

Documentation

Building an R Bot (with “PhorusBot” as a case study)

1. Introduction

PhorusBot is an analytics bot built with R using Telegram API Token. The bot was built to share my projects, contact, social media handle, links to dataset, business news, analytics etc. with users and allow users to have access to other bots such as Youtube Bot, Wikipedia Search Bot, Classical Music Bot etc.

2. How PhorusBot was Built

PhorusBot was built by generating API Access Token from Telegram chat bot called BotFather (@BotFather). The following steps should be taken to build a Bot with R;

Step 1: Generate Access Token

To generate access token connect with @BotFather (<https://telegram.me/botfather>) and follow the steps described here (<https://core.telegram.org/bots#6-botfather>).

Step 2: Install and Load the telegram.bot package

```
# installing telegram.bot package
```

```
install.packages("telegram.bot")
```

```
# loading or importing telegram.bot package
```

```
library(telegram.bot)
```

Step 3: Create an object of Your Bot

You create an object of your bot, in this case object of PhorusBot, using the code below and replace the “TOKEN” with Telegram Bot’s API Access Token generated from step 1 above. The token should look like this; 1234567890:AAEjAF9yJycaPofoLjKupZFe0QjJd9ers4J

```
bot <- Bot(token = "TOKEN")
```

Step 4: Creating the updater object

The Updater class continuously fetches new updates from Telegram and passes them on to the Dispatcher class. If you create an Updater object, it will create a Dispatcher.

Create the updater object using the “Updater” function by replacing the “TOKEN” with Telegram Bot’s API Access Token generated from step 1 above, in the code below. The token should look like this 1234567890:AAEjAF9yJycaPofoLjKupZFe0QjJd9ers4J

```
updater <- Updater(token = "TOKEN")
```

Step 5: Create Function(s)

The next step is to create function that should process a specific type of update that you desired.

In the case of PhorusBot, I created the function below;

```
start <- function(bot, update){  
  bot$sendMessage(chat_id = update$message$chat_id,text = print("Hello! Welcome to Phorus Analytics"))  
}  
  
email <- function(bot, update){  
  bot$sendMessage(chat_id = update$message$chat_id,text = print("mailphorus@gmail.com"))  
}
```

The goal is to have this function called every time the Bot (PhorusBot) receives a Telegram message that contains the `/start` command. To accomplish that, you can use a `CommandHandler` (one of the provided `Handler` sub-classes) and register it in the `updater`'s `dispatcher` (which is done with the `+` operator):

Note: You can create as many functions as possible, learn more on how to do this using this link (<https://github.com/ebeneditos/telegram.bot/wiki/Introduction-to-the-API>).

Step 6: Create `Handler` update the `updater`

```
start_handler <- CommandHandler("start", start)  
email_handler <- CommandHandler("email", email)  
  
updater <- updater + start_handler + email_handler
```

Step 7: Starting the Bot

To start the bot run the code below;

```
updater$start_polling()
```

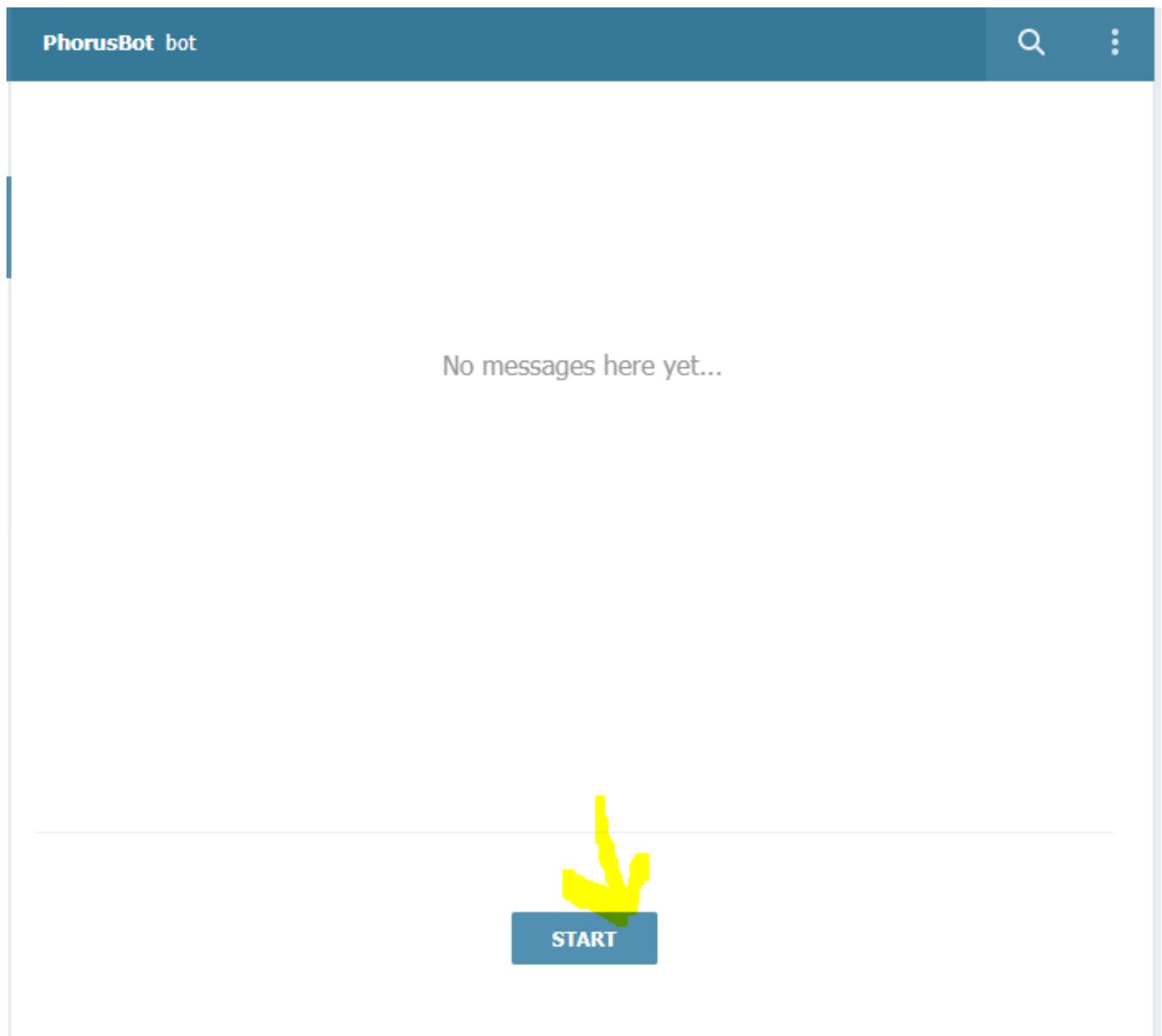
Start a chat with your bot and issue the `/start` command to the Bot (PhorusBot in my own case), it will reply you. To be able to chat with the Bot you search for the name of your Bot (e.g. PhorusBot) on Telegram application.

How to Interact with PhorusBot

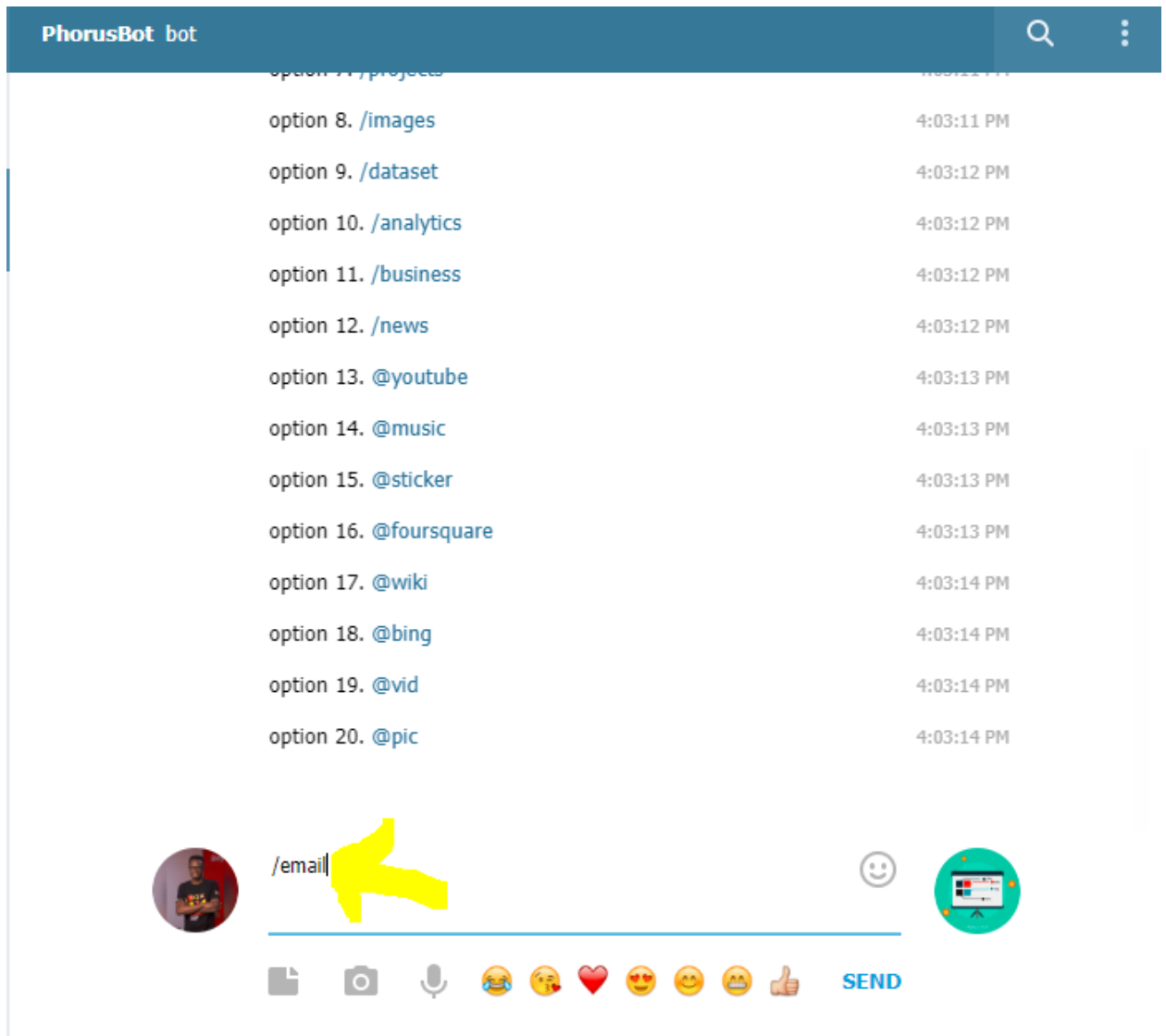
To interact with the PhorusBot or the Bot you created. You either have Telegram application installed or you access web version of Telegram using this URL (<https://web.telegram.org/>).

Then, follow the steps below;

1. Search for the Bot's name ("PhorusBot" in my own case)
2. Click on the Bot (e.g. PhorusBot)
3. Click "Start"



4. Enter the command of information you want as reply from the Bot (e.g. "/email")



5. To access other Bots like Youtube Bot, enter “@youtube” and type the title of what you wish to search for (e.g. Obama)

PhorusBot bot

option 7. [/projects](#) 4:03:11 PM

option 8. [/images](#) 4:03:11 PM

option 9. [/dataset](#) 4:03:12 PM

option 10. [/analytics](#) 4:03:12 PM

option 11. [/business](#) 4:03:12 PM


option 12. [/news](#) 4:03:12 PM


option 13. [@youtube](#) 4:03:13 PM


option 14. [@music](#) 4:03:13 PM




option 15. [@sticker](#) 4:03:13 PM











option 16. [@foursquare](#) 4:03:13 PM

**Former President Barack Obama Remarks**
459.3K views • 10.9K 👍 / 3.9K 👎 • 4 weeks ago

**"Obama out:" President Barack Obama's...**
37.1M views • 343.3K 👍 / 27.5K 👎 • 4 years ago

**President Barack Obama's Commencement Speech...**
689.4K views • 0 👍 / 0 👎 • 3 weeks ago

 [@youtube Obama](#)  

          SEND

6. You can as well search for other Bots such as @wiki, @sticker, @vid, @pic, @music etc.