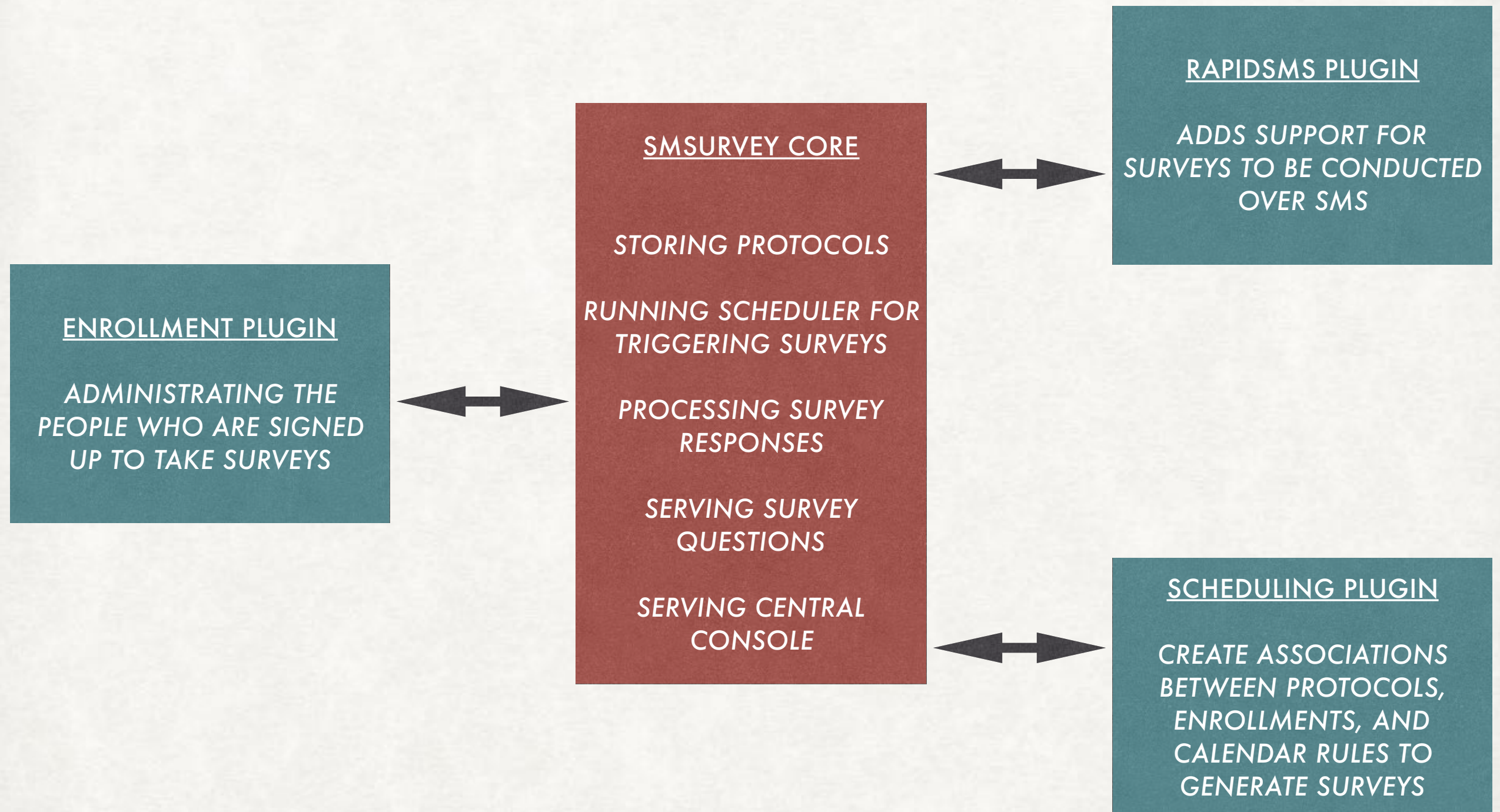
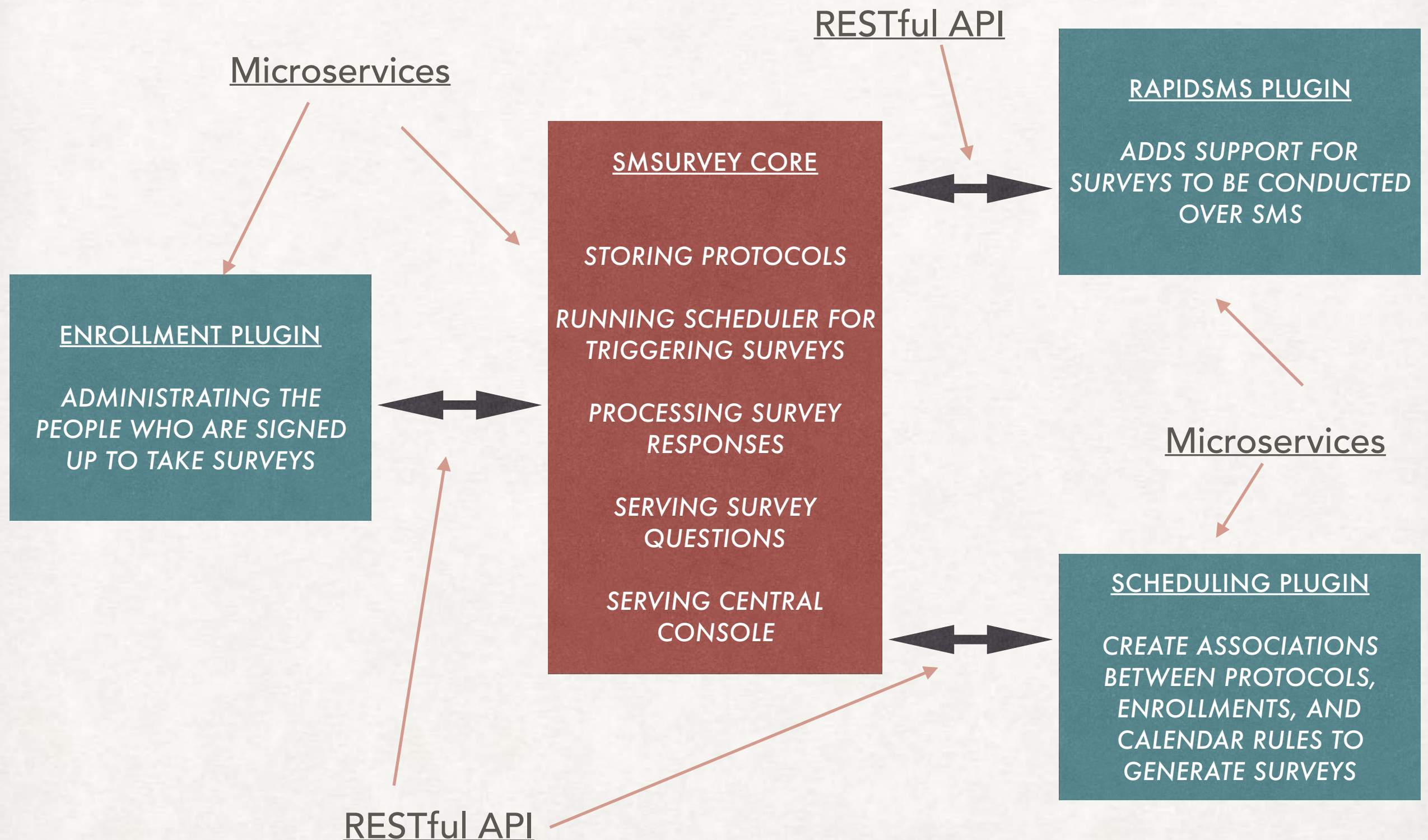


# WHAT IS THE ARCHITECTURE OF THE PROJECT?





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## SMSURVEY CORE

STORING PROTOCOLS

RUNNING SCHEDULER FOR  
TRIGGERING SURVEYS

PROCESSING SURVEY  
RESPONSES

SERVING SURVEY  
QUESTIONS

SERVING CENTRAL  
CONSOLE

SMSurvey Core is the spine of the system, but is actually quite dumb.

Its primary responsibility is to hold a store of all ongoing surveys, and their states.

It also has an inbuilt scheduler which will add to the store new surveys on a schedule.

Survey questions include in them code to execute when they receive a response. That code generates the next question in the survey (or terminates the survey if no further questions).

This is all the core really does (aside from hosting the user console).

All of these features are exposed on a secure RESTful API. Plugins are authenticated services that use the API.

A plugin may GET a question, and POST a response. It may POST to the scheduler, etc.



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Utilizes Tornado Web Server for the API

Uses Amazon DynamoDB to store the questions and answers

Uses Amazon RDS to store all other data.

# WHAT IS THE ARCHITECTURE OF THE PROJECT?

I am Sam. If I sign up to be a part of a survey, that means I am enrolled in that survey.

The group of all people signed up to that survey is the enrollment.

## ENROLLMENT PLUGIN

ADMINISTRATING THE  
PEOPLE WHO ARE SIGNED  
UP TO TAKE SURVEYS

Enrollments are managed in the SMSurvey ecosystem by the Enrollment plugin.

This plugin allows administrators to create a new Enrollment, which will generate a URL.

Volunteers, for example, may load that URL up on their tablets. They will be presented with a small webpage that allows them to enroll participants into that enrollment.

This design allows for easy separation of enrollments if we are managing many surveys.

# WHAT IS THE ARCHITECTURE OF THE PROJECT?

## ENROLLMENT PLUGIN

*ADMINISTRATING THE  
PEOPLE WHO ARE SIGNED  
UP TO TAKE SURVEYS*

Built using Django, Bootstrap.

Has a local store of some data, but primarily writes everything back to SMSurvey Core.



# WHAT IS THE ARCHITECTURE OF THE PROJECT?

In the survey world, a Protocol is the series of questions to be asked in a survey (sometimes with branching logic).

SMSurvey Core has a construct known as a TimeRule. When executed, a TimeRule generates a finite number of timestamps going into the future.

## SCHEDULING PLUGIN

CREATE ASSOCIATIONS  
BETWEEN PROTOCOLS,  
ENROLLMENTS, AND  
CALENDAR RULES TO  
GENERATE SURVEYS

Scheduling plugin provides a UI to build the TimeRules.

It then allows you to select a Protocol, and associate it with one of the Enrollments, and the TimeRule you have created.

Then it will load this data into SMSurvey Core's scheduling engine. At the timestamps generated by the TimeRule, new surveys will be created using the Protocols and Enrollments.

# WHAT IS THE ARCHITECTURE OF THE PROJECT?

## SCHEDULING PLUGIN

CREATE ASSOCIATIONS  
BETWEEN PROTOCOLS,  
ENROLLMENTS, AND  
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Built using Django, Bootstrap.

Has a local store of some data, but primarily writes everything back to SMSurvey Core.



# WHAT IS THE ARCHITECTURE OF THE PROJECT?

SMSurvey Core really cannot talk to the outside world, unless we want Participants to interact with the survey via the API.

The role of interacting with participants is delegated to plugins, like the RapidSMS plugin.

This plugin allows surveys to be conducted over SMS.

SMSurvey Core will “poke” this plugin when it has work for it.

Plugin will then request information regarding ongoing surveys, etc.

It will pass on questions from Core to the Participant, and responses from the Participant to Core.

## RAPIDSMS PLUGIN

ADDS SUPPORT FOR  
SURVEYS TO BE CONDUCTED  
OVER SMS

# WHAT IS THE ARCHITECTURE OF THE PROJECT?

## RAPIDSMS PLUGIN

*ADDS SUPPORT FOR  
SURVEYS TO BE CONDUCTED  
OVER SMS*

Built using Django with the RapidSMS template.

Uses Twillio as the text messaging service.



