



Switchvox PBX Integration

Plugin Documentation

Overview

Rock supports plugins to allow communication with various phone systems. This specific plugin allows Rock to exchange information with a Switchvox phone system as well as to enable click-to-call functionality.

Setting Up SWITCHVOX

Before configuring the integration you'll want to ensure your Switchvox environment is configured correctly.

Ensure Connectivity

The first step is to ensure that there is connectivity between your Switchvox server and your Rock server. If they're on the same network, great! If not, you may need to configure Access Control Rules inside of Switchvox. The specifics of this step are outside the scope of this document. See your network administrator for assistance if needed.

Access Control Rules

Showing: All Networks to server vlan (10 total)

Rule Name	Network	Never Block IPs	Web Admin Portal	Web User Portal	Admin API	User API	Printing	IMAP	XMPP Server (Jabber)	XMPP Client (Jabber)	SIP	NTP	SNMP	Actions
All Networks	0.0.0.0/0	Off	On	On	Off	On	On	Off	On	On	On	Off	Off	
[blurred]	[blurred]	On	On	On	On	On	On	On	On	On	On	On	On	
[blurred]	[blurred]	On	On	On	On	On	On	On	On	On	On	On	On	
[blurred]	[blurred]	On	On	On	On	On	On	On	On	On	On	On	On	
[blurred]	[blurred]	On	On	On	On	On	On	On	On	On	On	On	On	
[blurred]	[blurred]	On	On	On	On	On	On	On	On	On	On	On	On	
[blurred]	[blurred]	On	On	On	On	On	On	On	On	On	On	On	On	
[blurred]	[blurred]	On	On	On	On	On	On	On	On	On	On	On	On	
[blurred]	[blurred]	On	On	On	On	On	On	On	On	On	On	On	On	
Rock server network server vlan	192.168.0/24	Off	Off	Off	On	On	Off	Off	Off	Off	On	Off	Off	

Configure User Permissions

You'll also need to create/configure a Switchvox user for the integration to use. You may choose to use the default administrator account. If you'd prefer to use a new account you'll need to ensure that it has proper rights to run. The screenshot below shows the minimum rights this user should have.

The screenshot shows the 'Modify Admin' interface with the 'Permissions' tab selected. The permissions are configured as follows:

Category	None	Read Only	Read/Write
Extensions	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Phones	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Call Routing	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Admins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Call Creation API	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
PBX Features	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Notifications	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Extension Features	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Media	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Call Reports	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Queue Reports	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Custom Reports	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diagnostics	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintenance	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Networking	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Red arrows point to the 'Read Only' option for 'Extensions' and 'Call Reports', and the 'Read/Write' option for 'Call Creation API'. The word 'necessary' is written in red next to each arrow.

Save Admin ✓

NOTE: The precise settings may change based on Switchvox version. Please see the Switchvox references for more information.

Configuring the Plugin

Once the plugin is installed, click to 'Admin Tools > System Settings > Phone Systems'. You should see the Switchvox plugin in the list. Before clicking to edit the settings, you will first want to adjust the security of the plugin. The 'View' action determines who will be able to view click to call links and be allowed to place calls. By default, we have enabled this for the 'RSR – Staff Worker' role. You may want to adjust this security though.

With security set, you can now proceed to the details of the Switchvox settings.

The screenshot shows a configuration window titled "Switchvox Properties" with a close button (X) in the top right corner. The window contains several sections for configuration:

- Active:** A dropdown menu set to "Yes".
- Server URL:** A text input field containing "https://switchvox.rocksolidchurchdemo.com".
- Username:** A text input field containing "admin".
- Password:** A text input field containing "password".
- Origination Rules Template:** A large text area containing a single line: "1 | {{ PhoneNumber }}".
- Phone Extension Template:** A large text area containing a single line: "1 | {{ PhoneNumber | Right:4 }}".
- Use Organization Name For Caller Id:** A dropdown menu set to "Yes".
- Default Origination Account:** A text input field containing "1363".
- Internal Phone Type:** A dropdown menu set to "Work".

At the bottom right of the window, there are two buttons: "Save" (orange) and "Cancel" (grey).

1. Be sure to activate the provider so that it will be available in Rock.
2. Provide the base URL to your Switchvox server (e.g. <https://switchbox.rocksolidchurchdemo.com>)
3. Provide the Switchvox username and password to use for making API calls.
4. Next up you have the ability to set origination rules. These rules help reformat the phone number before sending it to Switchvox to dial. For instance, you may need to:
 - Convert the full office phone number (e.g. (602) 555-5534) to just the extension (5534).
 - Add a 1 to the number for long-distance calls.
 - Strip off an area code for local calls.

This field allows you to write your rules in Lava. An example is below of a rule that will convert a full office number to just the extension. This is a common pattern you'll want to follow.

```
{% assign phonePrefix = PhoneNumber | Slice: 0, 6 -%}

{% if phonePrefix == '319297' -%}

  {% assign extension = PhoneNumber | Right:4 | AsInteger -%}

  {% if extension > 2339 and extension < 2481 -%}

    {{ extension }}

  {% else -%}

    {{ PhoneNumber }}

  {% endif -%}

{% else -%}

  {{ PhoneNumber }}

{% endif -%}
```

5. The Phone Extension Template allows you to get the internal extension from a full phone number. Say, for instance, your organization has direct dial-in numbers in the format of (602) 555-3454, where the last four digits are the internal extension. This template will define that logic. This allows you to have your internal phone numbers in a single format.
6. The Use Organization Name for Caller Id helps to determine what text to use for the caller id when using click-to-call. By default, the name of the organization will be used. If you disable this setting, however, the name of the caller will be used. While this may seem to be the most logical approach, it is often confusing for the person who clicked the click-to-call link to now get a call with their name showing up on the caller id.

7. When initiating a click-to-call Switchvox requires you to pass-in the extension that is authorizing the call. In most cases we'll know the logged in person who and can use their extension to lookup up the Switchvox account. But in some rare cases, this might not always be the case. Say for instance you make a REST API call to originate a call between two external numbers. In this case we'll use the account id of the default extension configured here as the authorizing extension. *This value must be the 'Account Id' of the extension. You can find the account id for an extension under 'Admin Tools > General Settings > Defined Types > Switchvox Extensions'.* You'll need to run the sync once for this defined type to be populated. Initially, you can set this value to a random number (e.g. '1234') and then come back and update it to a real value. Don't forget to come back though or your click-to-call will not work.
8. Finally, the Internal Phone Type determines which of the Rock phone types should be used as the internal number.

Additional Settings

Sync Job

When the plugin is installed, a job will be added to sync the call detail records and extension list. If you would want to adjust any of the settings you can under 'Admin Tools > System Settings > Jobs Administration > Switchvox Sync Job'. The first time this job is run it could take a while to run, as it will attempt to download all previous CDR records in your phone system.

Extension List

Once you have the Switchvox integration running it will automatically create and sync a list of extensions for you. These are stored as a Defined Type called 'Switchvox Extensions'. For the most part you don't need to worry about this list, it is automated to keep things current. It is helpful to know that it exists, as you may run into a case where the extension you are expecting to be tied to user A is actually tied to a different person. When this happens it's probably caused by both people in Rock having the same extension on their record. This list gives you a good sanity check to see what's happening.

Personal Preferences

Each person with access to use the click-to-call features can determine which number they would like to use to initial the call. By default, their internal extension will be used, but they can change that to use their mobile or home phone if they wish. This can be set under 'My Settings' from the login status drop-down in the upper-right part of any internal page.