number of active connection requests in the database. We've supplied these metrics—which update weekly—as a way of getting you started. You can customize this section and select different metrics by editing the homepage block settings.

Intranet

The Intranet tab is one area of Rock that will be unique to every organization. We've added a couple of items during the install, but we leave it up to you to customize the list. This is a great place to share information with your staff and key volunteers. Below is a quick list of ideas you might want to include in your Intranet.

- 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

When setting up the Intranet, be sure to define who will be responsible for keeping each area up-to-date. It's much easier to add the information than it is to keep up with it over time. But, there's no point in adding it if you don't have a plan on how to keep it up-to-date.

Org Chart

Under the Intranet section you will also find a page for configuring an Org Chart. This is simply a group viewer that is specifically configured for helping you develop an organization chart. It's often helpful to have an org chart in Rock that you can use to

configure access to parts of the application or for use in configuration. If you don't think you'll need this you can simply hide it from the navigation by setting the *Display When* setting to *Never* under *Page Properties*, or 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 these types if it makes sense to you in 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 take a 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.

For Mac users, press Ctrl + Opt and the letter key of the shortcut you want to perform.

Learn the Lingo

Why do tech guys 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 discuss 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, Pages* are all different 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 will see the term in many of the configuration screens so it's good to know what it is.

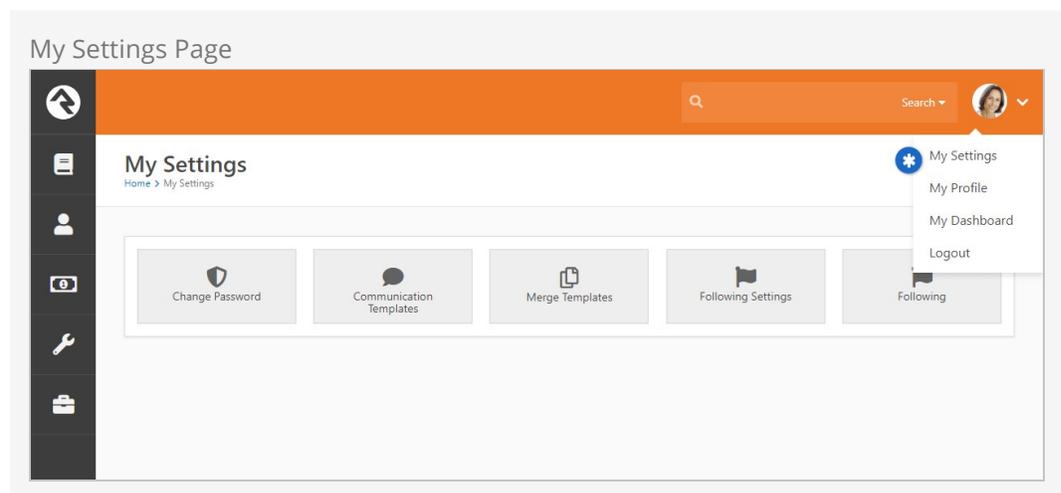
Defined Types / Defined Values

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 provide a list to limit the options to those that make sense to the 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 Lists*. These lists are made up of values (*Defined Values*) that you get to configure to match your organization.

My Settings

Rock offers several types of personal settings for each logged in user. 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 will be people's one stop shop for all of their personal settings and configurations.



Change Password

This is where the logged in user can change their password. Simple enough.

Communication Templates

This page allows the current user to access communication templates which they are permitted to edit. You might find it convenient to lock certain templates down, security-wise, to only allow a single user to 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, read through the [Communicating with Rock](#) documentation, and if you'd like to know more about building templates, don't miss the [Email Template Survival Guide](#).

Merge Templates

This page allows the current user to view, add and delete personal merge templates. Merge Templates are covered in the [Merge Document section of this manual](#). In general though, templates which a user uploads here will not be available for use by other people.

Following Settings

This page allows the current user to customize their *Following Settings*. You can read more about these features in the [Person & Family Field Guide](#)

Following

This page allows the current user 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 & Family Field Guide](#)

Background Checks

Background checks are an unfortunate requirement for most organizations these days. They involve the coordinated efforts of lots of different people – staff, security teams, service providers. Because of all these points of contact, it can take quite awhile for background checks to process.

Using workflows to expedite the process helps prevent delays and keeps your organization moving.

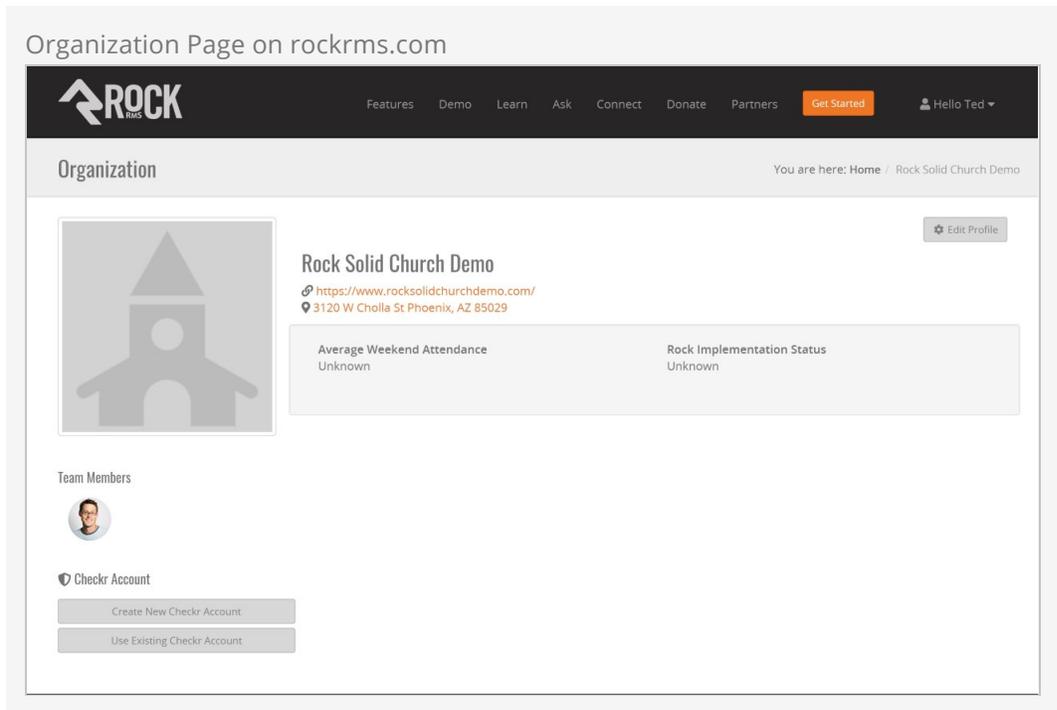
Rock ships with seamless integration with both Checkr and Protect My Ministry for background checks. The procedure is similar for each, but we'll look at them separately beginning with Checkr.

Configuring Checkr

The first option for running background checks on individuals is Checkr. Once configured, Rock will default to using Checkr for background checks on individuals who have never had a background check run. You can easily set which program you want to act as default, however, which we'll look at shortly. First, though, let's look at the steps to take to set up your Checkr account.

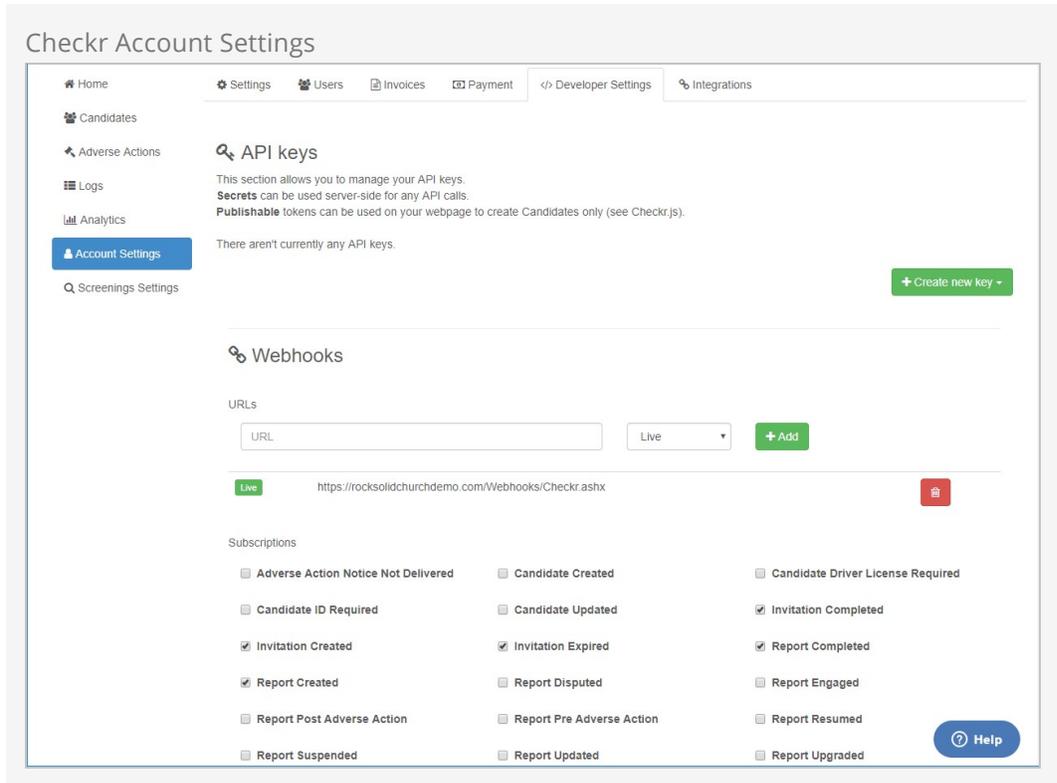
Step 1: Sign-up

The first step in the process is to sign up for a Checkr account. To do this, we'll actually start from your rockrms.com account. So log in at www.rockrms.com, and then click on the menu in the top right corner with your name on it. Click on "My Account". Beneath your profile image and biographical information on the left side of the page, you'll see any organizations your account is associated with. Click on the organization you wish to set up with Checkr. Beneath the organization logo and list of members (again on the left side of this new page), you'll see a section labeled "Checkr Account". Click the [Create New Checkr Account](#) button. (If your organization already has a Checkr account, click the [Use Existing Checkr Account](#) button instead). Once your account is set up, your organization page in the Rock RMS site will update with an Account ID and Access Token.

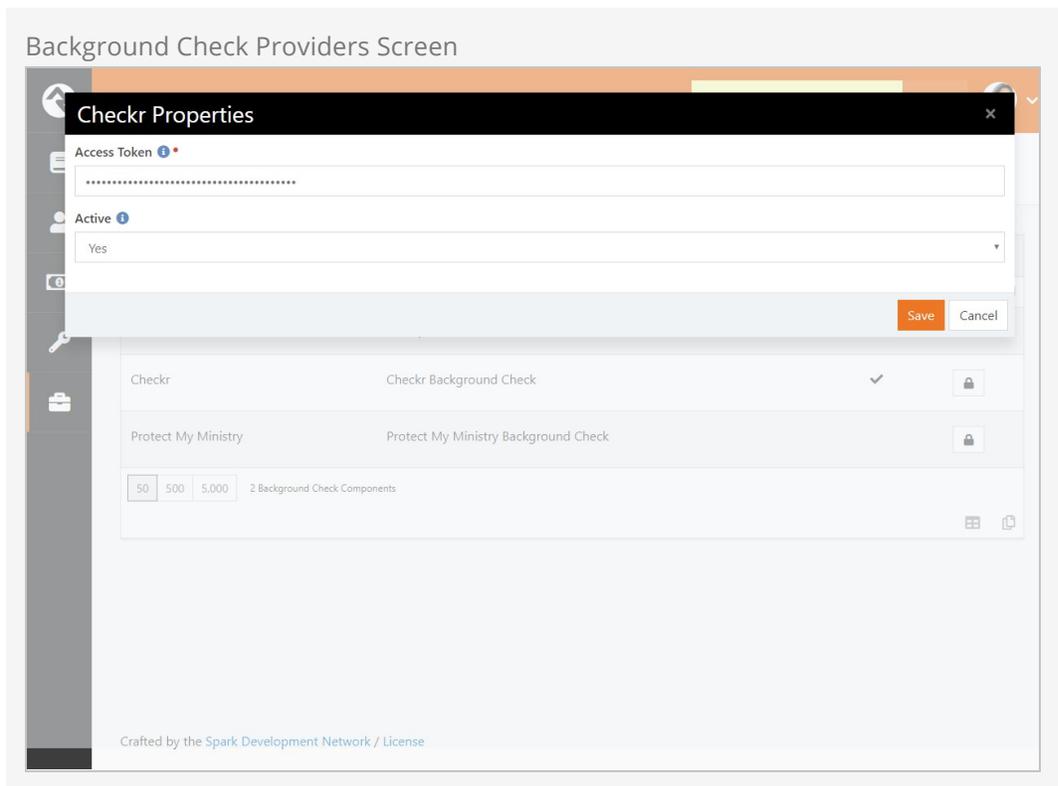


Step 2: Setup Webhook Inside Checkr

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.aspx` in the *Webhooks URL* field,



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

The final step is to set your background check provider to Checkr if it isn't already set to default. To do this, click the `Enable as Default` button in the *Checkr Background Checks* section of the *Checkr* screen. Now you're ready to use Checkr to perform background checks on individuals.

Enabled Background Check Types

The screenshot shows a web interface for 'Checkr' with a dark sidebar on the left containing navigation icons. The main content area has an orange header with a search bar and a user profile. Below the header, the page title is 'Checkr' with a breadcrumb 'Home > System Settings > Checkr'. The main section is titled 'Checkr Background Checks' and includes a button 'Enable As Default Background Check Provider'. It displays an 'Access Token' with a blurred value and an 'Edit' button. To the right, under 'Enabled Background Check Types', a list includes 'Motor Vehicle Report', 'Tasker Basic', 'Tasker Pro', and 'Tasker Standard', with an 'Update Packages' button below. A 'Requests' section follows, featuring a 'Filter Options' dropdown and a table with columns: Name, Requested, Completed, Report Status, Record Found, and Report. The table currently shows 'No Background Check Rows Found'. At the bottom, it says 'Crafted by the Spark Development Network / License'.

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 of the requests that Checkr has processed in the *Checkr* screen. This list is provided to help you see what's being processed at a high level. As you'll see soon, it's much easier to see the results of a specific background check request from the workflow and *Person Profile* pages.

Protect My Ministry Start Page

Protect My Ministry
Home > System Settings > Protect My Ministry

Protect My Ministry Enable As Default Background Check Provider

 **Protect Your Ministry**
with just a few clicks...

Protect My Ministry provides integrated background checks to Rock. This makes it simple to ensure your ministry is safe and protected.

[Register For An Account](#)

Username *

Password *

[Save](#)

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Should you choose to register for a new account, click the [Register For An Account](#) button. You'll be taken to the following page on the PMM website to complete the registration.



Please complete the form below to sign up:

Enter Client Code (if applicable):	Rock
*Organization Name:	
*Street Address:	
*City:	
*State:	
*Zip:	
*Contact Name:	
*Contact Email:	
*Telephone:	
Fax:	
How long has the organization been established?	
*Type of Organization:	(e.g. Church, School, Flower Shop)
*Purpose for Background Checks:	Choose one...
*Tax ID Number:	
*Billing Contact:	
*Billing Contact Email:	
User Setup:	
*Username: (6-10 Characters)	
*Password: (6-10 Characters)	
Select your options below. For pricing, please refer to your partner pricing or services proposal.	
<input type="checkbox"/> 05% Discount Offer Prepayment of \$1,000. Basic for \$9.50. Plus for \$18.95 (+fees). Please use the credit card provided in my online sign-up.	
<input type="checkbox"/> 10% Discount offer Prepayment of \$2,000. Basic for \$9.00. Plus for \$17.95 (+fees). Please use the credit card provided in my online sign-up.	
<input type="checkbox"/> 15% Discount Offer Prepayment of \$3,000. Basic for \$8.50. Plus for \$16.95 (+fees). Please use the credit card provided in my online sign-up.	
<input type="checkbox"/> 20% Discount Offer Prepayment of \$4,000. Basic for \$8.00. Plus for \$15.95 (+fees). Please use the credit card provided in my online sign-up.	
<input type="checkbox"/> 25% Discount Offer Prepayment of \$5,000. Basic for \$7.50. Plus for \$14.95 (+fees). Please use the credit card provided in my online sign-up.	
<input type="checkbox"/> Current Customer Check here if you are currently a customer of Protect My Ministry. Please be advised that pricing for this program may differ slightly than your current pricing with Protect My Ministry.	
<input type="checkbox"/> Standard Pricing Option No annual fees, no prepayment required - standard pricing.	
Click "Next" to enter Billing Information.	
<input type="button" value="Next"/>	

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

Step 2: Configuration

Once you've entered your PMM account information, you will see the details of your account.

🏠
Search

☰
👤
🔑
🔧
📦

Protect My Ministry

Home > System Settings > Protect My Ministry

Enable As Default Background Check Provider

Username admin	Enabled Background Check Types Seven Year Automatic BASIC PLUS Pennsylvania Act 153 Motor Vehicle Record Search
Password *****	

Edit

Background Check Types

Type	Package Name	County Criminal Default County	Use Home Address for County Criminal	Statewide Criminal Default State	Use Home State for Statewide Criminal	MVR Jurisdiction Code	Use Home State for MVR Search
☰ Seven Year Automatic <small>The Seven Year Automatic package is the premier screening option and is the recommended package for all staff and pastors serving at your organization. Some churches also use this package for all volunteers.</small>	Auto County	7 yrs					✕
☰ BASIC <small>The Basic Package is the minimum recommended package for all volunteer and staff screenings. It includes SSN Verification and Address History, National Criminal Database Search, National Sex Offender Search, Re-verification of criminal records, Alias Names.</small>	BASIC						✕
☰ PLUS <small>Depending on your state, it may be recommended to use the PLUS package instead of the Basic. The PLUS package includes everything in the BASIC package with the addition of one county or statewide criminal court search.</small>	PLUS			AZ	✓		✕
☰ Pennsylvania Act 153 <small>If your organization is located in Pennsylvania. This package should be used when screening any volunteers or staff that will interact with children. This package includes all of the screening and reporting requirements mandated by Pennsylvania Act 153.</small>	PA Package						✕
☰ Motor Vehicle Record Search <small>An A la carte Motor Vehicle Record (MVR) search.</small>						AZ39M	✓ ✕

50
500
5,000
5 Types

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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. 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 recommend that you provide a county on your request. If so this will be the default county to use if one is not present on the address of the person you're checking. You can find out if your state needs this county using [this map](#) from PMM.
- **Use Home Address for County Criminal** Again this will depend on the state you live in. If your state is recommended for the county search, you will 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 is 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 for the most part, 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. PMM provides a map to help you determine what is best for your area.

Viewing Protect My Ministry Requests

From this same screen you can also view all of the 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

Protect My Ministry

Enable As Default Background Check Provider

Username admin	Enabled Background Check Types Seven Year Automatic BASIC PLUS Pennsylvania Act 153 Motor Vehicle Record Search
Password *****	

Edit

Requests

Filter Options

Name	Requested	Completed	Record Found	Report	Log
No Background Check Rows Found					

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Background Check Administrators

Background Check Admins have access to complete details of background checks and the ability to approve or deny them at several points in the process.

Before you get started, 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 request workflow. For instance, you may be looking to hire a new staff member, complete the screening of a potential volunteer, update existing person profile records or transfer a staff member or volunteer into a new position. At any rate, whatever the reason, it is usually a staff member who first needs to start the request for a background check.

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

Every logged in user will be able to see either a *Yes* or *No* in the *Background Checked* field. Background Check Admins can also see three additional fields, and have editing privileges.

Every User

Safety & Security

Background Yes
Checked

Safety & Security Team

Safety & Security

Background Yes 1

Background Checked 2

Background 12/1/2014 2

Background Pass 3

Background Check Result 3

Background Check Document 4

- 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.

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

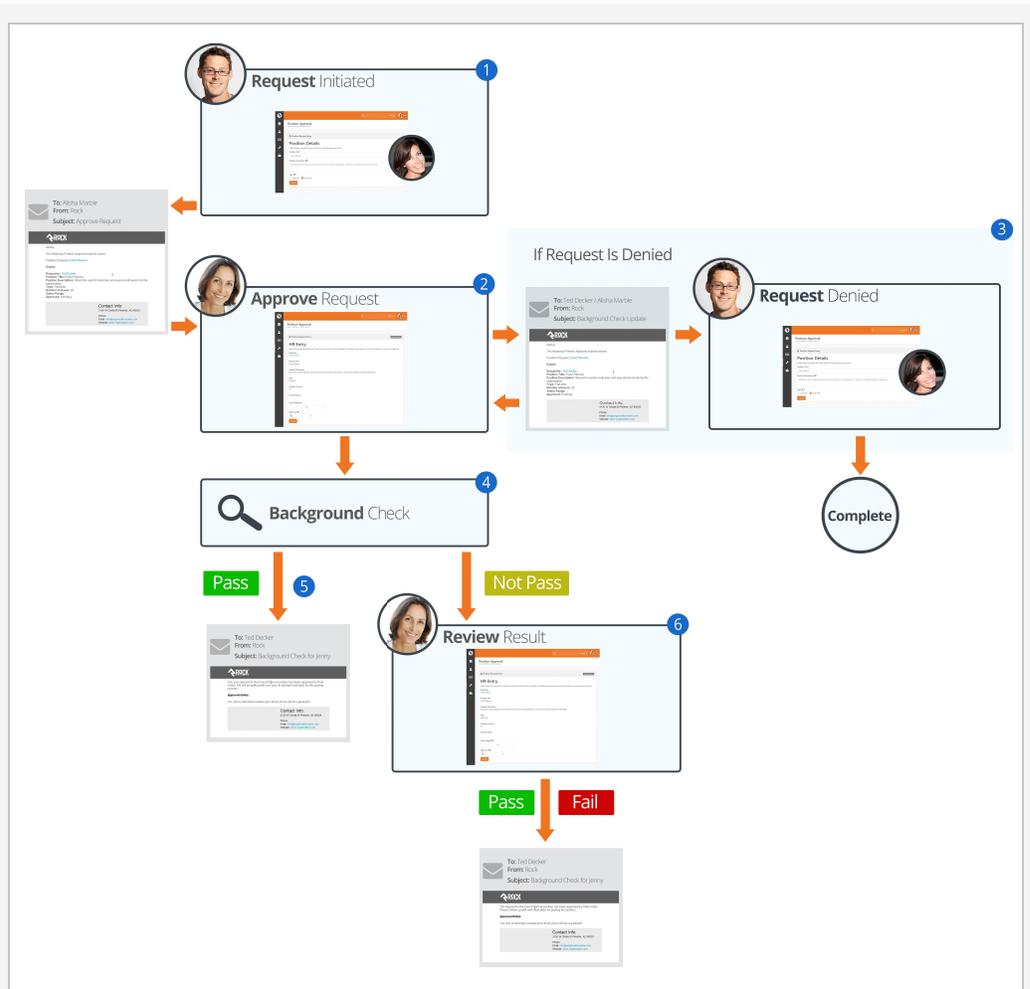
How It Works

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 requestor, who will have to confirm that they want to request another background check before proceeding.

The Lifecycle Of A Request



- 1 A staff member will initiate a request.
- 2 The request will be sent to notify the individuals in the 'Background Check Administrators' security role.
- 3 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 If the request is approved, it will be submitted to your organization's background check provider to be processed.
- 5 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 emailed an update of the completion.
- 6 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.

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](#).

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 interaction with others. Rock has a very robust location strategy. It's important that you understand all of 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, latitude/longitude point and geo-fence.

- **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 location on the map. You can set this by either providing an address and allowing Rock to convert it to a lat/long (assuming a Geocoding Service is configured) 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.

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 placement 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 is a *Main Campus* location that describes your church's campus.

Named locations can have hierarchy. Think again to your church'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 can send them to one of many online services to standardize and geocode them. These services 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

You can set up these services under [Admin Tools > System Settings > Location Services](#).

There you will 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 a highly recommended solution because of their high-quality results. See more about our recommendation below. Find out more on their website.	Address Standardization & Geocoding	Free
Bing	Microsoft's Bing mapping service 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 churches, 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 in any given day. This service does require a key to use it. To get your free key, follow these simple steps: <ul style="list-style-type: none">• Go to the Bing Maps Portal.• Sign in using a Microsoft Account or create a new account.• Select "Create or View Keys" from the menu on the left side	Geocoding	Free

Service Name	Description	Service Type	Cost
	<p>of the page. You will be asked for the following information:</p> <ol style="list-style-type: none"> 1. <i>Application Name</i>: Rock RMS 2. <i>Application URL (optional)</i>: your organization's Rock URL 3. <i>Key Type</i>: choose "Basic" from the dropdown menu 4. <i>Application Type</i>: choose either "Public Website" or "Non-Profit" from the dropdown menu, depending on which better fits your organization. <ul style="list-style-type: none"> • Input your key under Admin Tools > System Settings > Location Services > Bing. <p>While the Bing service provider is not 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.</p>		
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
Strikelron	Like Service Objects, Strikelron provides a paid option for geocoding data. You can find more information on their website.	Geocoding	Must request a 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.

SmartyStreets

Out of the box, Rock comes with SmartyStreets enabled. Their excellent service acts as both an address standardization and a geocoding service, and their data has proven very accurate in our testing. SmartyStreets is also church-friendly and has generously offered the Rock community a single unlimited account for address standardization. The API key is stored on Rock's servers where it is automatically authenticated and updated. In other words, you don't have to do anything except benefit from their service, which is pretty awesome. A huge shout of thanks to SmartyStreets!

While you don't need to do any configuring to enable SmartyStreets, there are a couple of settings options you should be aware of:

- **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.

Email Configuration

While the initial email configuration was handled during the install, we wanted to spend a bit more time reviewing how email is configured in Rock. And, since email is such an important tool for communications, we also want to discuss some best practices to ensure that your emails reach their intended recipients.

Email Settings

The configuration items you provided during the install can be updated under

[Admin Tools](#) > [Communications](#) > [Communication Transports](#) > [SMTP](#).

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. Currently, the only transport that is complete is the SMTP component (more to come soon).

SMTP Transport

SMTP (Simple Mail Transport Protocol) is the most common way to send email. Below are the configuration items that are needed to enable SMTP emails to work. If you are unsure of what these values should be, consult with your ISP or church IT support.

Setting	Description
Server	This will be the SMTP email server that Rock should use to send the emails through.
Port	The port on the server that should be used for communications. Typically this will be port 25 but often times port 587 is used, especially if you are encrypting the sending.
Username	If your email server requires you to authenticate to relay email, this is where you will provide the username.
Password	When enabling authentication, this will be where you set the password.
Use SSL	Check this box if 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 personal Gmail accounts. Here is what you would enter for each of these settings.

Warning

Using personal Gmail settings is not a recommended configuration for organizations sending out large bulk emails. We are 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 is not enough if you want to be sure that all of your messages will make it to their intended recipients. To do that, you need to make sure your DNS has proper SPF and Domain Key records and monitor that you are 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 and 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 even have free accounts that would suffice for many small organizations. Mailgun, for instance, allows you to send 10,000 emails a month for free.

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 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 Using 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.

Security Roles

The basic access control unit is the *Security Role*. While you can provide security specific to an individual, it's often overly tedious and problematic to define security access down to the individual. Using *Security Roles* is much more flexible and less prone to error.

Having a well thought out strategy for security roles is critical. Too simple and your users might have more rights than they need; too complex and security will be difficult to maintain. We've worked hard to build a foundation for you to build from in this area. We strongly recommend you look over the default security roles and reading their descriptions before you start setting up your staff and users. You can find these 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  you can manage the security of the item being displayed. This will bring up the *Security Editor* show below.

Security Editor

The screenshot shows the Security Editor interface for a resource named 'Secure Internal'. At the top, there is a tabbed menu with four options: 'View', 'Edit', 'Administrate', and 'Approve'. The 'Approve' tab is selected and marked with a blue circle '1'. Below the menu is the 'Item Permissions' section, marked with a blue circle '2'. It contains a table with the text 'No role/user Found' and two buttons: 'Add Role' and 'Add User'. Below that is the 'Inherited Permissions' section, marked with a blue circle '3'. It contains a table with the following data:

Role / User	Action	From
All Users	Allow	(Global Default)

At the bottom right of the interface is a 'Done' button.

1 Actions

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

2 Item Permissions

The *Item Permissions* list the specific permissions defined for the item. If there are no specific permissions set for this particular item, the permissions will be blank. Instead, 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 permissions list here tells you which parent item has set the security. This allows you to find the parent and fix any incorrect security.

Setting Permissions

When setting permissions you will add either an individual, or more commonly a security role, to the permissions list to either *Allow* them access or *Deny* rights. 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 specific 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.

Example:

Securing a page so that only a staff member can view it.

Incorrect Permissions:

Name	Allow / Deny
All Users	Deny
All Staff	Allow

At first this might look correct as both roles exist with the proper access. But if we walk down the order we find that the logged in staff person is by default a part of *All Users* and therefore will be denied. Remember that once a rule is true, the action is taken and subsequent rules are ignored.

Correct Permissions:

Name	Allow / Deny
All Staff	Allow
All Users	Deny

Now we can see that the logged in staff person will match the first rule and be granted access. Processing of the subsequent rule will not occur, so even though the staff person is also in *All Users*, they will still be granted access.

Verifying Permissions

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

Verify Security

Person **1**
Ted Decker

Entity Type **2** Entity Id **3**
Page 4

Show Security Clear Auth Cache

Action	Source Type	Source Id	Source Name	User / Role	Access
View 4	Rock.Model.Page	4	Create Account	All Users	Allow
Edit	Rock.Model.Site	1	Rock RMS	All Users	Deny 5
Administrate	Rock.Model.Site	1	Rock RMS	All Users	Deny 5

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1 Person

This field is where you search for the person whose security permissions you want to view.

2 Entity Type

This field is where you select the entity type you are wanting 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 where Rock displays 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 plan to be very responsive to bug fixes and plan to release new features quickly and often. To help you keep your system up-to-date, we have 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 make a quick check to Rock's server to see if there are any new updates available. If there are, the updates will be displayed with information about the changes included. Once you decide you're ready, simply click the `Install` button next to `Update` and Rock will do the rest.

Warning:

It is important that you have a backup of your database before you install an update because that update cannot be undone.

The screenshot displays the 'Rock Updates' page. At the top, there is a navigation bar with a search icon and a user profile icon. Below this, the page title 'Rock Update' is shown with a breadcrumb trail: 'Home > General Settings > Rock Update'. A sidebar on the left contains several icons for navigation. The main content area features a large blue box with the heading 'New Pieces Available' and a puzzle piece icon, accompanied by the text 'We've expanded the puzzle, let's get you up-to-date.' Below this, a yellow note box contains a warning: 'Note: We *strongly urge* you to backup your database and website before updating Rock. The changes that are made during the update process can't be undone. Also, be patient when updating. It takes anywhere from a few seconds to several minutes depending on the update size and your download speed.' A green 'Early Access: Enabled' badge is present, along with a thank-you message for being a Community Contributor and a link to learn more about the Early Access program. The current version is identified as 'Rock McKinley 8.0', with a checkbox for 'Include impact statistics' which is checked. Below this, the 'Rock McKinley 7.4' update is listed as 'Pending' with a 'Release Notes' dropdown menu. At the bottom, it is noted that the interface is 'Crafted by the Spark Development Network / License'.

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 to that point.

Can I skip a specific update?

No, updates are cumulative so you cannot skip over a specific update or patch.

Data Integrity

With data being entered into Rock from all directions, it can be a real challenge to keep it all clean, consistent and accurate. We've built tools to help you spot 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 them.

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

Duplicate Finder
Home > Data Integrity > Duplicate Finder

Person Duplicate List

1 Confidence	2 First Name	Last Name	3 Match Count	4 Modified	5 Created By
69.48 %	Thomas	Miller	1		Alisha Admin

50 500 5,000 1 Item

- 1 Confidence:**
Indicates the likelihood that this is a duplicate record.
- 2 Name:**
The first and last name of the individual.
- 3 Record 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) that 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.

Duplicate Detail

Home > Data Integrity > Duplicate Finder > Duplicate Detail

Person Duplicates

Confidence	First Name	Last Name	Email	Gender	Age	Campus	Addresses	Phone Numbers	
	Thomas	Miller	tom.miller@fakeinbox.com	Male		Main Campus	Home 11827 N 33rd Circle Phoenix, AZ 85029	Home (623) 555-0909	
<input type="checkbox"/>	69.48 %	Tom	Miller	tom.miller@fakeinbox.com	Male	39 Main Campus	Home 2302 E Curnow Dr Phoenix, AZ 85016	Home (623) 555-0909	

50 500 5,000 2 Items

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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 *fa fa-users* 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 to the record above.
- Tells Rock that there is currently no way to be sure if this record is a duplicate of the one above. This will keep Rock from showing it as a possible duplicate until more information is available to help determine its true status.

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 folks might be interested on 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 <i>Pending</i> . This allows you to view the record and determine if it is a duplicate record. Once you go through them all, you'll want to bulk update their statuses to <i>active</i> .

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
Person Data Error	This is the workflow that is configured on the <i>Actions</i> list of the <i>Person Profile</i> page.
Photo Request	The workflow that drives the photo request workflow.

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 is a filter to show you addresses that are not geocoded.

Location List

Location Editor
Home > Data Integrity > Location Editor

Location List

Filter Options ▾
Enabled Filters
Not Geocoded: True

Street Address	City	State	Postal Code	Country
14545 Hook Blvd	Victorville	CA	92394	US
123 Elm St	Peoria	AZ	85383	US
3120 W Cholla St	Phoenix	AZ	85029	US
123 My Street	Charlotte	NC	28272	US
4562 Kathy Drive	La Palma	CA	90623	US
3120 W. Cholla Ave.	Phoenix	AZ	85029	US
3002 W Lupine Ave	Phoenix	AZ	85029	US
3002 W Lupine Ave	Phoenix	AZ	85029	US
3002 W Lupine Ave	Phoenix	AZ	85029	US

50 500 5,000 9 Locations

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Once you select an address you can chose to view its details and edit it. Below is a view of the edit screen.

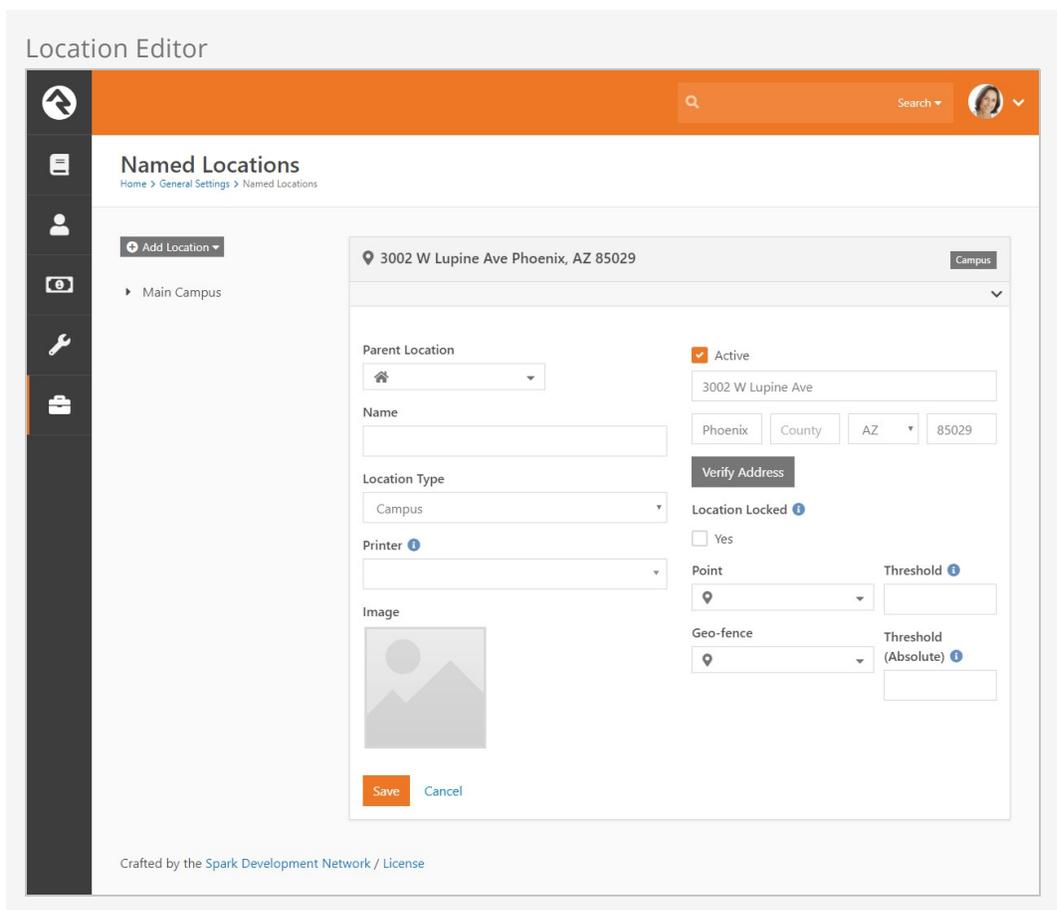


Photo Requests

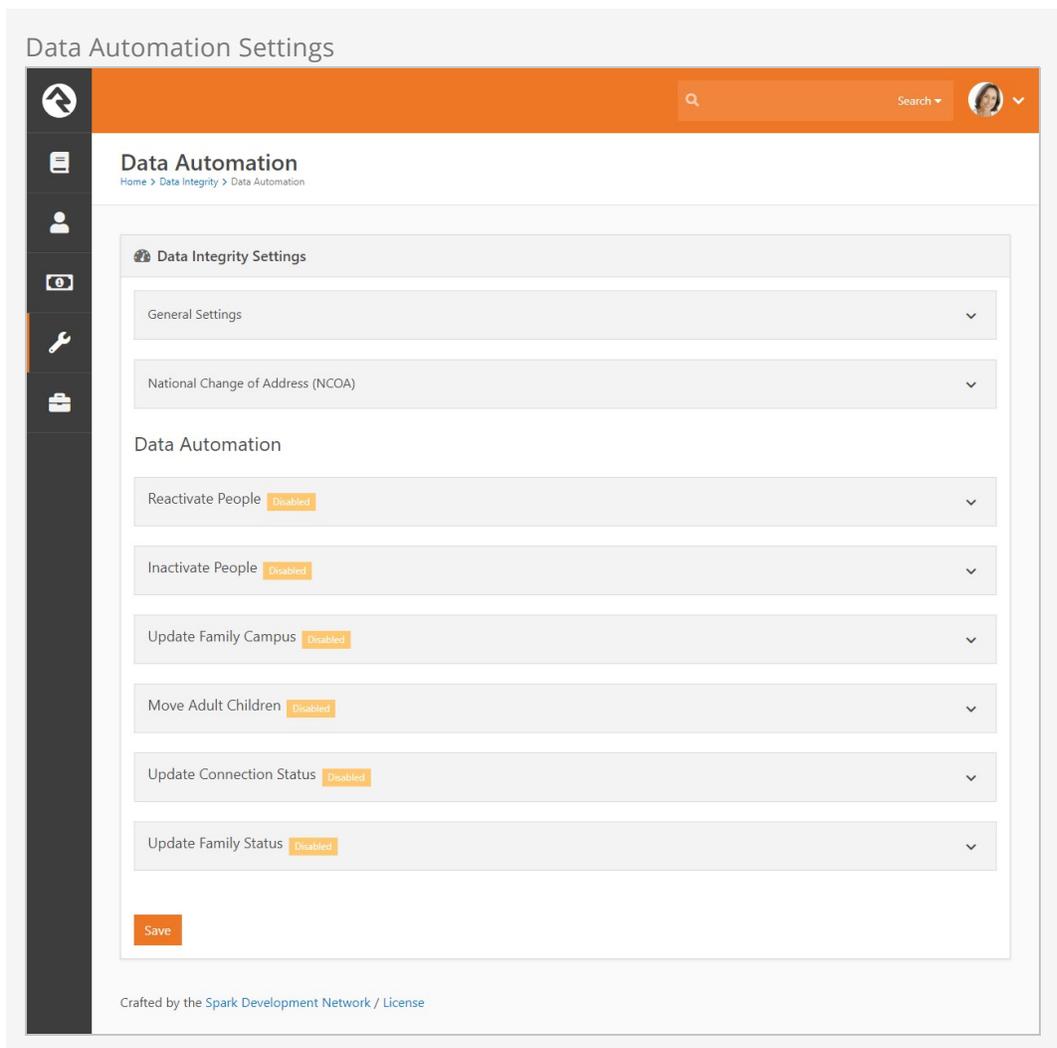
When new photos are submitted by the organization's members they will be displayed here to ensure that they are appropriate. You can read more about the photo request in the [Person & Family Field Guide](#).

Merge Requests

If a person selects people (person records) to be merged but they do not have security access to complete the merge a merge request will be created and listed here. By default, you will not have security access until you are listed on the *Merge People* page with read rights.

Data Automation Settings

Rock ships with the Data Automation job, which automatically updates person and family records. This makes things a lot easier for you. The job settings are configured on the *Data Automation* screen, 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.

Updates are made to records when the Data Automation job runs. Out of the box, 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 four types of data automation listed above are disabled by default. The updates 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 Automation* Settings screen.

Reactivate People

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

- **Any family member has made a contribution in the last:** If any family members 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 is an attendance record associated with any family members in any of the person's families and the attendance is for a group of a type that is configured with the *Is Service* option set to 'true'.
- **Any family member has attended a group of this type in the last:** If there is an attendance record associated with any family member in any of the person's families and the attendance is for a group that is of any of the selected types.
- **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 has 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 is 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 the following data view:** If the person is included in the selected data view.
- **Exclude any person in the following 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 will not 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 will have their record status updated from 'Active' to 'Inactive'.

- **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 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 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 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 is not 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 is 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 does not 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

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 is currently configured for the family, the campus for the family will be updated. Let's look at how this works.

First, the DataAutomation job looks at all of the attendance records of a specific location for all of the family members of the family in question to determine if that location has the greatest number of attendance records for that family. Next, the job looks at all of the contributions to campus-specific accounts made by family members of the family in question 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 two values (attendance and contributions) are different.

- **Ignore any family that has had a manual campus update in the last:** If the campus for a family has been manually (or automatically) updated with the selected number of days, the DataAutomation job will ignore the family.
- **Ignore any update that would change campus:** There may be instances where a family attends or gives to a campus other than the one they are associated with. 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, they will not 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, it will first look at the graduation year for each person considered. If they do not have a graduation year, they will not be moved. If they do have a graduation year but it's still in the future (according to the Grade Transition Date and the person's graduation year), they will not 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".)
- **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:** Any optional workflows that should be triggered for each person who is 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:** 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 will not be made an adult by this job.

There are a couple of additional optional Data Integrity settings included on the *Data Integrity Settings* screen. Let's take a look at them.

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 will not 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 determined. Otherwise, it is left unknown. Adults will not autofill with a gender that is already taken by another adult in the same family.

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 screen, located at [Tools > Interactions](#).

The screenshot displays the 'Interactions' screen. At the top, there is a search bar and a user profile icon. The main content area is titled 'Interactions' and contains a section for 'Interaction Channels'. A 'Filter Options' dropdown is visible above the list. The list includes the following channels:

- Rock RMS (Website)
- Rock Check-in (Website)
- External Website (Website)
- Rock Check-in Manager (Website)
- Self-Service Kiosk (Preview) (Website)
- Communication (Communication)
- WiFi Presence (WiFi Presence)
- PBX CDR Records (PBX CDR)
- Short Links (Url Shortener)

At the bottom of the screen, it says 'Crafted by the Spark Development Network / License'.

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.

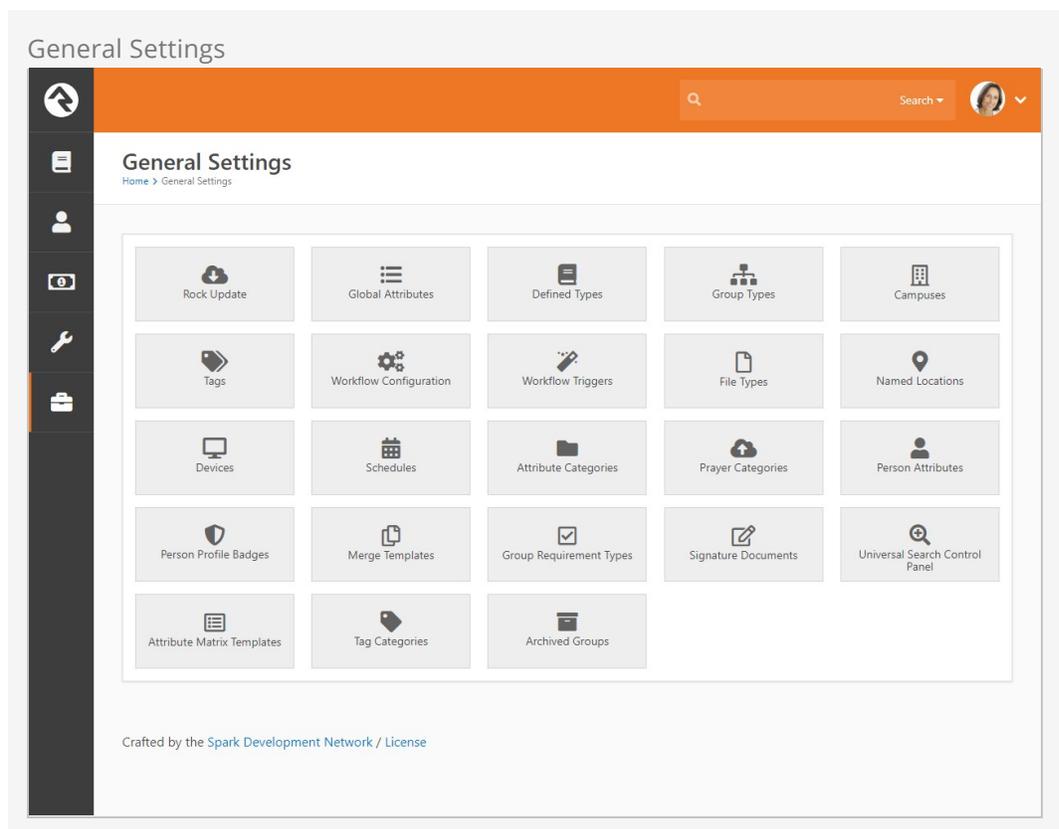
PBX CDR Records

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 a number of 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 updates. And many times only the vendor can complete them. Not so with Rock. When an update is made available, all you need to do is visit this screen. Details will be provided about the updates available. When you're ready, you simply click the `Install` button. Rock will then download and install the updates for you. How easy is that?!

Global Attributes

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 were set for you during the installation process. Below is a list of the core settings and descriptions.

Setting	Description
Organization Name	The name of the organization that is 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 in an <i>Organization Abbreviation</i> to provide this value.
Organization Address	The primary address of the organization. If you are a multi-site church, 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 is hosted on Rock. It is 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 is not 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 is 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 will not 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 will not 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 emails. 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.
Enable Page View Tracking	Enables or disables the tracking of every page that is viewed in Rock. This can provide you with analytics for how Rock is being used. The default value is enabled.
Password Regular Expression	A secure password means different things to different people. By default, Rock requires all passwords to be longer than six characters. If you like to require passwords to include numbers, 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. Default: "Password must be at least six characters long."
Job Pulse	This is not 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. You will, for the most part, want to leave this off. You can enable it if you'd like to find all of the broken links on your website.

Setting	Description
×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 tag which will take the user to their configured mail client.
Lava Supprt 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

While on the Global Attributes page [Admin Tools > General Settings > Global Attributes](#), you can click the row to edit the attribute's value.

Helpful Info

You will also notice that there is an [Edit](#) button on the grid. This will actually edit the configuration of the attribute. Typically, you won't want to do this. Instead, you'll want to just click the row to edit the value.

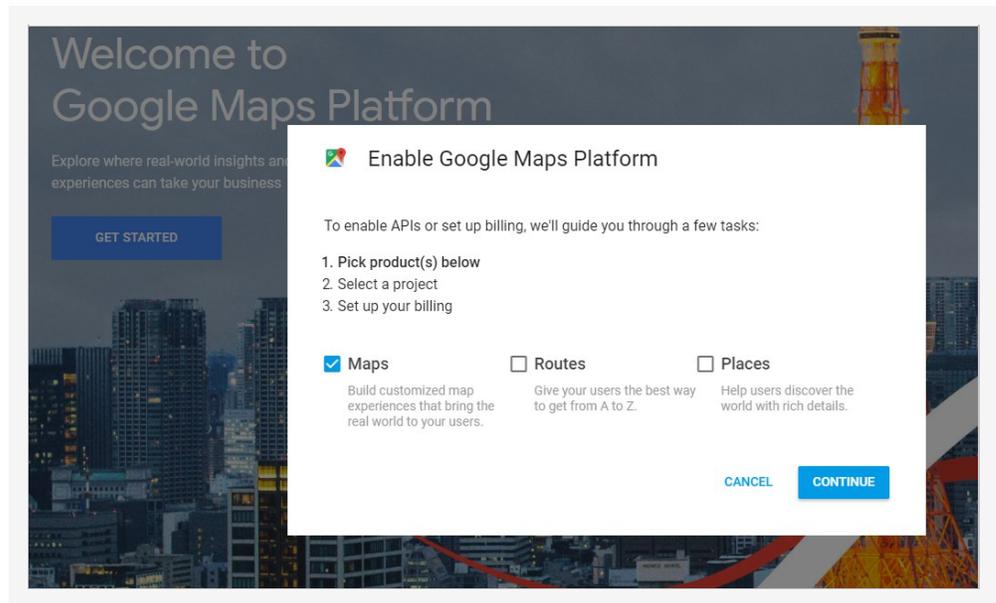
Creating a Google Maps API Key

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 steps to get started.

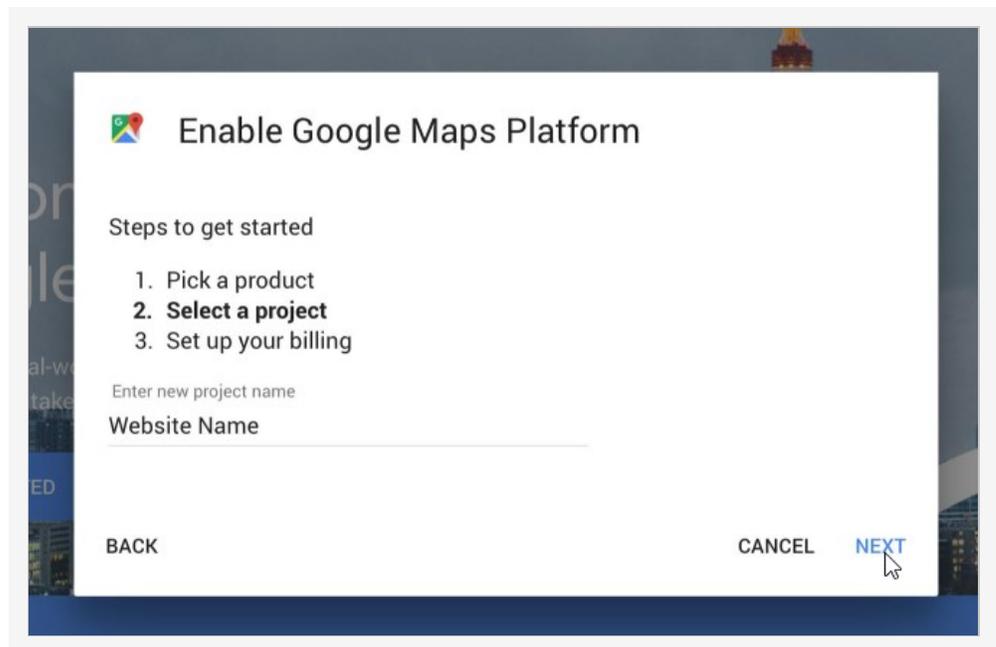
Note

Google provides a large number of free credits each month, so you should not incur any charges using maps in Rock.

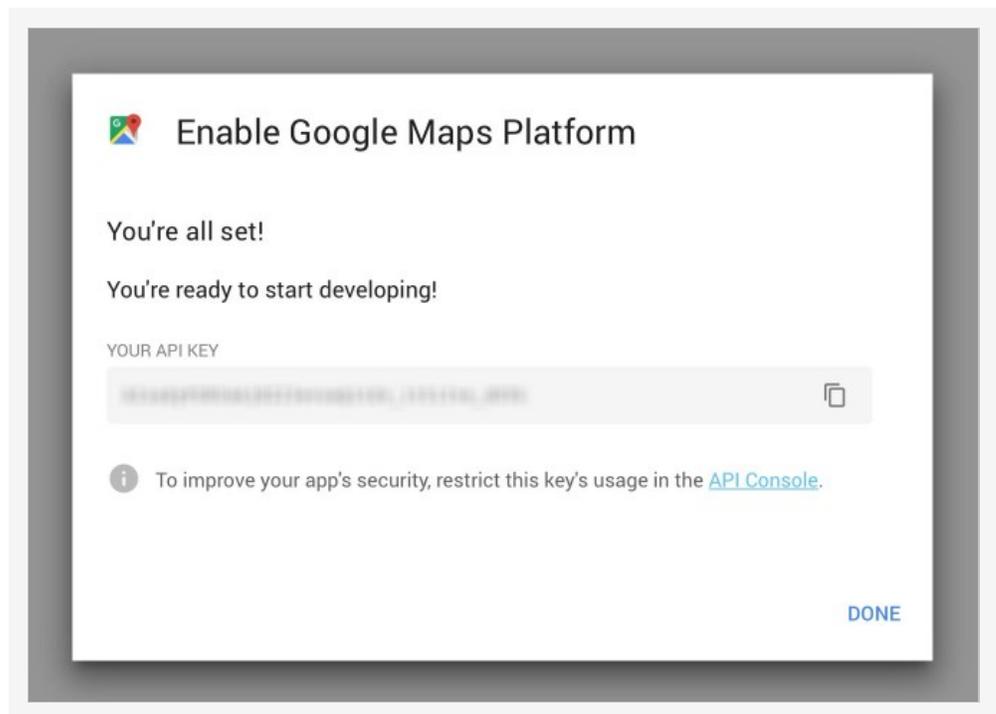
1. Go to the Google Maps Platform welcome page then click Get Started.
2. Choose Maps then click Continue.



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

Now you will 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 will choose your project, and once that is loaded you will 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 will then be taken to a new screen where you can edit its values.

Group Types

The *Group Types* screen is used to add new types of groups and 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 literally change it to any entity you want. The possibilities here are endless, and the results can be super beneficial to your organization. You add and modify tags in the Tags screen, located at [Admin Tools > General Settings > Tags](#). Select whichever entity type you want from the Entity Type field dropdown. Tags are discussed in detail in the [Person and Family Field Manual](#). As an administrator, you will 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 [Add](#) 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 will 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 [lock](#) 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 of the [Admin Hero Guide](#).

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 these 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 cannot be directly linked to. This storage type is best for large files that might eat up your valuable database storage space.

Each file type can select which storage type to use. You can also specify if you would like to cache the file type to improve speed. 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 to improve speed. Caching is also very useful when working with images. Rock has the ability to size images on the fly. While this is very powerful, it can impact performance, especially with large source images. When caching is enabled, though, the resized image is cached, so the resize is not required in the future until the image is updated.

Named Locations

This configuration screen allows you to define specific locations with a name. You will 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 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.

Schedules

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

Attribute Categories

Everything stored in Rock can have attributes added to it. For example, we can add numerous attributes to a person that match what is 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 also 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 Prayer](#) guide for more information on configuring prayer features.

Person Attributes

This screen allows you to manage the person attributes you have configured in the system.

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.

Merge Templates

This is where you will 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

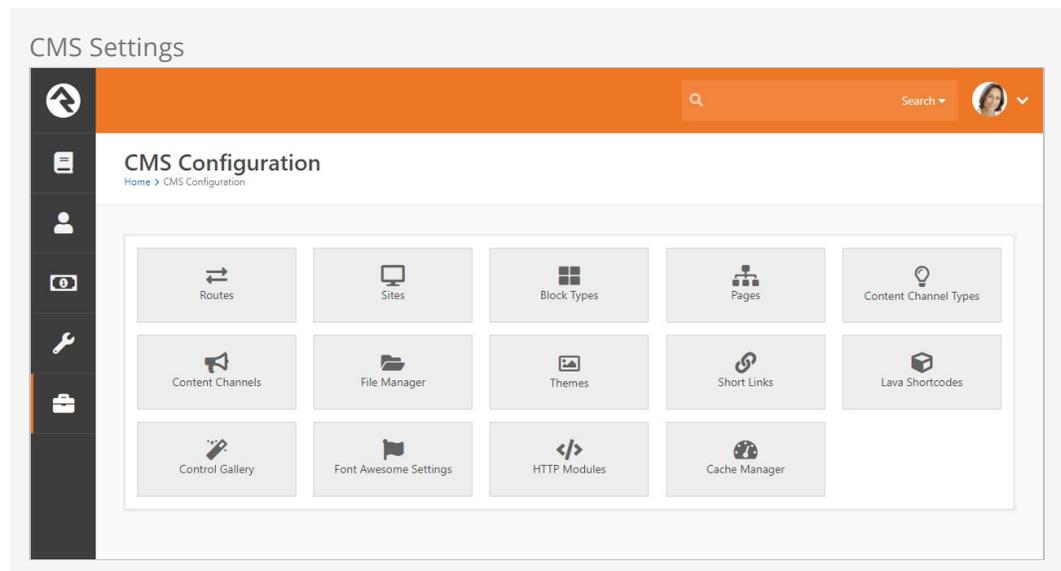
The Attribute Matrix Templates screen allows you to create a dynamic layout of multiple field types of your choosing. Like a spreadsheet, the matrix is made up of rows and columns. You can use Lava to customize the fields, but what's provided out of the box will likely fit most of your needs. Keep in 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](#).

CMS Configuration

Rock is built on top of a very powerful Content Management System (CMS). While discussing all of the features of this CMS is outside of the scope of this guide, below is a high-level overview of the tools in the CMS configuration section.



Routes

The routes section lists all of the routes, or URL page names, in use for both the internal and external pages of your site. To learn about routes and how to create your own, see the [Designing and Building Websites Using Rock](#) guide. 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 all of the websites that are running off of your set-up of Rock. Rock initially comes configured with three different sites:

- **Rock Internal:** The internal site used by the organization's staff to manage people and groups, and to manage the system in general.
- **External Website:** The primary portal for those outside the organization.
- **Check-in:** The site that is 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.

See the [Designing and Building Websites Using Rock](#) guide for more information on configuring new sites in Rock.

Block Types

Every page in Rock is made up of several blocks. These blocks are the core unit of functionality. You might be familiar with the HTML block on the homepage, for example. For the most part, everything on the screen is a part of one block or another. These screens list all of the various types of block available.

Page Map

While most of the configuration of a page can be completed right on that page, 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 of the pages defined in Rock in a simple tree display to help you get where you're going.

Content Channel Types

Rock's dynamic content capabilities are a cornerstone of its content management system (CMS) feature set. The *Content Channel Types* screen is where you will define the data structures for dynamic content. You can read more about these tools in the [Designing and Building Websites Using Rock](#) guide.

Content Channels

The *Content Channels* represent the actual data that is defined for use by the CMS tools. Again much more information on these tools can be found in the [Designing and Building Websites Using Rock](#) guide.

File Manager

The *File Manager* allows users to upload files and manage directories on your Rock host server. More information on this tool can be found in the [Designing and Building Websites Using Rock](#) guide.

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. To learn more about Rock themes and how to design your own, see the [Designing and Building Websites Using Rock](#) guide.

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. See the [Designing and Building Websites Using Rock](#) guide to learn more about creating and managing short links.

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 is a free version already linked to Rock that is ready and available for use. You can optionally upgrade to a Pro version for more icons. Follow the [Building Websites](#) manual for details about installing Font Awesome Pro.

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 then tell Rock to clear the cache of information based on those tags. There are two sides when it comes to configuring and using the CacheManager: 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

Cache Manager

Home > CMS Configuration > Cache Manager

Cache Manager

Cache Tags

Tag Name	Description	Linked Keys
No Tags Found		

Cache Statistics

Cache Types

All Cached Items

Stat	Count
Hits	286,027
Misses	1,135
Adds	16,048
Gets	287,162
Clears	8

Redis Backplane Settings

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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. (Note: clearing the tagged items from the cache will not 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 cannot be deleted. (Note: cache tags are stored as a defined value for the *Cache Tag* defined type.)

Add Cache Tag

Add Tag ✕

Tag Name

Description

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, do not 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 is not configured yet, click the `Edit Settings` button.

Redis Backplane Settings

Redis Backplane Settings

Clicking save will cause the current cache to clear and the configurations to reload. This will cause Rock to be unavailable for several minutes

Enable **1**

End Points **2** *i*

Password **3** *i*

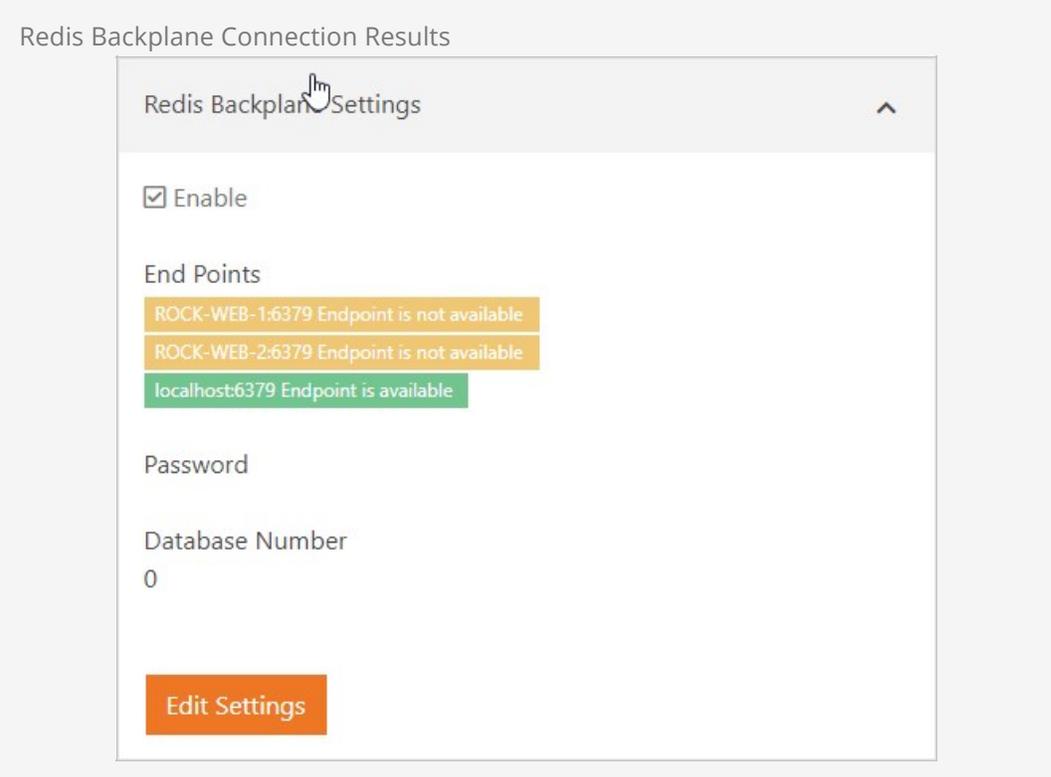
Database Number **4** *i*

- 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 is possible to run multiple databases with Redis. Because Redis uses a zero-based index, the default database number is 0. If Redis is not being used for anything else, this number should be 0.

Changes to the Redis Backplane Settings require Rock to be restarted. Clicking the button will restart Rock, causing it to be offline for a few minutes. (Note: 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.



Redis Backplane Connection Results

Redis Backplane Settings

Enable

End Points

- ROCK-WEB-1:6379 Endpoint is not available
- ROCK-WEB-2:6379 Endpoint is not available
- localhost:6379 Endpoint is available

Password

Database Number
0

Edit Settings

When Redis is enabled, the CacheManager screen 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 is a point of failure as well. If the entire Redis cluster goes down and the Rock Cache engine cannot contact any endpoints Rock will not 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" />
```

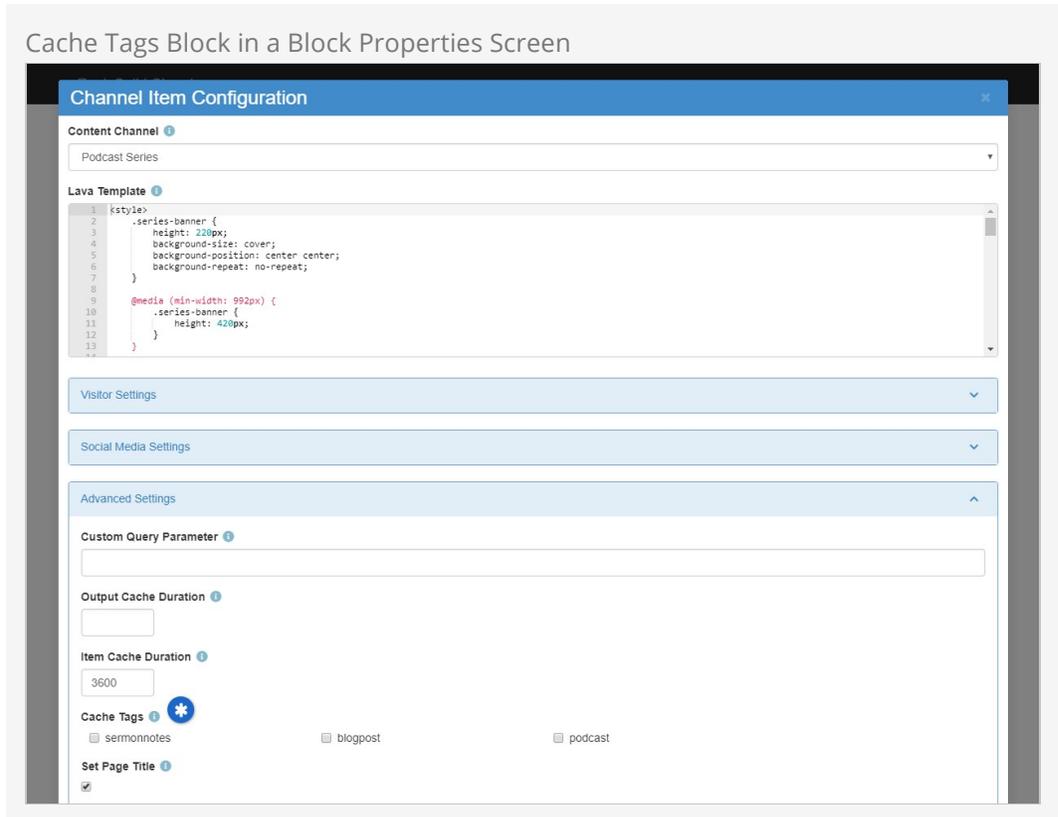
This allows Rock to function while Redis issues are resolved; however, the servers will not have their cache in sync. Once Redis is back up, changing the EnableRedisCacheCluster setting to "True" will tell IIS to restart the application. Sometimes IIS does not do this automatically (or fails while trying) and the app pool will have to be recycled manually.

Assigning Cache Tags

A new *Cache Tag* setting has been created and can be configured on the following block settings:

- ContentChannelView
- ContentChannelViewDetail

To access the *Cache Tags* settings, open the block settings of a page in your external Rock site and click the  button. The cache tags created in the *CacheManager* screen are displayed in the *Advanced Settings* section of the screen. Select the tag(s) you want to assign and click the button. Any number of tags can be assigned.



Cache Tag settings is also available on and tags can be assigned from the following block properties:

- HtmlContentDetail
- GroupListPersonalizedLava
- InternalCommunicationView

Cache Tags in a Block Properties Screen

Block Properties Id: 560

Basic Settings **Advanced Settings**

Name *****
Blog Content

Enabled Lava Commands **?**

<input type="checkbox"/> All	<input type="checkbox"/> Cache	<input type="checkbox"/> Execute	<input type="checkbox"/> RockEntity
<input type="checkbox"/> Search	<input type="checkbox"/> Sql	<input type="checkbox"/> WebRequest	<input type="checkbox"/> WorkflowActivate

Detail Page **?**
Blog Details

Enable Legacy Global Attribute Lava **?**
No

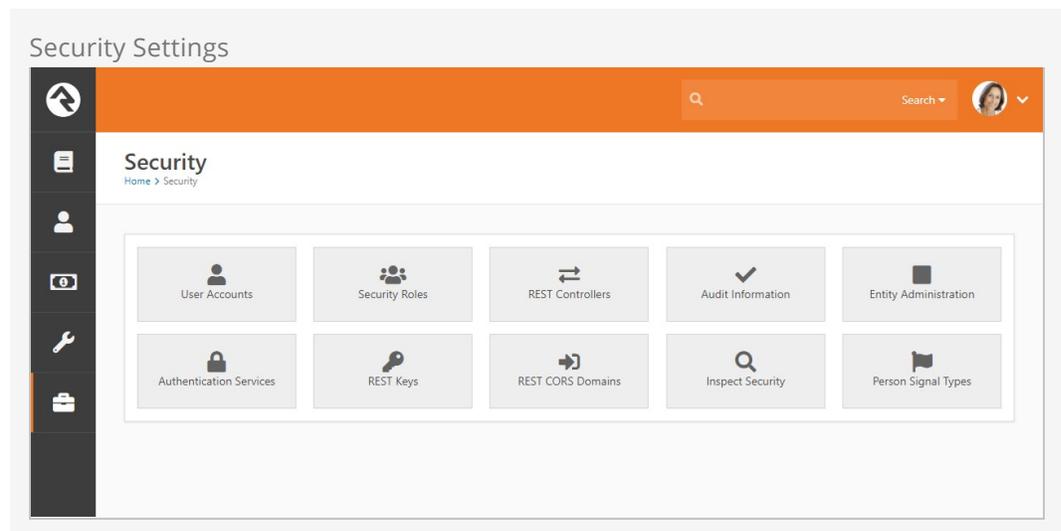
Cache Tags **?** *****

<input checked="" type="checkbox"/> externalwebsite	<input checked="" type="checkbox"/> contentchannel	<input type="checkbox"/> pastorsmith
-----------------------------------------------------	----------------------------------------------------	--------------------------------------

Save Cancel

Security Settings

Due to the sensitive nature of the data in Rock, it is 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 see the 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 base your security off of these groups. This adds consistency to your security model, which leads to fewer mistakes. The security role screens allow you to manage your roles and 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. In addition to what roles you'll need you will want to think about a naming scheme for your roles. While it sounds trivial, a good naming convention can help reduce confusion. To help you we've created a naming template for you to use. 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 instance Rock ships with a role of 'APP – Check-in Devices' that is used to provide security to the check-in site.
- **WEB** – You'll quickly find the need to add several new roles to 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 in your organizations.

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 secure the REST API 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 most, but not all, entities do have a corresponding table in the database.) These sets of screens allow you to view and configure all of 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. Rock has preconfigured *Groups* and *People* to be common, but you may wish to add more (especially if you start adding custom entities of your own).

You can also add security to entities to help protect the data they contain. For instance, we have 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 are allowed to access sensitive data.

Authentication Services

Rock can be configured to allow several types of authentication during the login process. Let's look at them more closely.

- **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 cannot 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 will 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 when they have one less password to remember. In order to enable this, you will 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 will 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 screen 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 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 to anything 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

To save you time (and possibly a headache), you can clone security role groups. Cloning allows you to make a copy of an existing group along with all of its security settings. (Note: Group members are not copied over to the new group.)

Clone Security Role Group

Security Roles Detail
Home > Security > Security Roles > WEB - Administration

WEB - Administration Security Role ☆

Note Because this group is used by Rock, editing is restricted.

Group of individuals who administrate portals. They have access to add, remove, update pages and their settings as well as the content on the page.

Edit 📄 🔒

Group Members

Filter Options 🗨️ 👤 🚚 📄 ⊕

<input type="checkbox"/>	Name	Role	Member Status	
<input type="checkbox"/>	Ted Decker	Member	Active	👤 ✖

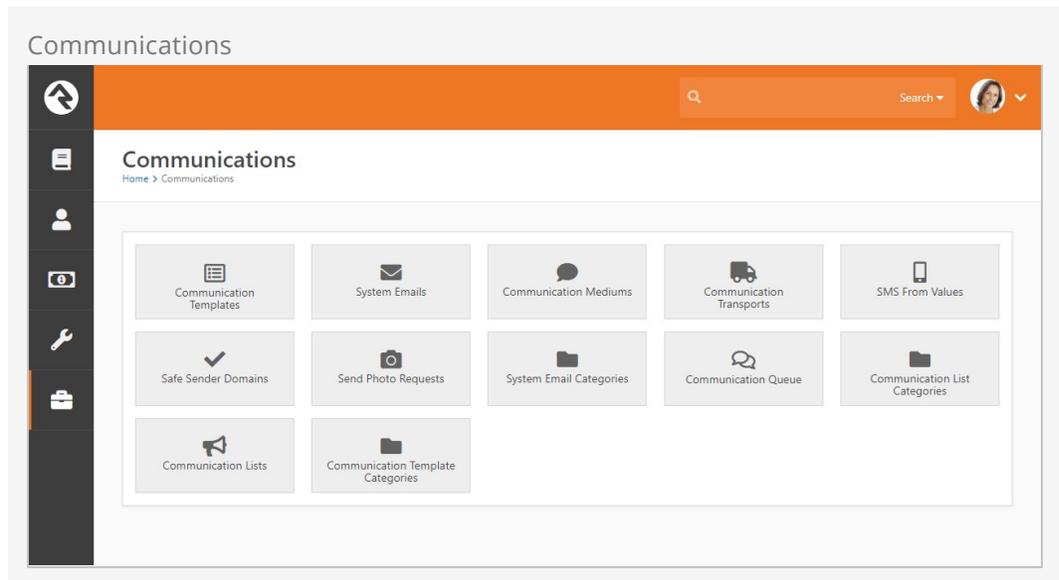
50 500 5,000 1 Group Member 🗨️ 👤 🚚 📄 ⊕

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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 name of the group will be appended with the word "copy". Click the [Edit](#) button to change the name and description of the group, and make any further changes to the group's settings. Click [Save](#). When you return to the Group List screen, 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 Emails

Rock defines several email templates that are used by the system for specific needs. Some examples are the emails that are sent when someone forgets a password or a confirmation message when an account is created. You may want to change the look or wording of the emails to better match the brand and voice of your organization. This is the place to do so.

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. Each of these are communication mediums. You can configure

the settings for each medium from these screens. 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 Twilio to send the messages.

Rock is powerful because of its customization possibilities. Here, you can add additional communication mediums. 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, Twilio and SMTP above in the Communications Mediums section. These delivery options are called Transports. They are what take the message contents and make sure that they get to the recipients. Each has a set of configuration options specific to its needs. For example, the Twilio transport requires an account SID and a token to tie into your account. These settings can be provided using these screens.

Don't Forget...

If you activate a new transport you need to set it as the default transport for a Communications Channel [Admin Tools > Communications Settings > Communication](#)

[Channels](#)

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

SMS From Values

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

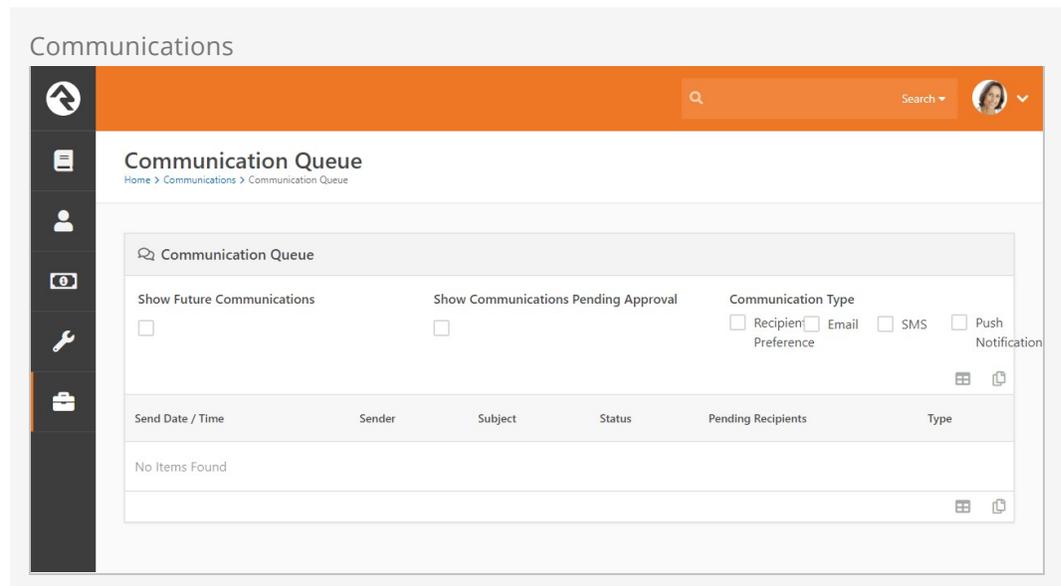
Photo Request

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 & Family Field Guide](#).

System Email Categories

This page allows you to create and manage categories for your system emails.

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. Communications in the queue can be filtered by future communications, communications pending approval, and communication type (email or SMS). 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. 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. The Send Communications 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

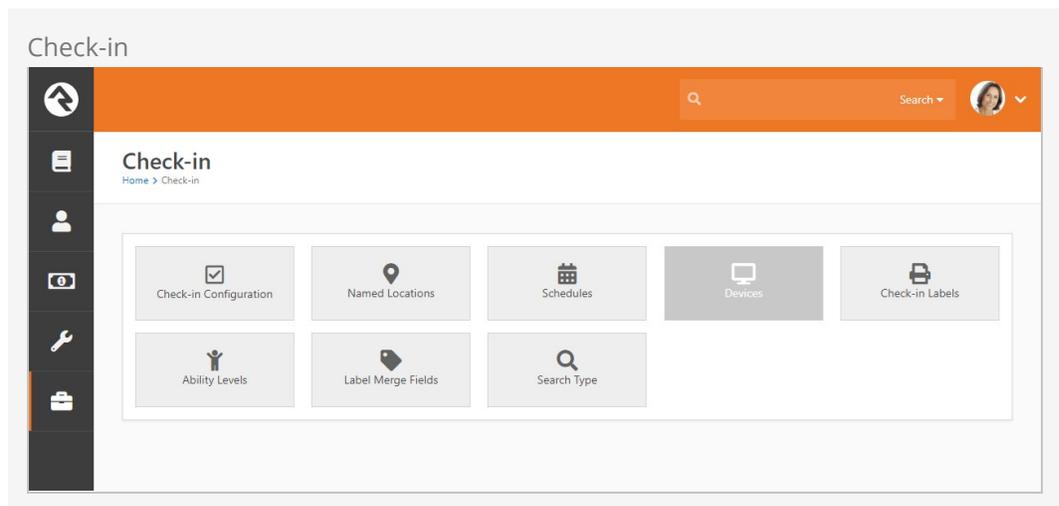
This page allows you to view, modify and add communication lists to be used with the communication wizard. To learn more about communication lists and sending communications, check out the [Communicating with Rock](#) manual.

Communication Template Categories

This page allows you to view, modify and add communication template categories. To learn more about the communication wizard and communication templates, check out the [Communicating with Rock](#) manual.

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 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 will want to use this to define your campuses, buildings and rooms. These *Named Locations* can then be used with configuring groups, check-in, etc.

Also available under [Admin Tools > General Settings > Named Locations](#)

Schedules

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

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.

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. Also available 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. Also available under [Admin Tools > General Settings > Defined Types > Label Merge Fields](#)

Search Types

This is a short-cut link to the *Search Types* defined type. Also available under [Admin Tools > General Settings > Defined Types > Search Types](#)

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 on the other hand is new, exciting and it's super simple to achieve amazing results. Let's take a look at the output from a few sample documents to see what's possible.

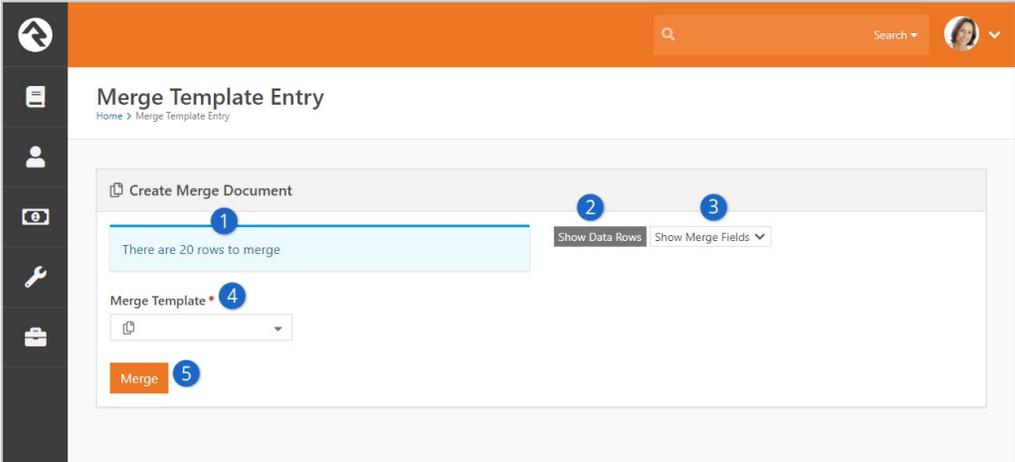
Merge Documents

The image displays four examples of documents generated using the merge document feature. Each example is shown as a stack of pages. 1. **Mailing Labels**: A single page with three columns of contact information for Ted Decker, Cindy Decker, and Alisha Marble. 2. **Name Tags**: A single page with four names arranged in a 2x2 grid: TED Decker, CINDY Decker, ALISHA Marble, and BILL Marble. 3. **Letters**: A stack of pages showing a letter template with a date (August 30, 2018), recipient address, salutation, body text, signature, and name. 4. **Certificates**: A stack of pages showing a certificate template with a title (CERTIFICATE OF PARTICIPATION), recipient name (Ted Decker), activity (USHER TEAM), presenter name (Alisha Marble), and date (August 30, 2018).

Let's now take a look at how you manage and use merge docs and then we'll dive deep into how to create and format them.

Using a Merge Document

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



The screenshot shows the 'Merge Document Page' interface. At the top, there's a navigation bar with a search icon and a user profile. Below that, the page title is 'Merge Template Entry'. The main content area is titled 'Create Merge Document' and contains several elements: a status bar showing 'There are 20 rows to merge' (callout 1), a 'Show Data Rows' button (callout 2), a 'Show Merge Fields' dropdown menu (callout 3), a 'Merge Template' dropdown menu (callout 4), and a 'Merge' button (callout 5). A left sidebar contains various navigation icons.

- 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?

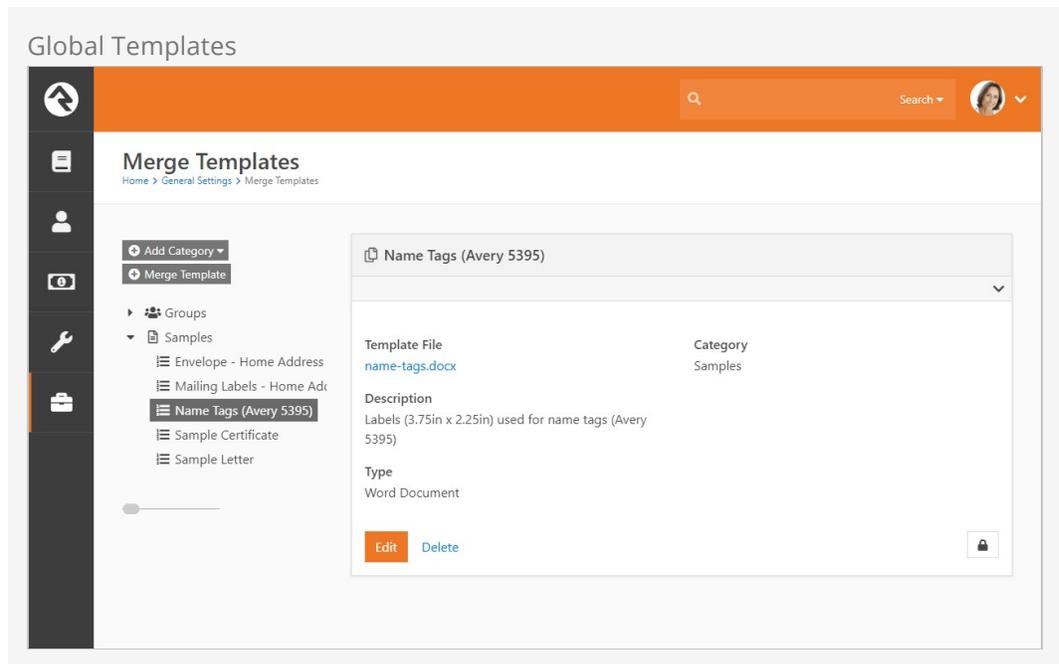
Administrating Merge Templates

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 define global templates and personal templates.

Global Merge Templates

You can set up a list of merge templates that are accessible to everyone in the database

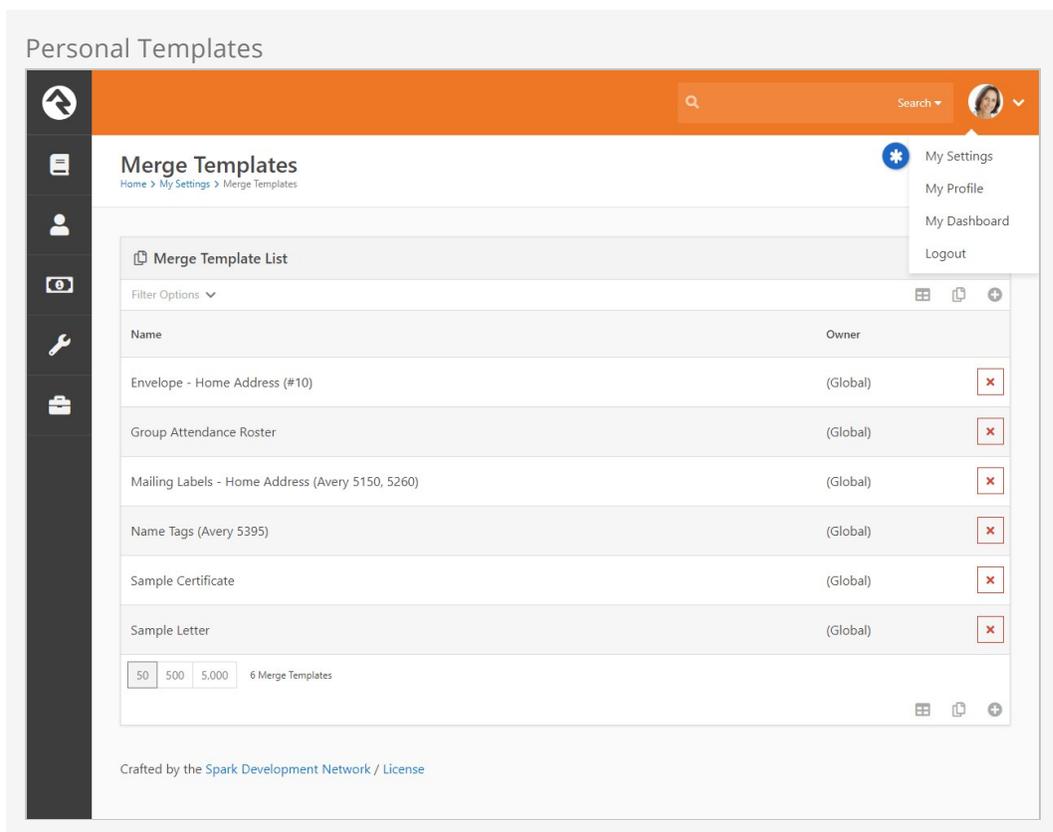
under [Admin Tools > General Settings > Merge Templates](#) .



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).



From this screen, you can select your own personal templates as well as any you have access to 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,

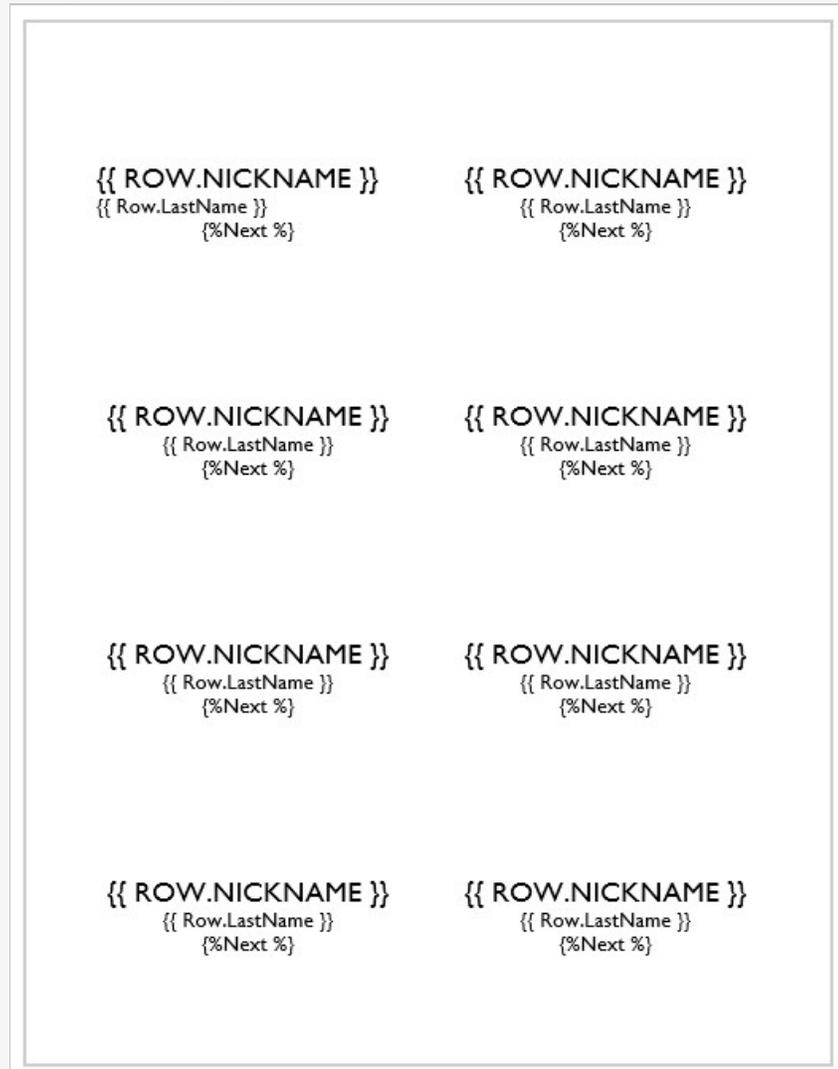


Ted Decker
Associate Pastor

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 you add a `{%Next%}` code when you're ready to move to the next record in the list.

Sample Merge Label Template



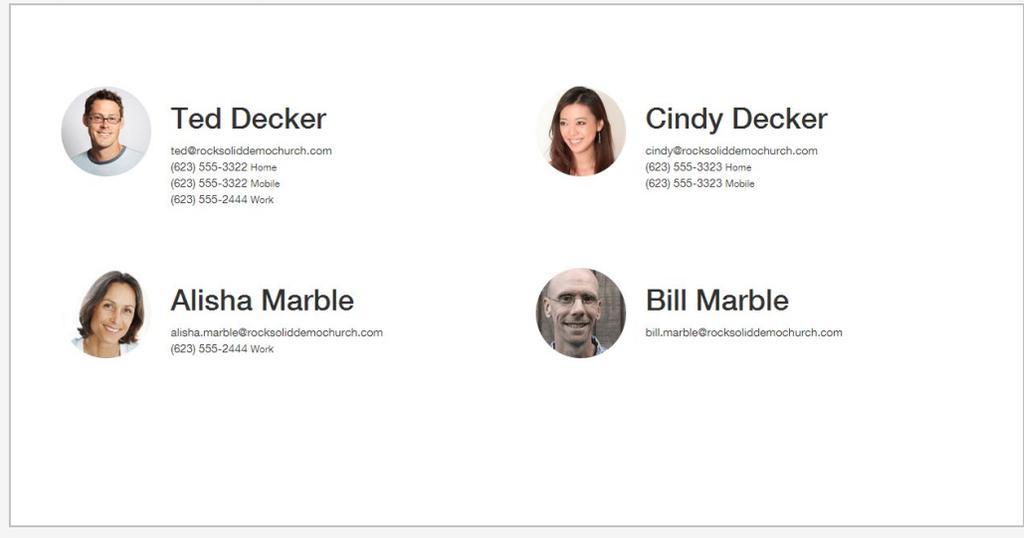
Rock will automatically figure out what strategy your document is using so there is no extra configuration.

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).

Creating an HTML merge document is simple. Let's take a quick look. 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>
      </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](#)

Warning if you are using Cloud Flare

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

Lava Tips With Merge Documents

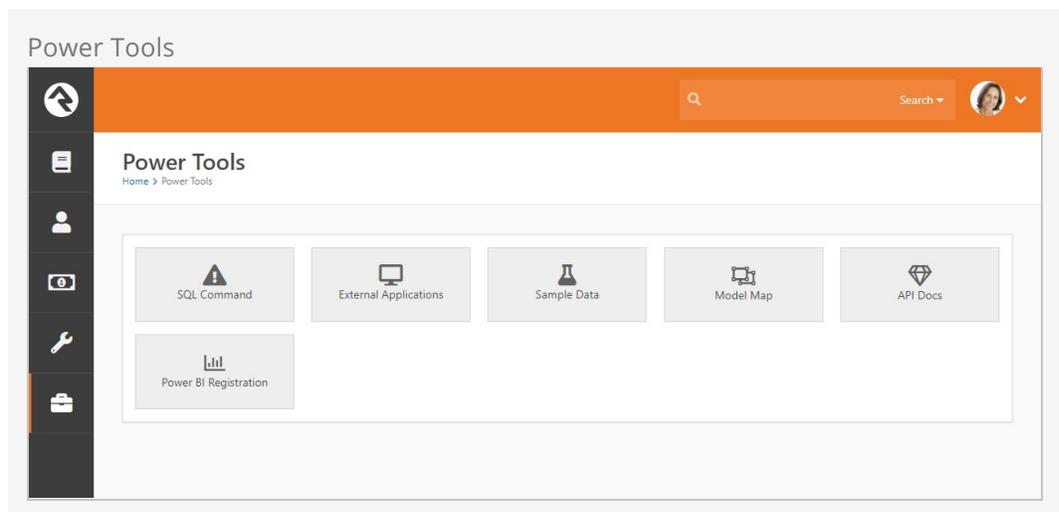
For the most part your mad Lava skills will all work with Merge Templates. There are a couple of new tricks, though, that we'll outline below.

- 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 members 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, but should 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 type in a SQL command to get direct access to their data.

The *SQL Command* block allows you to type in a SQL command and have it execute 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

SQL Command
[Home](#) > [Power Tools](#) > [SQL Command](#)

Warning!
 Running SQL commands directly against the database while powerful, can be extremely dangerous. The difference is all in your hands. If you are unsure of the SQL you are about to run **DO NOT** proceed.

SQL Command

SQL Text

```

1 SELECT
2   TOP 10 firstname, lastname
3 FROM
4   [Person]
5

```

Selection Query? No Yes

Run

firstname	lastname
Alisha	Admin
Giver	Anonymous
Cindy	Chang
Philip	Coffee
Alexis	Decker
Cynthia	Decker
Noah	Decker
Theodore	Decker
Francis	Dexter
Helen	Evans

50 500 5,000 10 Items

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You can also enter `UPDATE` and `DELETE` commands if you wish. In order 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 are 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 (which 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

When you're just starting out, it's helpful to have some sample data to play with. Or perhaps you'd like to create a training environment for teaching your staff. Either way, adding a standard set of people, families and groups is a breeze with Rock.

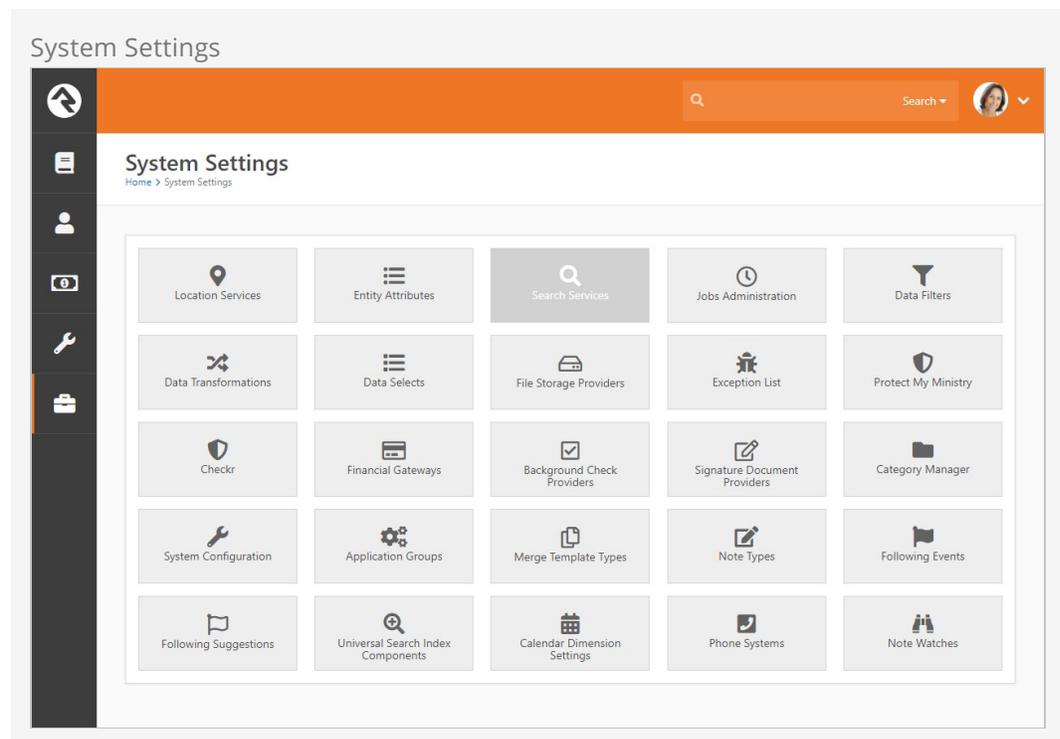
The *Sample Data* block is a one-step way to import a consistent set of sample data. You'll recognize many of the names from the examples in the Rock documentation. Free free to run the import repeatedly to keep time-sensitive data like attendance current.

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.

System Settings

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



Location Services

Knowing the location of those who attend your church can be very powerful. In order to do this, you need to be able to convert an attendee's address (3120 W Cholla St Phoenix, AZ 85029) to a latitude / longitude point (33.590795 , -112.126459). To do this 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.

Similar to 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 of this document.

Entity Attributes

This configuration section can help you define additional *Organizational Attributes*. For the most part, you should not need to do this unless you are writing your own code to run inside Rock. To add an *Organizational Attribute*, simply create a new attribute that is not tied to an entity. (This really is what an organizational attribute is.)

By now you know about attributes and the power they bring to Rock. In fact, they are more powerful than you realize. We've already discussed how attributes can be attached to any type of entity (person, group, etc.) In more complex scenarios, you can actually attach them to an entity with certain criteria. Say you only wanted an attribute to be on a group if it is of the type *Serving Team*; you could configure that using these screens. Most organizations will never need to get this advanced with their configurations, but it's good to know that it can be done (if needed).

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 these search types. For the most part you'll want to leave them set as is, but you can inactivate one if you find it is not helpful in your situation. 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. Examples of this might be some cleanup or updating of data in the database. These background tasks are called *Jobs* and can be managed and scheduled through the screens in this area. More details on jobs can be found below.

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 is 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.

Exception List

Errors are a fact of life. Some errors are the result of bugs in the software. Despite all of our work to eliminate bugs, some will sneak by us. Exceptions can also occur when blocks and pages are misconfigured. While you can set these errors to be emailed to you under the [General Settings > Global Settings > Email Exceptions List](#), you can also view the history of these errors here.

Exceptions are shown in the order they occur. Instead of showing you every error in a large list, we have 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.

File Storage Providers

Under the [Admin Tools > General Settings > 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*. 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.

Financial Gateways

Financial gateways allow Rock to move money from individuals' accounts to the organization. Information on these gateways and their configuration is discussed in detail in the [Rock Solid Finances](#) guide.

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 of Rock. For the most part you should never need to worry about these settings, but we have provided

this screen to help you change these settings if needed. Each of the settings is discussed below.

Warning:

Changing these settings will cause Rock to restart. This means that all sites will be unavailable for a few minutes during the restart.

- **Time Zone:** During the install you should have set your time zone. If you need to change it, you can do that here.
- **Max Upload File Size:** For security reasons, web servers 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.
- **Run Jobs In IIS:** By default, Rock's job engine runs on the web server. 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.

Application Groups

Several features in Rock rely on storing information on people. For instance when you use the photo request feature, Rock needs to track who has uploaded a photo, whose photo needs to be verified and who has opted out of getting future requests. Instead of writing tons of custom code to do this we've chosen to create a reusable group type called *Application Groups*. These groups are listed here for administrator access.

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 [Person & Family Field Guide](#).

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 it even goes further to allow 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 & Family Field Guide](#)

Following Suggestions

This section allows you to define new *Following Suggestions*. You can read more about these features in the [Person & Family Field Guide](#)

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

Business Intelligence is a buzz word for tools that allow you to quickly analyze data and present actionable information to leaders. In large organizations, these tools usually are separate from the normal day-to-day systems, but in Rock we've simplified the process and built the tools right in. The Calendar Dimension Settings screen is one piece of the configuration process. To read more about BI and learn how to configure settings for your organization, see the Business Intelligence chapter of the [Taking Off With Reporting](#) manual.

Spark Data (v8.4)

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 you, 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 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. 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 will then see a page similar to this:

Spark Data Setup

Spark Data

Spark Data is a set of services that allows you to easily clean and enhance your data with little effort. To begin you'll need to apply the API key below to your Rock Instance (Admin Tools > System Settings > Spark Data) and ensure that a credit card is on file for use with paid services.

Spark Data Key: 123456789-1234-1234-1234-123456789012 Enabled - Card on File

Name	Card Type	Account Number
Rock Solid Church	Visa	*****

Recent Billings 2018

Date	Service	Amount
------	---------	--------

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Roadmap
Who's Using Rock
Partners
Privacy
Employment Opportunities
Promo Shop

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Rock is a project of the Spark Development Network.

1 Credit Card

Your organization will need to have a credit card on file for any services you request.

2 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.

Now you can return to your own Rock installation. Go to back to your [Admin Tools > System Settings > Spark Data Settings](#) page, and paste in the Data 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 (v8.4)

The NCOA list is a list of address updates that the United States Post Office maintains, to reroute your mail to your new address whenever you move. But few businesses (or churches) want to comb through the entire list, looking for records they need to update. So services like we are using provide methods to access the data you care about far more easily.

Through Spark Data, we are now bringing the power of that service to your database. Why do you care? Well, when people move out of the city (or state), they will inform the

post office, their credit cards companies, and even their magazines that they're moving. But they're rarely going to let your church know that they're moving. You might have seen their giving stop (if they were giving at all), but there's no other way to know that they actually moved, rather than being on a vacation. Part of keeping your data clean though, is making sure that old records are inactivated so you stop sending them information (keeping your newsletter list down to only active people can also help with deliverability issues). This service will compare all of the addresses in your system with the list of address changes. When a match is found, it will respond according to the settings you choose. Usually if they move in-town you'll just want to update their address, but if they move too far away, you'll want to inactivate them.

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.

NCOA Settings

Spark Data Settings
Home > System Settings > Spark Data Settings

Spark Data

Spark Data Status Enabled - Card on file Update Settings

National Change of Address (NCOA) Enabled

Enable 10 ▶ Run Manually

1 Enable the automatic updating of change of addresses via NCOA services.

2 By accepting these terms, you agree that Rock RMS may share your data with TrueNCOA for NCOA processing. You understand that through your use of the Services you consent to the collection and use of this information, including the storage, processing and use by TrueNCOA and its affiliates. Customer information will only be shared by TrueNCOA to provide or improve our products, services and advertising; it will not be shared with third parties for their marketing purposes. Read TrueNCOA's full Terms of Service here, and read TrueNCOA's Privacy Policy here.

I acknowledge that running this service will charge the card on file \$50 for each file run.

Person Data View ⓘ • **3**

Connected People

4 Minimum Move Distance to Inactivate ⓘ miles

5 Mark 48 Month Move as Previous Addresses ⓘ

6 Mark Invalid Addresses as Previous Addresses ⓘ

Inactive Record Reason ⓘ •

Moved

7 Recurring Enabled ⓘ

8 Recurrence Interval ⓘ • Days

9 Save

Crafted by the Spark Development Network / License

1 Enable
Check this box to allow 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 the 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 churches 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. You don't want to check the addresses of records which are already inactive, for instance, or you'll be tracking every time they move indefinitely, even years after they've left your area.

4 Minimum Move Distance to Inactivate

Set how many miles away from their previous address people have to 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 is in your database who recently joined your church, you can use this option to add any address they moved from 19-48 months ago as a Previous Address in Rock

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 specify that address should be set as a "previous address" instead of their current address. That way, you're not losing the information but neither are you trying to mail them at 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 dataview are sent out for checking 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 all of the setting configured, you click this button to run the job manually, rather than waiting for the job and schedule you set.

Don't forget!

This tool isn't the only one helping you to manage person statuses. That means that even if someone is inactivated by this job because of a move, if they do still continue attending they can still be automatically re-activated using the Reactivate People portion of the Data Integrity job we covered above.

Once your NCOA job has run, you can view your [Tools > Data Integrity > NCOA Results](#) page. It will look something like this:

The screenshot shows the 'NCOA Results' page in a web application. The page has a dark sidebar on the left with navigation icons. The main content area is titled 'NCOA Results' and includes a search bar and a user profile icon. Below the title, there is a 'Filter Options' dropdown. The main content is a list of families, each with a status indicator and a 'Processed' button. The families listed are Meramble Family, Adams Family, and Stogsdill Family. The Adams Family entry includes a 'Move Date' of 8/15/2018 and a 'Move Distance' of 14.09. The Stogsdill Family entry has an 'Invalid Address' status. A 'Next >' button is located at the bottom right of the list.

Family	Family Members	Original Address	New Address	Move Distance	Move Date	Status
Meramble Family	Michael Meramble	1011 E Avenue I Lancaster, CA 93535				Processed
Adams Family	Scott Adams	111 Thornberry Trail Jackson, GA 30233	432 JONES RD MILNER, GA 30257	14.09	8/15/2018	Processed
Stogsdill Family	Josh Stogsdill	545 Mark Shopville Rd Somerset, KY 42503				Invalid Address

You can imagine that the list will probably get quite long, since it lists every family whose address was checked. So be sure to use the *Filter Options* to filter the records you're shown by their status, the date they moved, look for invalid addresses, or even target specific families by last name or campus.

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 the application.

Managing Your Campuses

You can manage your campuses from [Admin Tools > General Settings > Campuses](#). There you will see a list of campuses that you can manage or add to. Selecting a campus will bring up the campus details screen.

Campus Detail
Home > General Settings > Campuses > Campus Detail

Add Campus

Name ¹ Active ²

Description ³

Short Code ⁴ URL ⁵

Campus Leader ⁶

Service Times ⓘ ⁸

Phone Number

Address ⁷

City Arizona Zip

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- 1 Name**
The name of the campus.
- 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 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.
- 5 URL**
The web address for the campus.
- 6 Campus Leader**
The person placed in charge of running the campus.
- 7 Contact Information**
The phone number and address of the campus.
- 8 Service Times**
The service times for the campus.

Named Locations:

When you add an address to a campus, a new *Named Location* will be created for you. You can view this new location under [Admin Tools > General Settings > Named Locations](#).

Adding Attributes to Campuses

There are probably other bits of information you'd like to track about your campuses. Adding additional *Attributes* to campuses is simple. Just follow these steps:

1. Go to [Admin Tools > System Settings > Entity Attributes](#).
2. Click the  to add a new attribute.
3. Select the *Entity Type* of "Campus" and set up the attribute information. You do not need to add a value for the *Qualifier Field* or *Qualifier Value* fields.
4. After clicking [Save](#), you can configure security on who can edit this attribute if you wish.
5. You will 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 all of the jobs that come configured with Rock.

Name	Description	Default Schedule
Job Pulse	Runs continuously to help monitor the jobs engine and keep the website responsive. Do not disable this job if you are running the job engine inside of IIS (more on this below).	Every 30 seconds
Send Communications	Sends out queued communications (email, SMS, etc.)	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 & 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 Rock Admin Hero Guide .	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 & Calendar Guide for more information.	None
Location Services Verify	Attempts to standardize and geocode addresses that have not 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 section of this manual.	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.
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
SQL Database Maintenance	Performs routine SQL Server database maintenance. See the Care and Feeding of Rock section below for more information.	None
Process BI Analytics ETL	Runs the Stored Procedures that do the ETL for the AnalyticsDimFamily, AnalyticsFactFinancialTransaction, and AnalyticsFactAttendance tables. Must be run at least once for data to be made available. To read more about BI and Rock, see the Business Intelligence guide.	Every day at 5:00 am
Process Analytics Dimension Tables for Person	This job takes care of schema changes (dynamic Attribute Value Fields) and data updates to Person analytic tables.	Every day at 4:00 am
Move Data from PageViews and	Moves the data from Page Views and Communication Recipient Activity into the Interaction tables. When	Every day at

Name	Description	Default Schedule
Communication Activity to the new Interaction Tables	done, the job will drop the PageView and CommunicationRecipientActivity tables, then the job will remove itself.	4:00 am
Universal Search Re-Index	Re-indexes the selected entity types in Universal Search.	Every day at 5:00 am
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.	Every 15 minutes
Family Analytics	This job populates Rock's family analytics.	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 configured individuals when following events occur.	At 7:00 am, Monday through Friday
Send Following Suggestion Notification	Calculates and sends following suggestions to those 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

Name	Description	Default Schedule
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
Send Group Requirements Notification	Sends out reminders to group leaders when group members do not 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
Process Adult Children	Moves children to their own family when they become an "adult" based on their age. (The default age is 18.) The job settings include a number of options for controlling how Rock handles and displays information when the child is added/updated in a new family. You can read more about this job and its settings in the Person & Family Field Guide .	Every day at 6:00 pm
Data Automation	Updates person and family information based on Data Integrity settings. To learn more about Data Integrity settings, see the Data Integrity chapter above.	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 above.	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 dataviews 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 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	Every 25 minutes

Name	Description	Default Schedule
	<p>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).</p>	

Note:

You can code your own jobs if you have access to a developer.

Configuring a Job

You can change the configuration of a current job or add a new job under `Admin Tools > System Tools > Jobs Administration`. There you will 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

Jobs Administration
[Home](#) > [System Settings](#) > [Jobs Administration](#)

Jobs List

Name	Last Successful Run	Last Run Date	Last Run Duration	Last Status	Last Status Message	System	Active	Run Now
Calculate Person Duplicates	6/7/2018 5:04 PM	6/7/2018 5:04 PM	1s	Success	Started at 6/7/2018 5:04:31 PM	✓	▶	✕
Group Sync	6/6/2018 2:06 PM	6/6/2018 2:06 PM	0s	Success	No groups to sync and 0 groups were changed	✓	▶	✕
Data Automation	6/5/2018 5:39 PM	6/5/2018 5:39 PM	7s	Success	Reactivate People: Not Enabled Inactivate People: Not Enabled Update Family Campus: Not Enabled Move Adult Children: Not Enabled Gender Autofill: 3 people were processed; 1 genders were updated; 0 records logged an exception Update...	✓	▶	✕
Job Pulse	6/15/2017 12:50 PM	6/15/2017 12:50 PM	0s	Success		✓	✓	✕
Send Communications	6/15/2017 12:50 PM	6/15/2017 12:50 PM	0s	Success	No communications to send	✓	▶	✕
Process Workflows	6/15/2017 12:50 PM	6/15/2017 12:50 PM	0s	Success	0 workflows processed	✓	▶	✕
Calculate Metrics	6/15/2017 12:45 PM	6/15/2017 12:45 PM	0s	Success	Calculated a total of 0 metric values for 0 metrics	✓	✓	▶ ✕
Registration Reminder	6/15/2017 10:00 AM	6/15/2017 10:00 AM	0s	Success	No reminders to send	✓	▶	✕
Process Signature Documents	6/15/2017 9:00 AM	6/15/2017 9:00 AM	1s	Success	0 signature requests sent; 0 existing document's status updated	✓	▶	✕
Event Payment Reminders	6/15/2017 9:00 AM	6/15/2017 9:00 AM	1s	Success	Sent 0 reminders from 0 registration instances	✓	▶	✕
Location Services Verify	5/16/2014 3:00 AM	5/16/2014 3:00 AM	5s	Success		✓	▶	✕
Rock Cleanup	5/16/2014 1:00 AM	5/16/2014 1:00 AM	1s	Success		✓	▶	✕

50 500 5,000 34 Service Jobs

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After you select to add or configure a job you'll see the screen below.

Adding A New Job

Scheduled Job Detail
Home > System Settings > Jobs Administration > Scheduled Job Detail

Add Service Job

Name **1** Active **2**
 Yes

Description **3**

Notification Status **4** Cron Expression **5**

Notification Emails **6**

Job Type **7**

General

SQL Query **8**

Command Timeout

Save Cancel

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- 1 Name**
Provides a concise description of what the job is doing.
- 2 Active**
Allows you to mark the job as active or inactive. (Note that not all of the jobs that ship with Rock are active by default. It's a good idea to check the active status on the jobs you want to run.)
- 3 Description**
Documents in detail what that job is doing and any background criteria that you may want to know in the future. Use this field to document all the details about the job.
- 4 Notification Status**
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**
Defines when the job is run. Cron expressions are a concise schedule pattern. 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**
A comma-separated list of emails for the job; used when a notification

needs to be sent.

7 Job Type
Selects the type of job to run.

8 Job Settings
Each job type will have a set of configuration items. In this sample, 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 is no need to restart your website. Changes will be automatically updated within a few minutes.

Tip:

There will be times when you will need to stop running a job for a period of time. Perhaps you have a job that launches a workflow every night to send reminders for group leaders to take attendance for their groups and they are not meeting for a few weeks. 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

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 is set to run every 30 seconds. Its only purpose is to load a special *KeepAlive.aspx* page. Doing so keeps IIS alive at all times.

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 set schedule, this job rebuilds database indexes that need tuning. It does the work so you don't have to. 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`.

Home > System Settings > Jobs Administration > Scheduled Job Detail

Scheduled Job Detail

🕒 Edit Service Job

Name * **Active** Yes

Description

Notification Status **Cron Expression ⓘ ***

Notification Emails ⓘ **Cron Description**
At 02:30 AM

Job Type * **Last Status Message**

Run Integrity Check ⓘ

Run Index Rebuild ⓘ

Run Statistics Update ⓘ

Alert Email ⓘ *

Advanced

Command Timeout ⓘ

Minimum Index Page Count ⓘ

Minimum Fragmentation Percentage ⓘ

Rebuild Threshold Percentage ⓘ

Use ONLINE Index Rebuild ⓘ

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Note Types

You've probably seen Rock's notes feature 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 is 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. 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 batch detail page [Finance > Batches > Batch Detail](#).

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](#) 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 below.

Easy Return ▾
Search ▾

Financial Batch Detail

Home > Batches > SampleData1497153600000

SampleData1497153600000
Batch #411 Closed

<p>Date Range 6/11/2017 12:00 AM to 6/11/2017 12:00 AM</p> <p>Transaction / Control / Variance \$501.00 / \$501.00 / \$0.00</p>	<p>Account Totals</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>Building Fund</td><td style="text-align: right;">\$125.00</td></tr> <tr><td>General Fund</td><td style="text-align: right;">\$326.00</td></tr> <tr><td>Mission Fund</td><td style="text-align: right;">\$50.00</td></tr> </table> <p>Currency Totals</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>Check</td><td style="text-align: right;">\$501.00</td></tr> </table>	Building Fund	\$125.00	General Fund	\$326.00	Mission Fund	\$50.00	Check	\$501.00
Building Fund	\$125.00								
General Fund	\$326.00								
Mission Fund	\$50.00								
Check	\$501.00								

Edit
Match Transactions
Audit Log

Transactions
Transactions Transaction Details Options ▾

Note This batch has been closed and transactions cannot be edited.

Person	Date / Time	Amount	Currency Type	Transaction Code	Accounts	Summary
Lowe, Trish	6/11/2017 12:00:00 AM	\$45.00	Check		General Fund: \$10.00 Mission Fund: \$35.00	✕
Marble, Bill	6/11/2017 12:00:00 AM	\$150.00	Check		General Fund: \$50.00 Building Fund: \$100.00	✕
Decker, Ted	6/11/2017 12:00:00 AM	\$306.00	Check		General Fund: \$266.00 Building Fund: \$25.00 Mission Fund: \$15.00	✕

50 500 5,000
3 Transactions

Total Results

General Fund	\$326.00
Building Fund	\$125.00
Mission Fund	\$50.00
Total:	\$501.00

Alisha Admin

a minute ago Batch

The bank just called about this batch. Ted's check may have been for \$300 instead of \$306. Calling Ted to confirm.

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Adding Multiple Note Types to a Single Entity

When you add a note to a person on the *Person Profile* page you are 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 new type modal will be displayed.

Adding a Note Type

Note Type Detail
Home > System Settings > Note Types > Note Type Detail

Add Note Type

Name **1**

Entity Type **2**

Icon CSS Class **3**

Background Color **4**

Font Color

Border Color

User Selectable **5**

Requires Approvals **6**

Send Approval Notifications **7**

Allows Watching **8**

Auto Watch Authors **9**

Allow Replies **10**

Approval URL Template **11**

Save Cancel

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

2 Entity Type
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 are requiring the 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 Emails*.

8 Allows Watching

This option will allow people to get a notification when a reply is made to a note; see the next section for more details.

9 Auto Watch Authors

This option will automatically notify the person adding a note, whenever someone replies to their note. See the next 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

In the above screenshot that there are a few "Note Watching" options we only touched on. These bear a more detailed view, so let's cover them now.

On a note type, you can specify whether a note type *Allows Watching*. If it does, anyone who can view a note will be able to choose to watch a specific note using the menu on each note. They will then be notified of replies to any note which they are watching. You can also specify whether authors should automatically watch their own notes so they'll know if someone replies to their note.

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

New Note Watch

Note Watch Detail
Home > System Settings > Note Watches > Note Watch Detail

Add Note Watch

Watched by

Watcher Person ⁱ

Watcher Group ⁱ

Watch Filter

Entity Type ⁱ

Watching Person ⁱ

Watching ⁱ

Allow Override ⁱ

Note Type ⁱ

Save Cancel

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You can specify either a single person or all members of a group to watch the notes you specify here, by selecting them in either the *Watcher Person* or the *Watcher Group* options. In this example, we've already indicated that we want this Note Watch to apply to Person notes. We can now either specify a specific person to watch for all notes on by picking them in "Watching Person", or we can instead choose a Note Type to watch - that will notify the person or group you specified as the "Watcher" whenever a note of that type is added to anyone. If you want to get very specific, you can select a Person AND a Note Type to watch; that will serve to only notify people of that type of note when they are added to that specific person.

You can also create exclusions to the note watch by 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 specify that group as the *Watcher Group*, select *Watching*, set the *Entity Type* as Person, and select the Communication note type. 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* again, but un-check "Watching" and specify your senior pastor as the *Watching Person*. Now your staff group will not 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 Email 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, and rather than sending one email for every single watched note reply, which could quickly overwhelm your inbox.

Digital Signatures

Many events and activities require legal waivers and documents to be signed by participants. Rock easily allows you to 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 will 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 now 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 below.

1 Active
No

2 Username

2 Password

API Client Id

3 API Client Secret

4 Use API Sandbox
No

5 Webhook Url
https://prealpha.rockrms.com/WebHooks/SignNow.ashx

Advanced

Cookie Initialization Url
https://mw.signnow.com/setcookie

Save Cancel

- 1 Ensure that you *Activate* the provider.
- 2 Enter in your SignNow username and password.
- 3 Enter the Client ID and Secret from the email you received.
- 4 The API Sandbox should be set to *No*. This is a development setting that should not be enabled.
- 5 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.

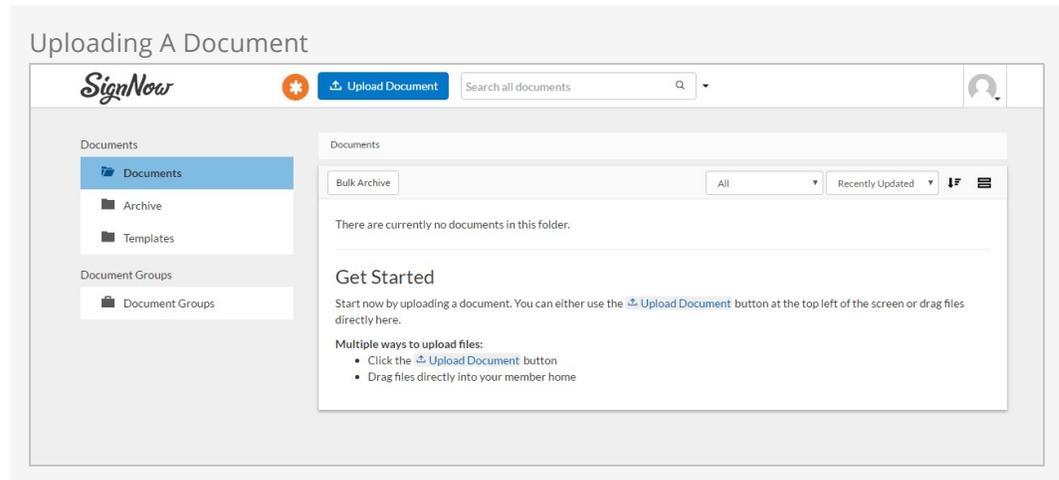
Document Templates

You can think of Document Templates as Word templates that you configure to send to individuals for 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*).

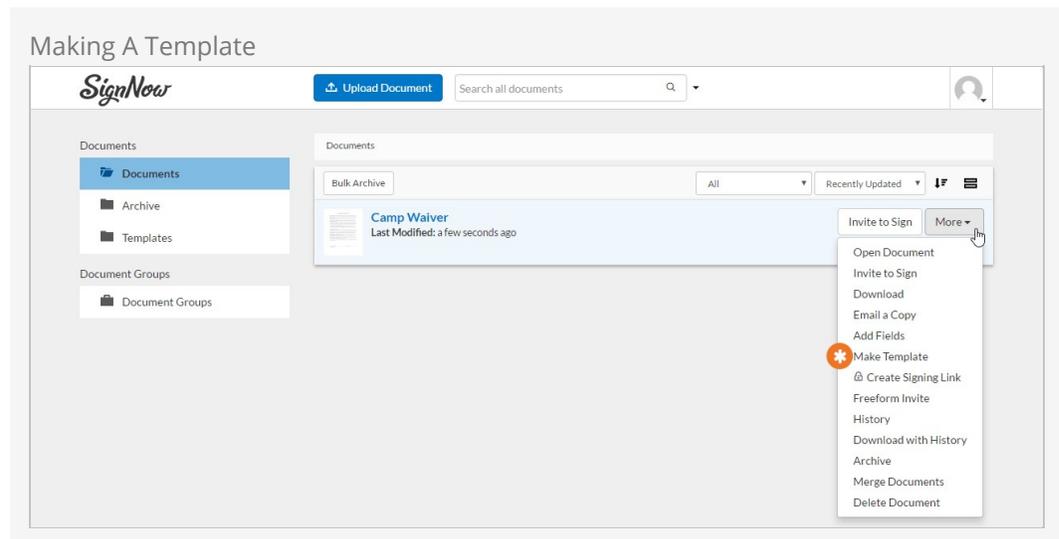
There's a bit more to templates than just a Word document. For instance, you'll also need to configure where in the document the user must sign. You'll create these templates on the SignNow site. Let's walk through the creation of a new SignNow

template.

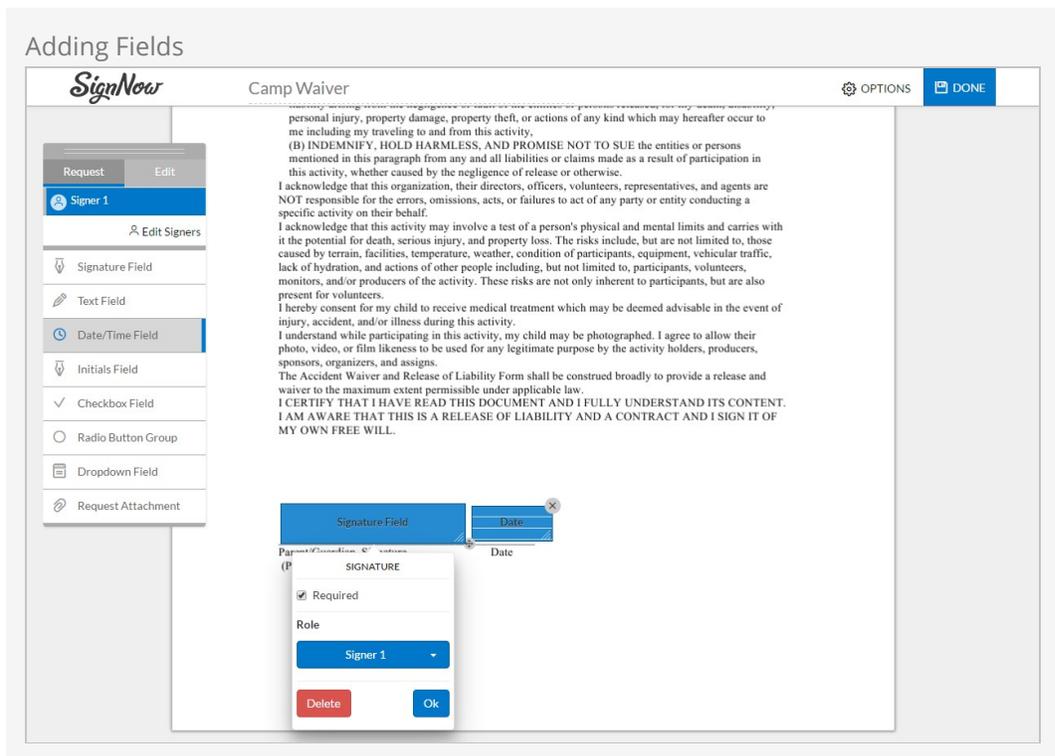
Once you're logged in, you should see a screen similar to the one below. From here you'll want to click the [Upload Document](#) button from the very top. This will allow you to select a Word or PDF document to upload. The file you select will then appear under the *Documents* tab.



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.



Next, we'll add the signature location to the document. Technically, you don't need to do this. You could be done here, but if you don't specify a signature location, 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 the 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 is 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](#) > [Document Templates](#). From here you can add a new template.

Document Templates

Home > General Settings > Signature Documents > Document Templates

Add Signature Document Template

Name **1**

Description **2**

Digital Signature Provider **3**

File Type **5** Digitally Signed Documents

Template **4**

Save Cancel

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- 1 Name:**
The template name in Rock.
- 2 Description:**
Allows you to enter in additional 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 down a list of templates that you have configured. You should see the template you made above 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 separates out the person that the document applies to and who is assigned 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. Let's take a look.

You can define the signature document that is 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 select 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

Rock Solid Church New Here? Resources Connect Give Blog Calendar Login

Summer Camp 2016

Home / Calendar / Summer Camp 2016

Registrant (cont)

Signature Required This Registration requires that you sign a Camp Waiver for each registrant, please follow the prompts below to digitally sign this document for Noah.

SignNow Your progress: 0 of 2 Options Help Guide Me

I certify that there are no health-related reasons or problems which preclude my child's participation in these activities.
I acknowledge that this Release of Liability Form will be used by the event holders, sponsors, and organizers of the activity in which my child may participate, and that it will govern their actions and responsibilities at said activity.
In consideration of my application and permitting me to participate in this activity, I hereby take action for myself, my executors, administrators, heirs, next of kin, successors, and assigns as follows:
(A) I WAIVE, RELEASE, AND DISCHARGE from any and all liability, including but not limited to, liability arising from the negligence or fault of the entities or persons released, for my death, disability, personal injury, property damage, property theft, or actions of any kind which may hereafter occur to me including my traveling to and from this activity.
(B) INDEMNIFY, HOLD HARMLESS, AND PROMISE NOT TO SUE the entities or persons mentioned in this paragraph from any and all liabilities or claims made as a result of participation in this activity, whether caused by the negligence of release or otherwise.
I acknowledge that this organization, their directors, officers, volunteers, representatives, and agents are NOT responsible for the errors, omissions, acts, or failures to act of any party or entity conducting a specific activity on their behalf.
I acknowledge that this activity may involve a test of a person's physical and mental limits and carries with it the potential for death, serious injury, and property loss. The risks include, but are not limited to, those caused by terrain, facilities, temperature, weather, condition of participants, equipment, vehicular traffic, lack of hydration, and actions of other people including, but not limited to, participants, volunteers, monitors, and/or producers of the activity. These risks are not only inherent to participants, but are also present for volunteers.
I hereby consent for my child to receive medical treatment which may be deemed advisable in the event of injury, accident, and/or illness during this activity.
I understand while participating in this activity, my child may be photographed. I agree to allow their photo, video, or film likeness to be used for any legitimate purpose by the activity holders, producers, sponsors, organizers, and assigns.
The Accident Waiver and Release of Liability Form shall be construed broadly to provide a release and waiver to the maximum extent permissible under applicable law.
I CERTIFY THAT I HAVE READ THIS DOCUMENT AND I FULLY UNDERSTAND ITS CONTENT. I AM AWARE THAT THIS IS A RELEASE OF LIABILITY AND A CONTRACT AND I SIGN IT OF MY OWN FREE WILL.



Parent/Guardian Signature (Please print legibly.) Date Participant's Name Age

Powered by: Rock RMS 3120 W Cholla St Phoenix, AZ 85029

In-Line Signatures Requires Additional Configuration

In order 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 the 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 is 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.

The screenshot shows a web application interface titled "Managing Requests and Documents". It features a dark sidebar with navigation icons and an orange header bar with a search icon and a user profile. The main content area is titled "Document Templates" and shows a breadcrumb trail: Home > General Settings > Signature Documents > Document Templates. A "Camp Waiver" template is displayed with a "File Type" of "Digitally Signed Documents" and an "Edit" button. Below this is a "Documents" section with a table listing document requests. The table has columns for Name, Last Invite Date, Applies To, Assigned To, Signed By, Status, Document, and Delete. Three rows are visible, with the first row marked as "Completed Request".

Name	Last Invite Date	Applies To	Assigned To	Signed By	Status	Document	Delete
ASUStudentGroup_TyMcClintock		Ty McClintock	Ty McClintock		Signed		
SummerCamp2016_TedDecker		Noah Decker	Ted Decker		Sent		
SummerCamp2016_TedDecker		Alex Decker	Ted Decker		Sent		

- 1 Document Template Detail:**
From here you can edit the template details.
- 2 Documents:**
Next you'll see 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 this first request has been completed. You can click the document icon to see the signed document.

Manually Editing Documents

You can manually edit/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 should not 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 State:**
The current status of the document. If you set the status to *cancelled*, the request will be canceled 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 has not been signed yet the `Resend Invite` button will be visible which will allow you to resend the invite.

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 system job, named *Process Signature Documents*, to help Rock manage the digital signature process. This job performs three tasks:

1. Sends invites to new group members in 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. The job will also send out reminders for requests that have not 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

 Reply  Reply All  Forward

Mon 8/1/2016 7:36 PM



[Redacted] via SignNow (CudaSig)

Digital Signature Request from Rock Solid Church

To



SignNow

Open Document

Rock Solid Church has requested a digital signature for a 'Camp Waiver' document for Ty McClintock.

This email contains a secure link to SignNow designed for the initial recipient. Please do not forward or share this email, link, or access code with others. If you believe this email was sent to you in error, please contact the sender.

This invite will expire in 15 days.

Use SignNow on iOS, Android, and the web.

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 users their own Rock username and password. For many organizations this will be the default service they'll use for authenticating a user, 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 setup Rock to use your Active Directory under [Admin Tools > Security > Authentication Services > Active Directory](#)



Active Directory Setup

Active Directory Properties

Active 1
No

Server
Allow Change Password
No

Server 2

Domain 3

Save Cancel

- 1 Be sure to activate the security service.
- 2 Provide the server name of one of your Active Directory Domain Controllers.
- 3 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 users prefer Facebook as their credential of choice. Luckily setting up a Rock website to use Facebook authentication is quick and easy. Simply follow these steps.

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 will need to designate someone's personal facebook account in your organization to use as the 'admin' but don't worry 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 to add one:

1. At the top of the screen click the **Register Now** button. This will begin the quickstart setup.
2. You will be presented with a screen asking for the Display Name and Contact Email for your app. Once you've entered a name and email, click **Create App ID**.
3. You'll then have to enter a "captcha" text, just to make sure you're not a robot.
4. The next screen will be the Product Setup screen. Choose the Facebook Login **Set Up Option**.
5. Next, choose the "WWW" Web option.
6. On the "Tell Us about Your Website" panel, enter in your site URL and click **Save** and then **Continue**.
7. 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.
8. Now that you've navigated through all the panels under the "Web" setup, over in the Left sidebar under "Facebook Login," click the **Settings** option.
9. 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. By October 6, 2018 this will be required. Port 443 will need to be used instead of 80. You will also need to add the page that has the Facebook login button onto the end of the domain (ie. <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 are finished.
10. Now, back in the left sidebar, click the "Settings" option (not the "Settings" option under Facebook Login, but the main "Settings" section). From the "basic" screen,

note the "App ID" and "App Secret" values. You will need these two values when configuring Rock.

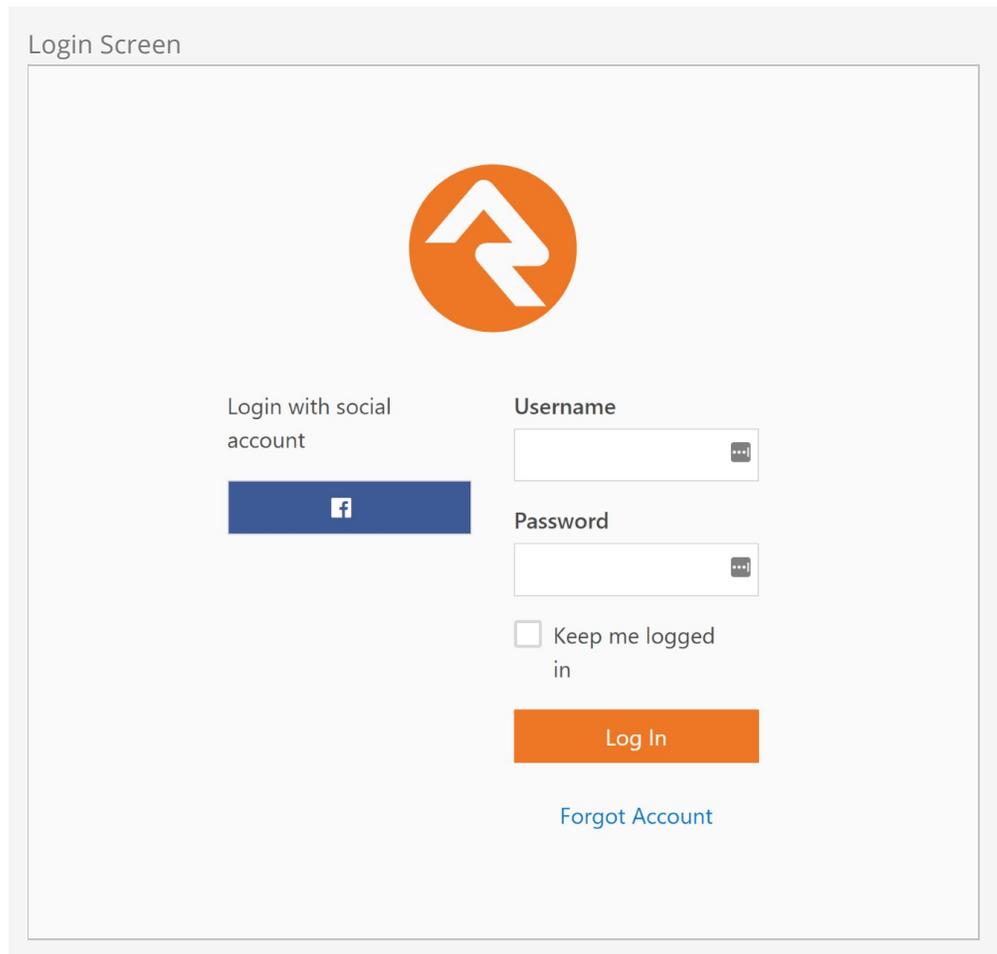
11. Before you make your app public, Facebook recommends submitting any additional features or permissions for App Review -- user_friends is one such feature that will need to be submitted if you would like to use the Facebook Friend Known Relationship within Rock.
12. To submit an item for approval click App Review on the left-hand menu and click Start a Submission on the Submit Items for Approval section.
13. A pop-up menu will present you with Login Permissions you can submit. Scroll down and check to user_friends and click Add.
14. You'll be redirected to a Current Submission page. Select Add Details on the right (if you chose to add multiple permissions you will need to do this for each one). You will also need to add an App Icon (1024 x 1024) and have Business Use selected under Settings in order to submit for approval.
15. An entry form will pop-up and this is where you need to tell Facebook how you will use the desired permission. Once you are finished describing how you will use the permission and how it will be beneficial to your organization and the individual, you will need to toggle the Web option to 'On' and provide detailed steps on how the app will use the permission.
16. Lastly, you will need to upload a screencast demonstrating how the login 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).

Step 2: Configure Rock

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

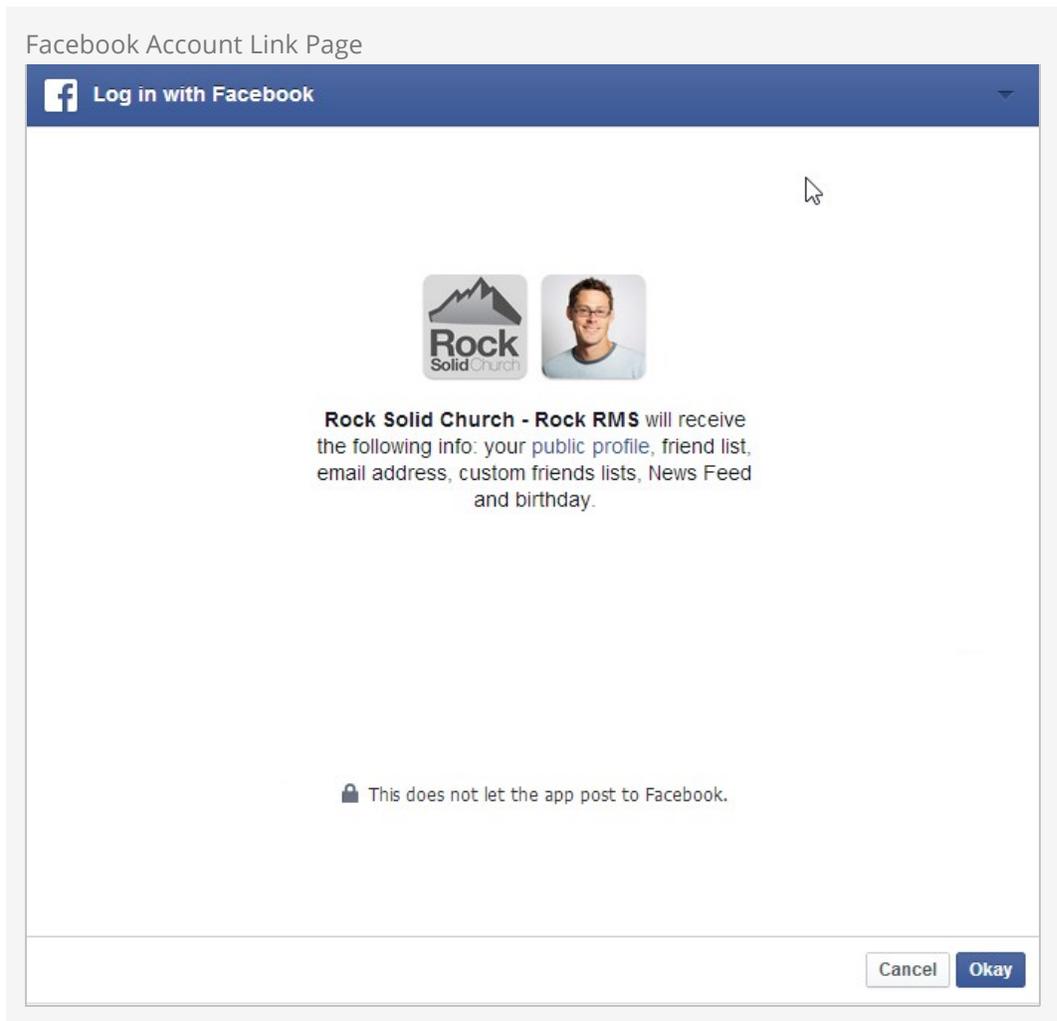
1. Activate the Facebook Authentication Service by navigating to the [Admin Tools >](#) [Security > Authentication Services > Facebook](#) page. Enter the Facebook "App Id" and "App Secret" that you saved from the previous steps, and make sure that the service is Active and Save your changes.
2. Now enable the Facebook login on any of your login pages by setting 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 set 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.

Login Screen



The image shows a login screen with a light gray background. At the top center is a circular orange logo with a white stylized 'A' and 'R' symbol. Below the logo, on the left, is the text 'Login with social account' above a blue button with a white Facebook 'f' icon. On the right, there are two input fields: 'Username' and 'Password', each with a small eye icon to its right. Below the password field is a checkbox labeled 'Keep me logged in'. At the bottom right is an orange 'Log In' button, and below it is a blue link labeled 'Forgot 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.



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 could not be made, a new Rock record is created 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 user logs in with Facebook, and we create a new person, we will pull following information from Facebook when creating that person:

- First Name
- Last Name
- Email
- Gender

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

1. If person does not 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 will want to use that project.
2. On the left hand of the screen expand the *APIs and auth* menu, click on the *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 of 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.

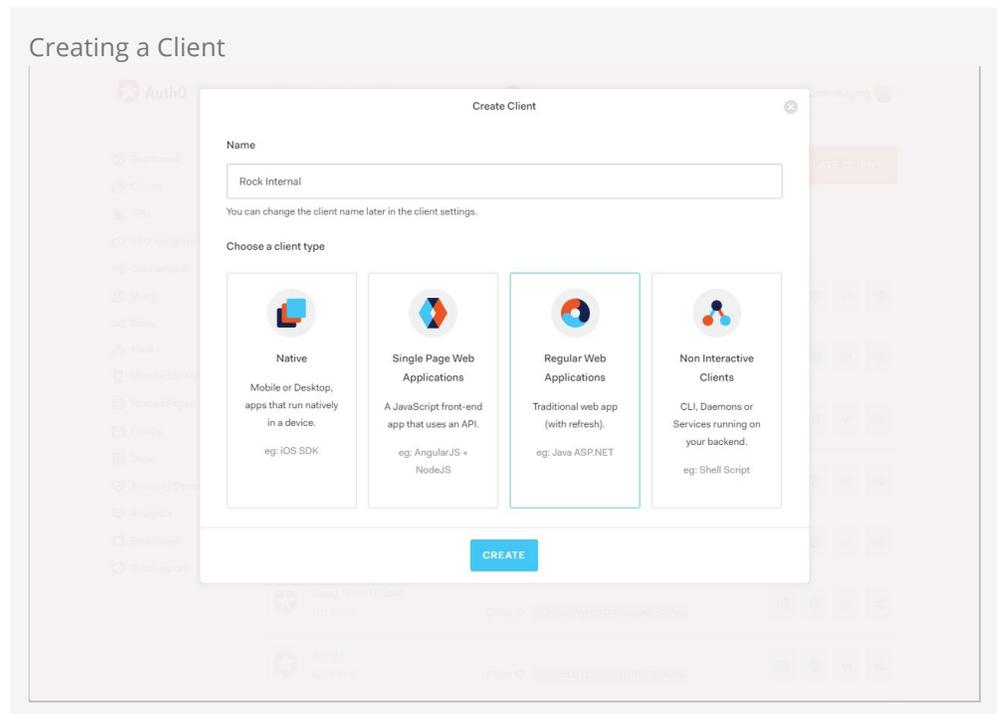
Auth0 Integration

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 orders of magnitude 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.

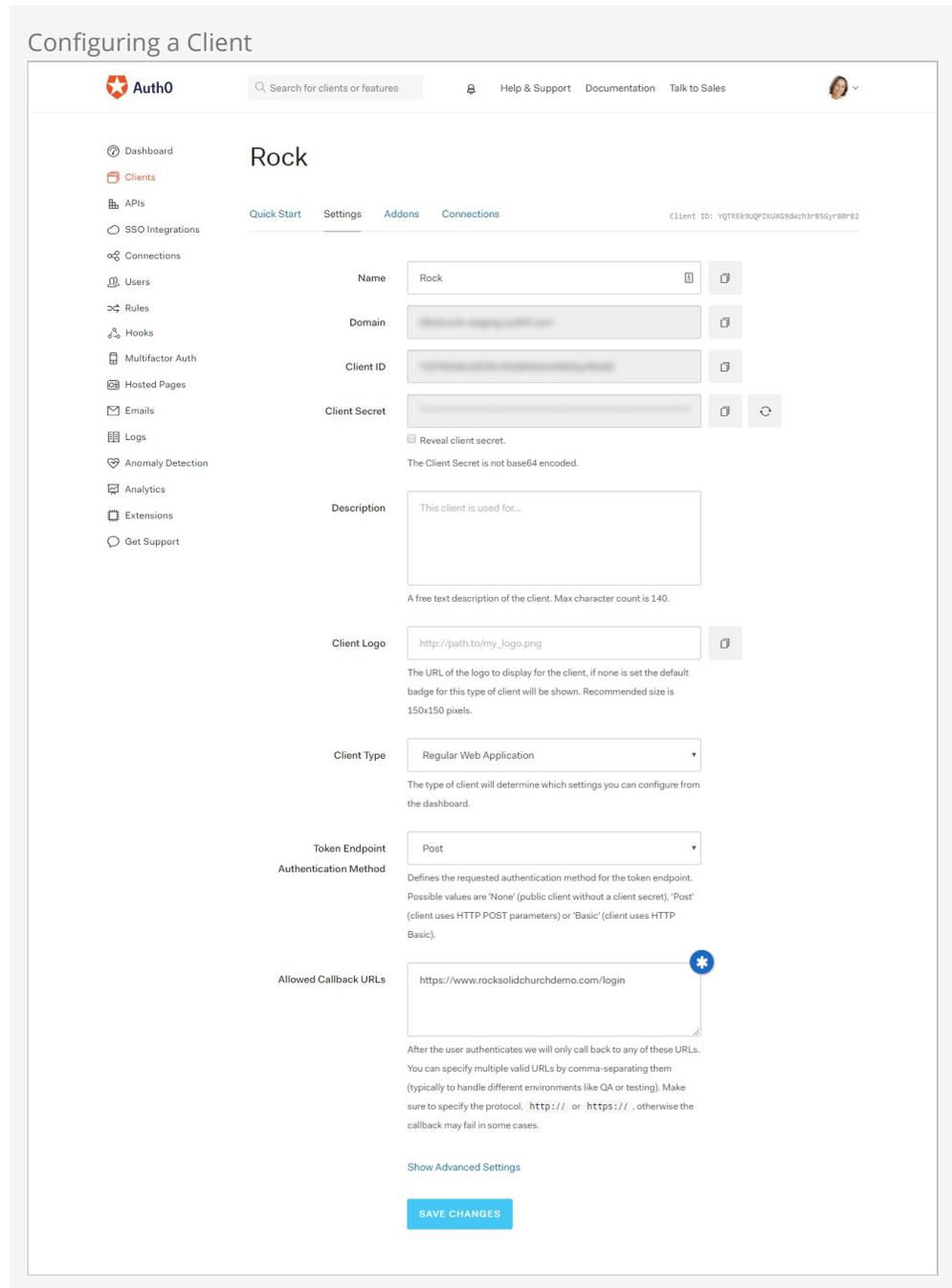
1. The first step is to create a new 'Client' in the Auth0 administrator site. Select 'Clients' from the left-hand navigation to get started.
2. Give your client a name and select the 'Regular Web Applications' option.



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.

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



4. Finally, you need to give your client some extra permissions. In the Auth0 manager head over to the APIs link then 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.

Authorizing a Client

The screenshot shows the Auth0 Management API interface. The left sidebar contains navigation options: Dashboard, Clients, APIs, SSO Integrations, Connections, Users, Rules, Hooks, Multifactor Auth, Hosted Pages, Emails, Logs, Anomaly Detection, Analytics, Extensions, and Get Support. The main content area is titled 'Auth0 Management API' and includes tabs for Quick Start, Settings, Scopes, Non Interactive Clients, Test, and API Explorer. Below the tabs, there is a message: 'Here is a list of your Non Interactive Clients. You can authorize these to request access tokens for this API by executing a client credentials exchange.' Below this, it states: 'Single Page and Native apps do not require further configuration. SPAs can execute the Implicit Grant to access APIs while Native Apps can do Authorize Code with PKCE for the same purpose.' A search bar is present with the text 'Filter by Application Name and Client ID'. The client 'Rock' is selected, with a CLIENT ID of 'YQTRK9UQPZKUXG9dWzh3rB5Gyr80rB2'. A green 'Authorized' status indicator is shown. Below, there is a section for selecting scopes to be granted to this client. The GRANT ID is 'cgr_T1xioVCah8TxiqaU'. The SCOPES section has a dropdown set to 'All' and a search bar. The following scopes are listed with checkboxes: read:client_grants, create:client_grants, delete:client_grants, update:client_grants, read:users (checked), update:users, delete:users, create:users, read:users_app_metadata (checked), update:users_app_metadata, delete:users_app_metadata, create:users_app_metadata, and create:user_tickets. At the bottom, there are 'UPDATE' and 'TEST' buttons.

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 external organization site as another user. For example, if someone calls needing technical support because of a problem with their person profile, an admin may want to view the page logged in as that person. 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 is 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.

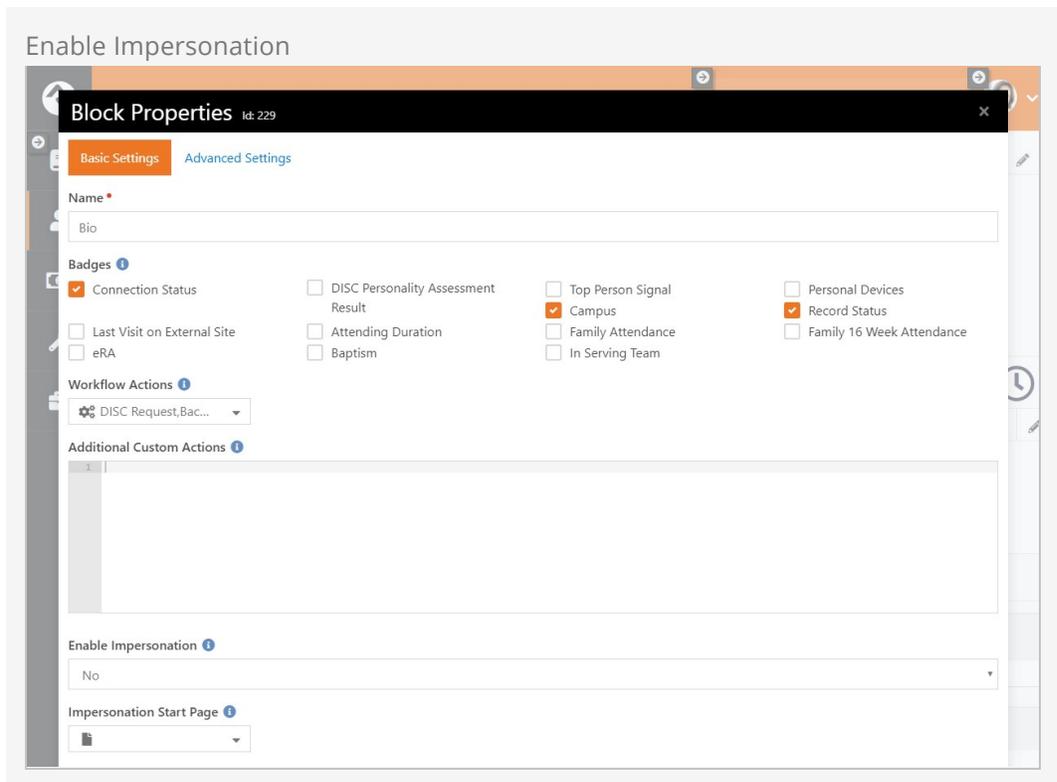
The **Person Token Use Legacy Fallback** tells Rock whether or not to use pre-v7 legacy person token settings if they come through the system. If the Person Token Use Legacy Fallback Value is set to No, those legacy tokens will be rejected. We recommend keeping the value set to Yes for a few months after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

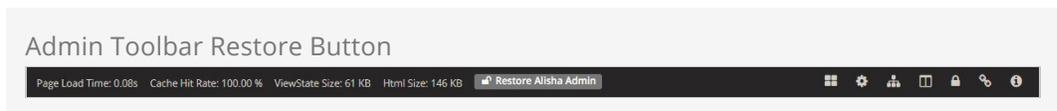
Impersonation is enabled in the Bio block settings of the Person Profile page.



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.



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

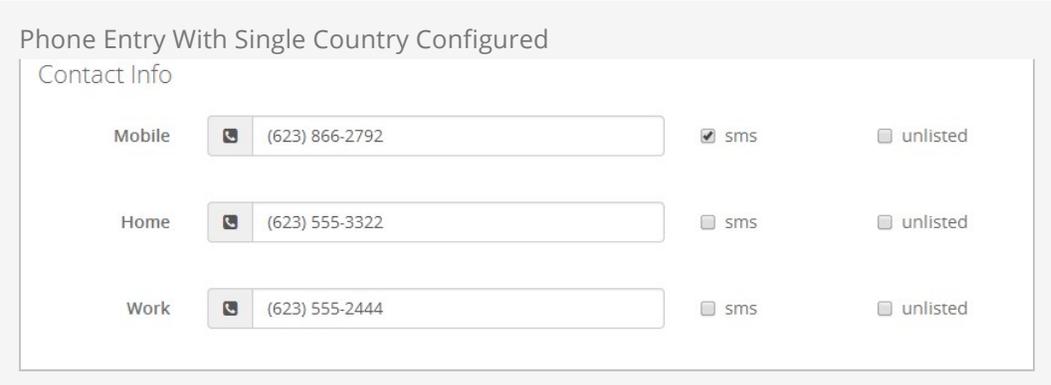
It is recommended that you set the *Impersonation Start Page* on the block to point at your Public-facing Rock site, if your primary use of this feature will be to impersonate attendees interacting with your public Rock pages. Failure to set a start page will cause Rock to remain on the *Internal* site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



Phone Entry With Single Country Configured

Contact Info

Mobile	<input type="text" value="(623) 866-2792"/>	<input checked="" type="checkbox"/> sms	<input type="checkbox"/> unlisted
Home	<input type="text" value="(623) 555-3322"/>	<input type="checkbox"/> sms	<input type="checkbox"/> unlisted
Work	<input type="text" value="(623) 555-2444"/>	<input type="checkbox"/> sms	<input type="checkbox"/> unlisted

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 is used when dialing the number
- **Description:** A short description of the phone formatting pattern
- **Match Expression:** This is a regular expression that is 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 \$#.

Search

Defined Type Detail

[Home](#) > [General Settings](#) > [Defined Types](#) > [Defined Type Detail](#)

Phone Country Code

Note Because this defined type is used by Rock, editing is not enabled.

Defines phone number country codes and how they should be formatted.

<p>Category Communication</p>	<p>Attributes for Defined Type</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Match Expression</td> <td style="width: 20%; text-align: right;"> </td> </tr> <tr> <td>Format Expression</td> <td style="text-align: right;"> </td> </tr> </table>	Match Expression		Format Expression	
Match Expression					
Format Expression					

Phone Country Code

	Value	Description	Match Expression	Format Expression	
	1	North American Phone Number without Area Code	<code>^\(d(3))\d(4)\$</code>	\$1-\$2	
	1	North American Phone Number with Area Code	<code>^\(d(3))\d(3)\d(4)\$</code>	(\$1) \$2-\$3	
	1	North American Phone Number with Country Code and Area Code	<code>^1\d(3)\d(3)\d(4)\$</code>	(\$1) \$2-\$3	

50 500 5,000 3 Defined Values

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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 will 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 Countries Configured

Contact Info

Mobile	1 ▾ (623) 866-2792	<input checked="" type="checkbox"/> sms	<input type="checkbox"/> unlisted
Home	1 ▾ (623) 555-3322	<input type="checkbox"/> sms	<input type="checkbox"/> unlisted
Work	1 ▾ (623) 555-2444	<input type="checkbox"/> sms	<input type="checkbox"/> unlisted

Formatting Phone Numbers on the Person Profile Page

There is 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 are 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. Enabling this is simple.

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 has not 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 these 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 will 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 grade/year an individual is in their education. 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 is possible for someone to fork Rock's source and localize the code and database contents. If you are interested in starting an internationalized

port let us know and we'd be happy to help share your work.

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. Here 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 are 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 will 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. The good news is Rock's cache is VERY fast as it uses the server's memory. Unfortunately, it 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 he 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 setup 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 the [Redis](#) for more information on the various server options available. 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/MSSOpenTech/redis/releases>. It is 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 will notice that once a page loads the second load of that page is super-fast. That's Rock's caching engine kicking in. 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 when it's down, but it will also be the first to load your page after an AppPool recycle.

Once Rock is started there is 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.