



## Quarterly Update – February 2021

### Attendees

Andy Nicholls  
Arne Schreiber  
Charles Mei  
Doug Kelkhoff  
Michael Carniello  
Eli Miller  
Joseph Rickert  
Juliane Manitz  
Lin Taft  
Mark Padgham (ROpenSci)  
Marly Gotti  
Matthias Trampisch  
Mike Stackhouse  
Nash Delcamp  
Nicholas Masel  
Pawel (Paul) Bernecki  
Lyn Taylor  
Yilong Zhang.

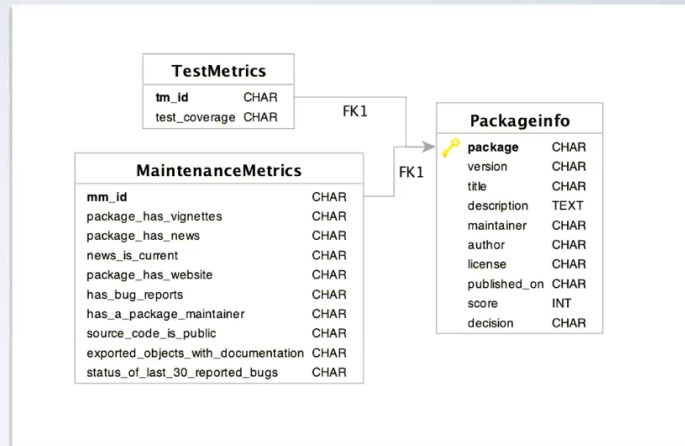
### Agenda

- Risk Assessment app update and demonstration - Marly Gotti
- New sub-team volunteers wanted - central repository
- General updates
  - o Comms / website
  - o The riskmetric package
  - o R Consortium
  - o Testing
  - o Stats catalogue
- AOB

## Update on the Risk Assessment app

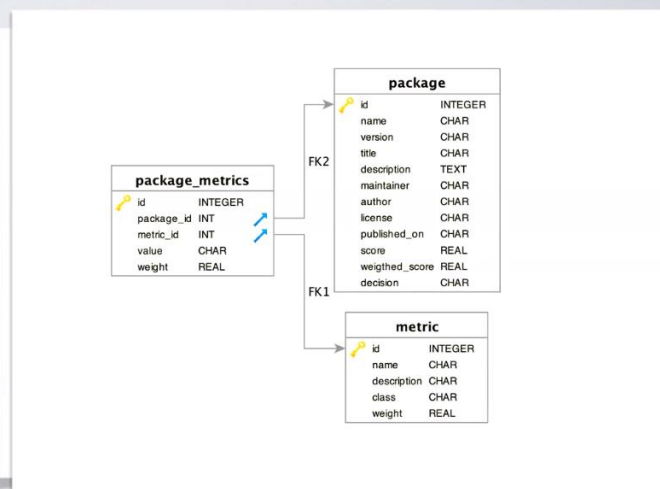
# DATABASE

- Redesign database
  - Unite metrics into a single table
  - Tables are object-centric
  - New tables:
    - package table: contains each package uploaded to the db
    - metric table: stores information about each metric as established my riskmetric
    - package\_metric: relates the metric table with the package table (contains each metric information per package)
- Dynamically create SQLite database and log file
- Improve inefficient queries. Replace dbSendQuery with dbGetQuery (SendQuery + Fetch + ClearResult)



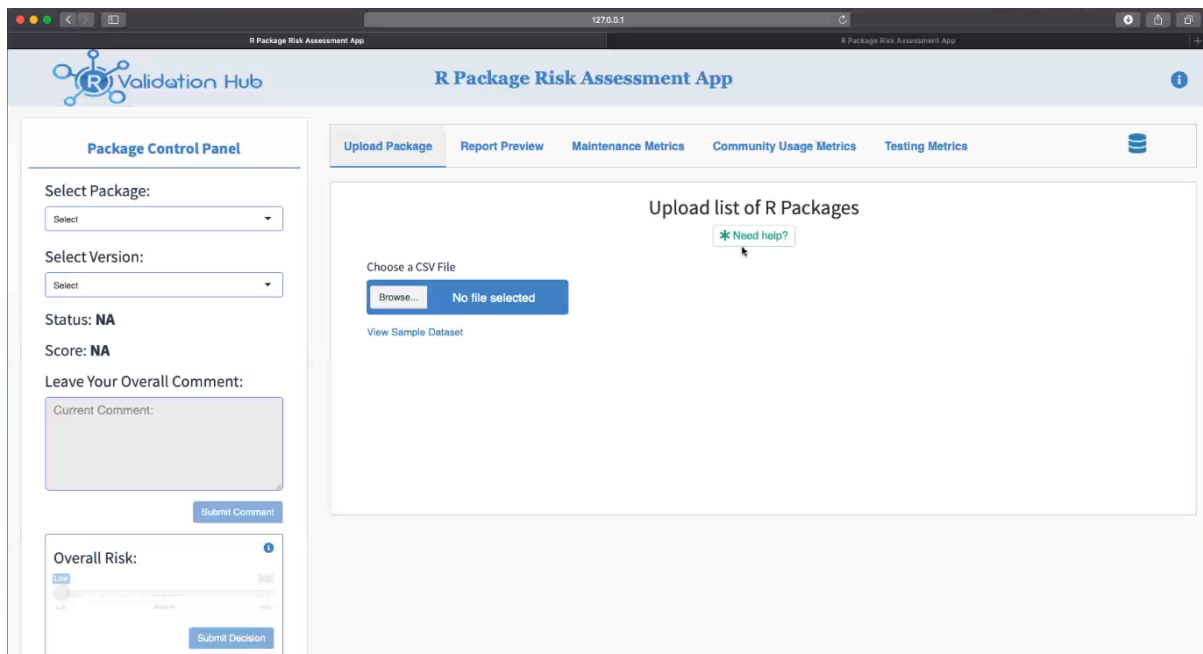
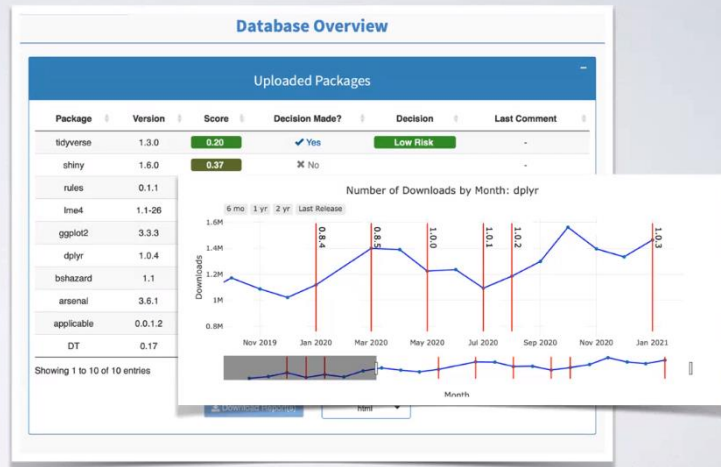
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# GENERAL UPDATES

- Database dashboard
- Displays each package on the DB (version, risk score, decision, last comment)
- Allows multiple report downloads
- Added a timeline-like plot on the Community Usage Metrics
- Shows the number of downloads of a package for different periods of time
- Restructured backend to address issues like code duplication, inefficient queries to the DB, unnecessary calls to observe instead of observeEvent, etc.



Marly selected a relative new package and showed the timeline plot. This reveals when it was released and download rate. You can select the timeline at the bottom to focus on a smaller review timeline. The Grey is the part not shown on the graph above.

## Package Control Panel

Select Package:

Select Version:

Status: **Under Review**

Score: **0.42**

Leave Your Overall Comment:

current comment:

Submit Comment

Overall Risk:

Low Medium High

Submit Decision

Upload Package

Report Preview

Maintenance Metrics

Community Usage Metrics

Testing Metrics



**PACKAGE MATURITY**

**8**

Months since first release.

**VERSION MATURITY**

**7**

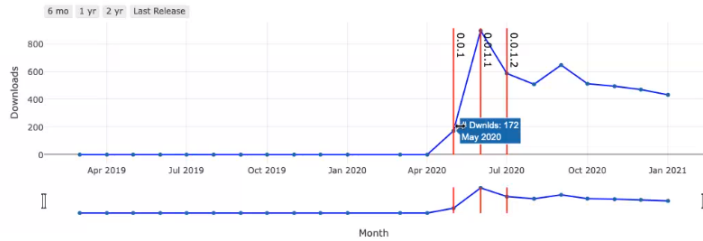
Months since version release.

**DOWNLOAD COUNT**

**4,716**

Downloads in Last Year

Number of Downloads by Month: applicable



Leave Your Comment for Community Usage Metrics:

Commenting as Admin ( Admin )

Submit

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Validation Hub R Package Risk Assessment App

[Return to Dashboard](#)

### Database Overview

Package	Version	Score	Decision Made?	Decision	Last Comment
tidyverse	1.3.0	0.20	✓ Yes	Low Risk	-
shiny	1.6.0	0.37	✗ No		-
rules	0.1.1	0.50	✗ No		-
lme4	1.1-26	0.20	✗ No		-
ggplot2	3.3.3	0.21	✗ No		-
dplyr	1.0.4	0.18	✓ Yes	Medium Risk	-
bshazard	1.1	0.82	✓ Yes	High Risk	-
arsenal	3.6.1	0.31	✗ No		-
applicable	0.0.1.2	0.42	✗ No		2021-02-15 20:15:24
DT	0.17	0.29	✗ No		-

Showing 1 to 10 of 10 entries

[Download Report\(s\)](#) Select Format: Html

For the Overall Risk Score, 1 is high risk, and 0 is low risk. NOTE that the decision score is assigned by the user – based on their personal preference to risk. The current “Score” is based on the current version of riskmetrics but an option to configure weightings is due in future. If new are metrics added to rismetric today, they will not exist in the app.

It’s just a proof of concept shown, for example, if you look at dplyr – score 0.18 so low score, but the user decision gave it a median risk. You can then go back to dplyr to check the rationale behind the decision of the user to rate it higher than the app selected.

Database dashboard is work in progress and intention is to add a second table that allows the user to add a second table to change the weight for each metric. This will allow the score for the package to change based on the weight you assign each metric. Weight of 0 means the metric wont be counted.

Validation Hub R Package Risk Assessment App

**Package Control Panel**

Select Package:

Select Version:

Status: **Reviewed**

Score: **0.18**

Leave Your Overall Comment:

current comment:

[Submit Comment](#)

**Overall Risk:**

[Submit Decision](#)

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**Maintenance Metrics**

- PRESENCE OF VIGNETTES?** YES (The package has 9 vignettes)
- ASSOCIATED WEBSITE URL?** YES (Website: https://dplyr.tidyverse.org)
- NEWS?** YES (The package has a NEWS file)
- NEWS IS CURRENT?** YES (NEWS file contains an entry for the current version number)
- BUGS PUBLICLY DOCUMENTED?** YES (Bug reports URL: https://github.com/tidyverse/dplyr/issues)
- BUG CLOSURE** 83.33% (Percentage of last 30 bugs closed)
- DOCUMENTATION** 99.65% (Percentage of exported objects documented)
- SOURCE CODE PUBLIC?** YES (Source code URL: https://github.com/tidyverse/dplyr)
- HAS A MAINTAINER?** YES (Hadley Wickham <hadley@rstudio.com>)

Leave Your Comment for Maintenance Metrics:

Commenting as Admin (Admin)

[Submit](#)

Comments(0):

Currently the name of the metric & description comes from the App. However, to be able to populate new metrics in the app, we'd need the riskmetrics package to house the Label & description which currently it doesn't have. So the app assigned these based on the variable name.

Marly asked the wider group if there was anyone interested in contributing to the app to get in touch with her. Welcome to add issues on github and come with ideas for progress/development.

There was a question, if a new metric is added to riskmetrics, how long would it take to get into the App? – it would be quicker if the labels and description of the metrics came from the riskmetrics package – at the moment they are assigned within the App.

Is there any restriction of the choice of database – currently single live sql database doing live queries, if you want to change to a different database internally, then you could do an issue on github and do that.

## Central Repository



Conversation ongoing regarding structure of a repository and how this may be possible to get started. Doug Kelkhoff updated the group. How packages get reviewed/assessed/approved and how we'd build that into a repository assessment of risk, for use with big pharma /small pharma/ regulators is all under discussion. If people are interested in getting involved in the team please reach out. There is also a new slack channel Rvalidationhub slack.com kicked off for discussion.

## General Updates

Riskmetrics package is close to CRAN release.

Conferences that the R validation hub will be attending:

JSM Aug 7<sup>th</sup>-12<sup>th</sup>.

- ASA biopharma workshop (BIOP 2021) 21-23 sept 2021
- PSI: virtual 21 to 23 June 2021
- Hopefully
  - Use R! 5-9 July 2021
  - DIA: 27 June-1 July 2021
  - JSM 7-12 Aug

Please come “visit” us/share our sessions/ and reach out to us for discussion.

The R consortium are working on a RTS Certification for statistical accreditation for someone working in a SAS/R regulatory environment. Please get in touch if you want more detail.

Mike Stackhouse and team are working on a stats catalogue collating documentation detailing differences between SAS & R.

Testing sub-stream: At GSK they are built a suit of tests for qualification of R. The plan is to release this perhaps in April/May and hence this can be used as the basis of the testing stream. The tests are based on datasets that are available in literature.

Thank you for attending!