

## Frequently Asked Question (FAQ) Library

### *How do I set up an API to export data to R?*

Data can be exported from REDCap to statistical packages including R. The following instructions will explain how to set up API (Application Programming Interface) to automatically export data to R.

Before setting up your API program, review these FAQ documents:

1. [FAQ: What is REDCap API?](#)
2. [FAQ: How do I request an API token?](#)

1. To set up REDCap API using R, you will need the following:

a. Computer installation

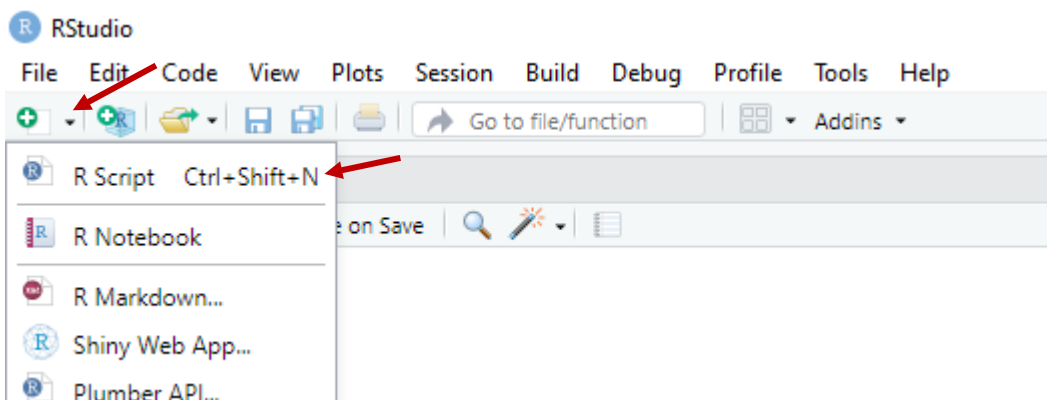
Software	R Packages
R	stringr
R Studio	tidyverse
Microsoft Windows	redcapAPI
	RCurl

b. REDCap **User Right** privileges (See also [FAQ: USER RIGHTS](#)):

✓ Data Export
✓ API Data Export

c. An API token for your project (See also [FAQ: API TOKEN](#))

2. Open R studio and create a new script.



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### 3. Copy the code below and paste in the script

```
#Created by Janet Miceli
# 10/18/17

##Call server
library(RCurl)
library(tidyverse)
library(stringr)
library(redcapAPI)

raw <- RCurl::postForm(
  uri = "https://poa-redcap.med.yale.edu/api/",
  token = "TOKEN",
  content = 'record',
  format = 'csv',
  type = 'flat',
  rawOrLabel = 'raw',
  exportDataAccessGroups = 'true',
  .opts = curlOptions(ssl.verifypeer=FALSE)
)

##Convert to data frame
backup <- read.csv(text = raw, stringsAsFactors = FALSE)

##Save as a csv
today <-format(Sys.Date(),"%m%d%y" )

File <- paste("FILENAME",today,".csv",sep="")
write.csv(backup, file = File , na="", row.names = FALSE)

##Export Metadata
redcapExportMeta <- function(APIKEY, URI) {
  if (!require('RCurl')) {
    stop('RCurl is not installed')
  }
  meta_data <- read.csv(text=postForm(uri=URI, token=APIKEY,
content='metadata',format='csv',
#RCurl options
.opts=curlOptions(ssl.verifyhost=2)), stringsAsFactors=FALSE,
na.strings='')
  subset(meta_data, field_type != 'field_type')
}

meta <- redcapExportMeta(URI = "https://poa-redcap.med.yale.edu/api/",
APIKEY = "TOKEN" )

Meta <- paste("FILENAMEmeta",today,".csv",sep="")
write.csv(meta, file = Meta , na="")
```



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4. To use the script with your REDCap project, enter your API Token in the two locations where you see “**TOKEN**” (in quotes) and insert the file path of the folder where you intend to store backups where you see **FILENAME**.

**Pro Tip:** Because R is idiosyncratic and does not always recognize '/', use double forward slashes '/' in your file path.

**Pro Tip:** Save to your SECURE box folder if you have Box Sync set up on your computer. This script will label the file as FILENAMEtoday'sdate.csv (ex: CoRECT020218.csv).

5. Select the full script and click 'run'.
  - a. Depending on the size of your project, it may take a few minutes for the program to finish running. Once it is complete, you will find both files in the folder designated in Step #4.