

Using RStudio Package Manager with RStudio or R - Enclave Platform

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Purpose

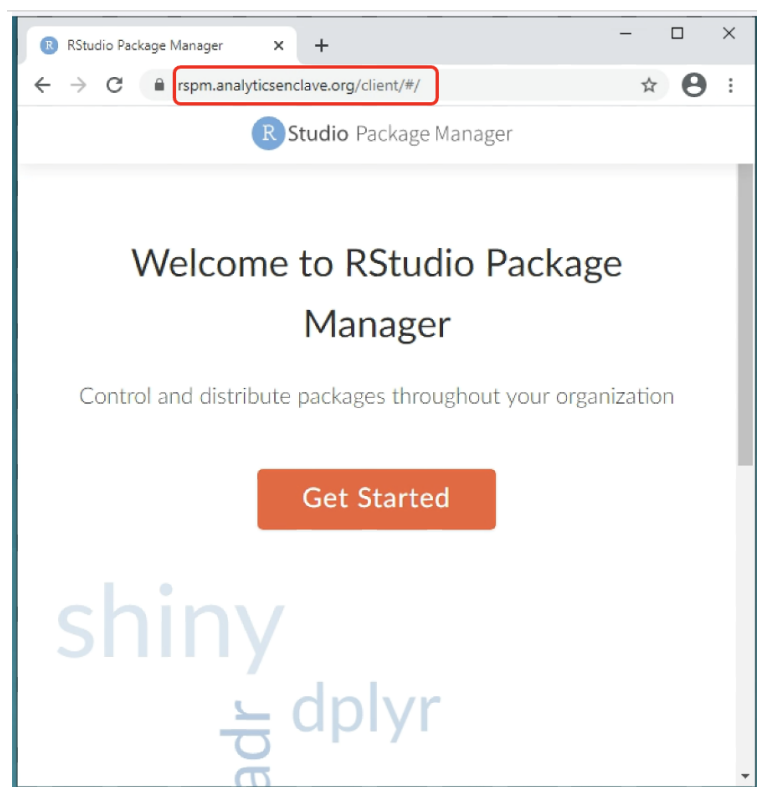
This document outlines the basic steps for using RStudio Package Manager (RSPM) in Enclave Platform to configure repositories and access packages.

Prerequisites

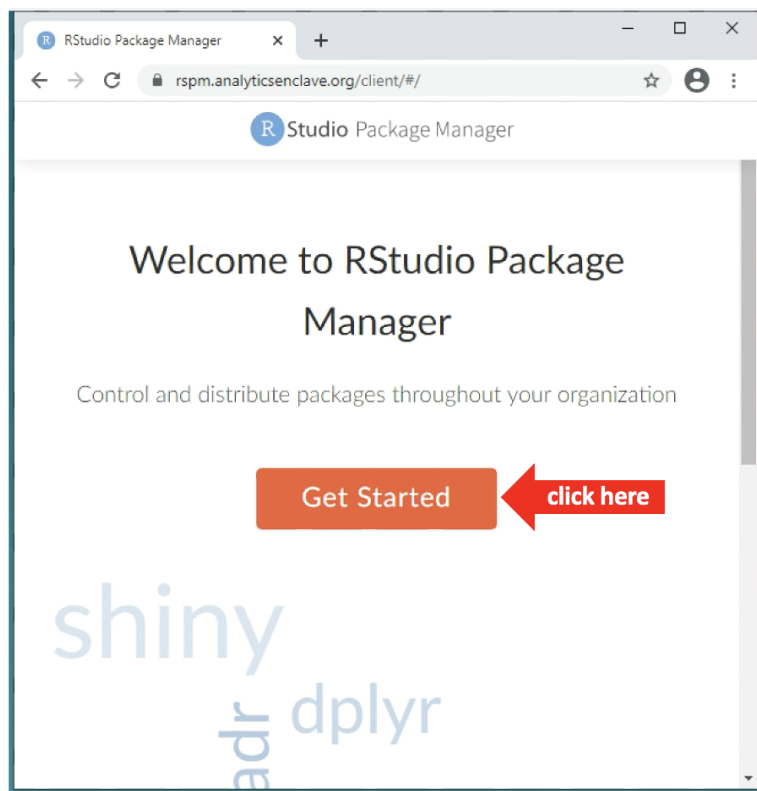
1. Access to Enclave Platform should already be granted and your workspace provisioned. If you do not have approval to access the Enclave Platform, complete and submit the [Access Request Form](#).
2. You should be logged on to your Enclave Windows VDI. You cannot access the Enclave environment and resources therein from outside the platform.

I. Connecting to RSPM repositories

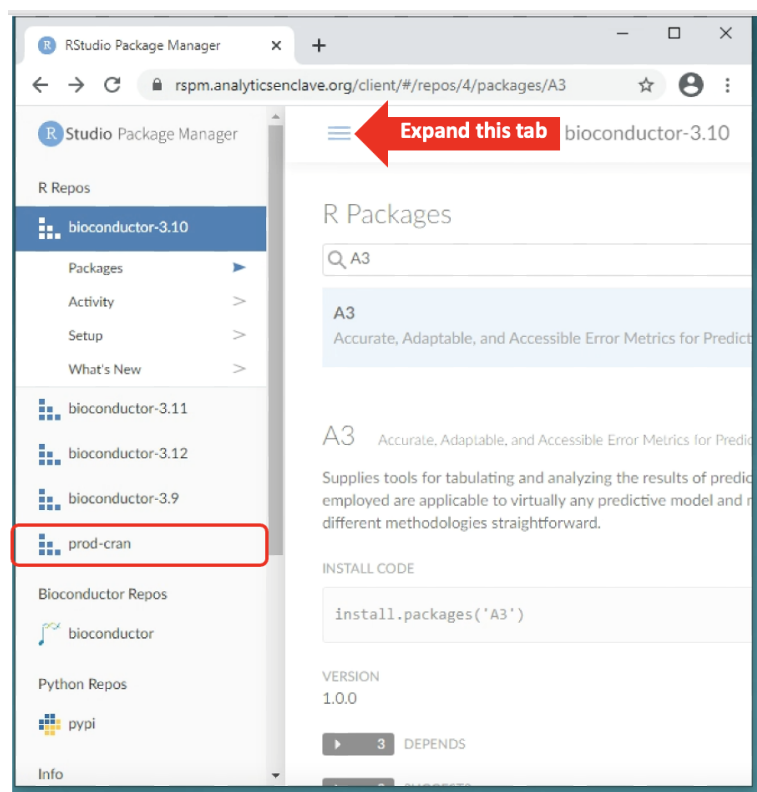
Using the available browsers (Google Chrome or Firefox) navigate to <https://rspm.analyticsenclave.org/client/#/>



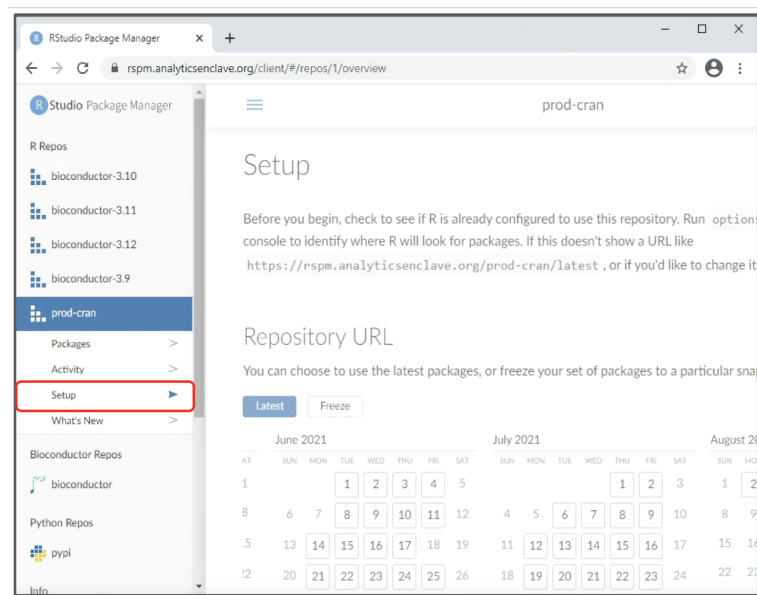
Click on the **Get Started** tab



Navigate to **prod-cran**



Click on the **Setup** tab from the sub-menu

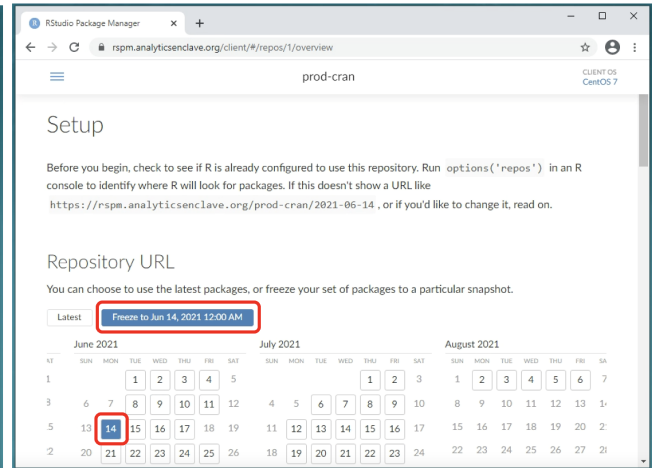
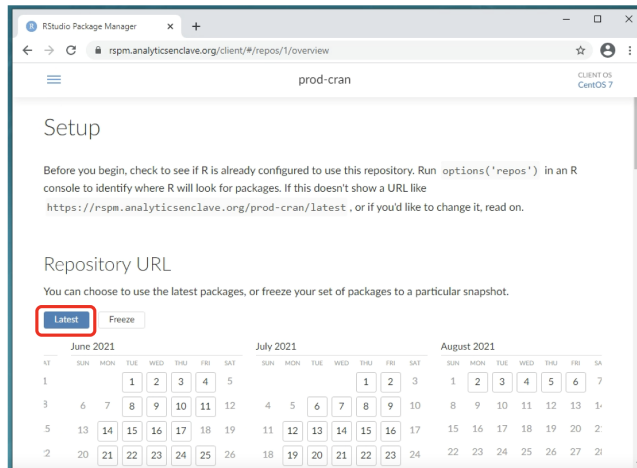


You may configure your RStudio environment with RSPM in different ways. For example: (1) using only the latest packages from a repository (<https://rspm.analyticsenclave.org/prod-cran/latest>), (2) using a set of packages from a fixed version of a repository, or (3) using binary or source packages.

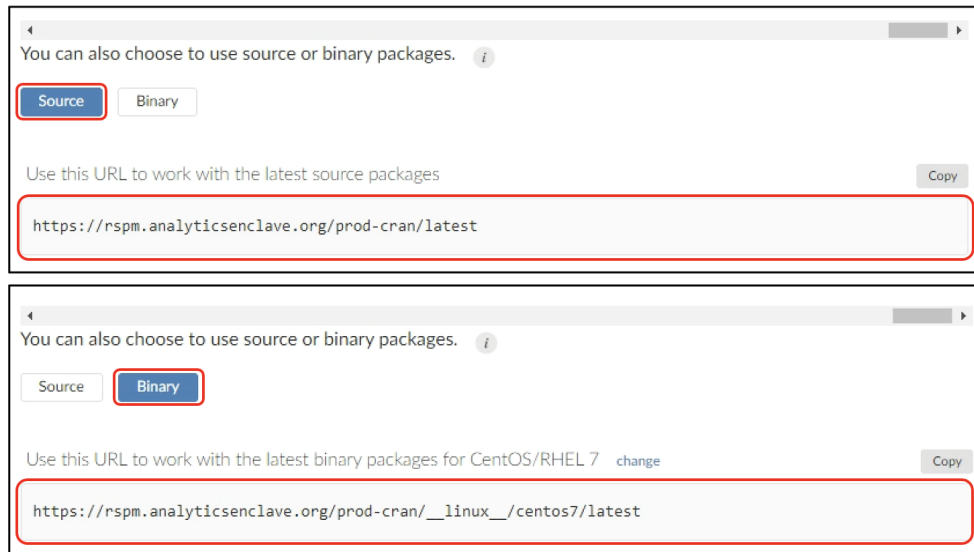
Use binary package installations from RSPM wherever possible to speed up deployment time.

Select latest to use the latest packages from the repository

Select a specific date to use a fixed version of the repository i.e. the set of packages is added from CRAN as they existed on June 14, 2021, the date the source was created



Select binary or source packages

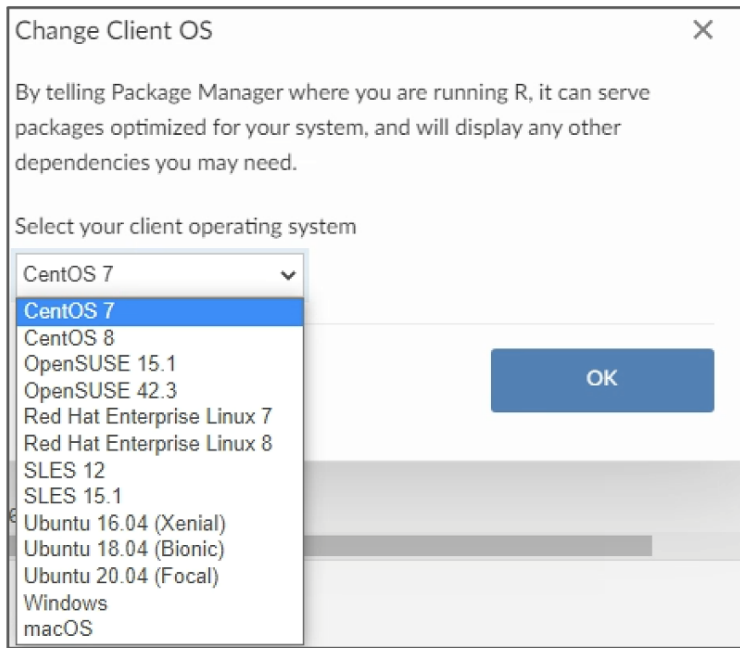


Each repository in RSPM will contain a Setup web page with instructions for configuring R to use RSPM. Once configured, you can access packages using standard functions such as `install.packages()`, `available.packages()`, `packrak`, and `renv`.

The repositories in RSPM are CRAN-like repositories thus you can use the usual R functions to access, query, and install packages.

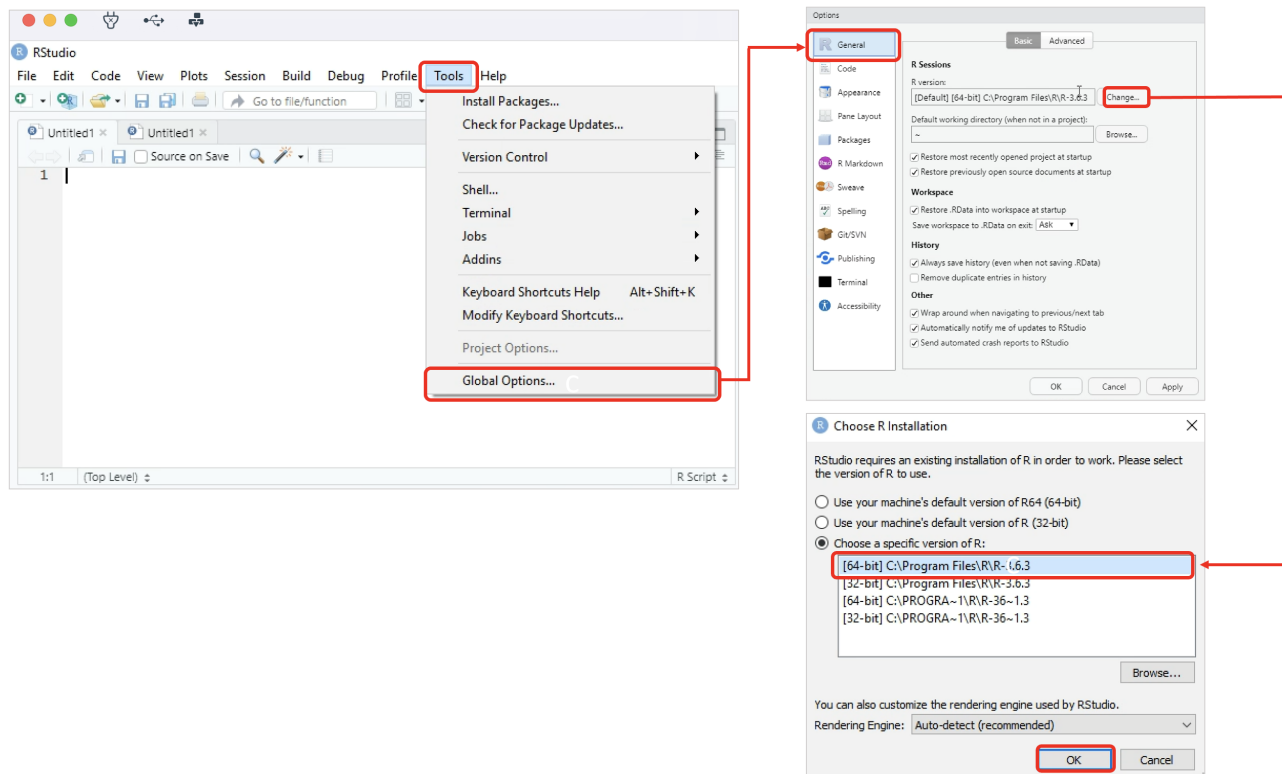
II. Configuring RSPM repositories

Install the system prerequisites for the repo's packages



Version Selection

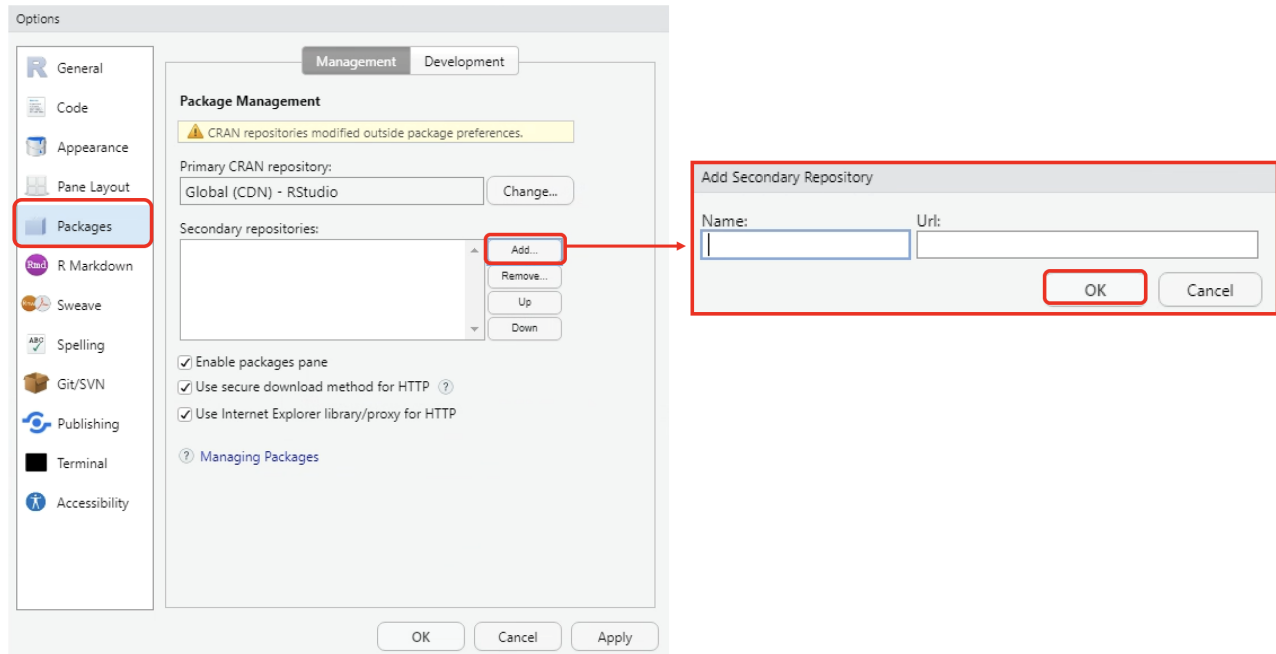
Selecting specific version of R as depicted in the diagram below. When you switch versions, remember to save your workspace before restarting the session to access the newly selected version of R you want to use. As of August 2021, the available versions are R 3.6.3 and R 4.0.4.



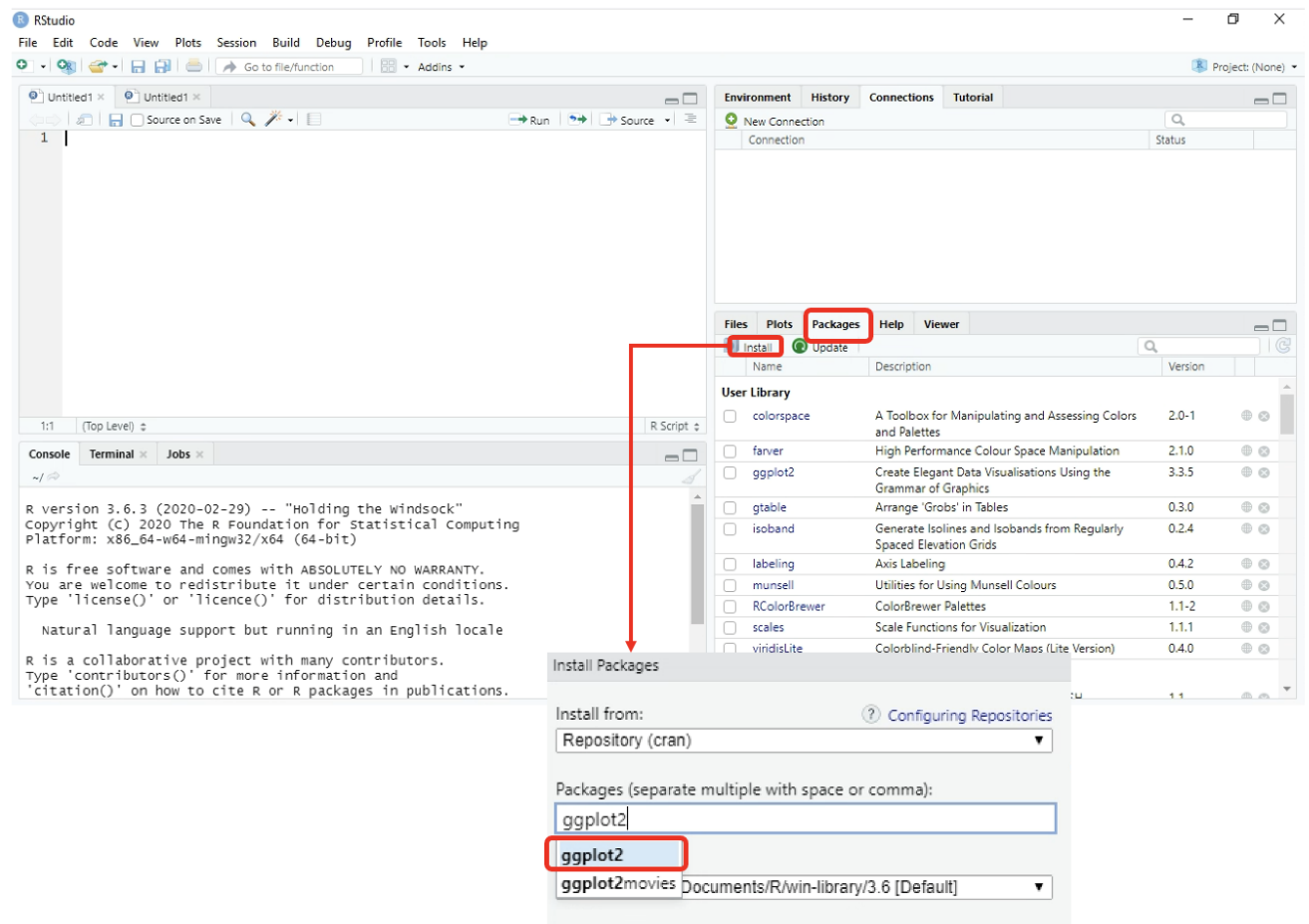
Using Packages INSIDE RStudio

In RStudio, go to the **Tools** section of the main toolbar and select **Global Options**. In the **Packages** sub-menu, the **Primary CRAN repo** is preset to Global (CDN) – RStudio. Click **Add** and type in the name and repository URL of the secondary repository and click **OK**.

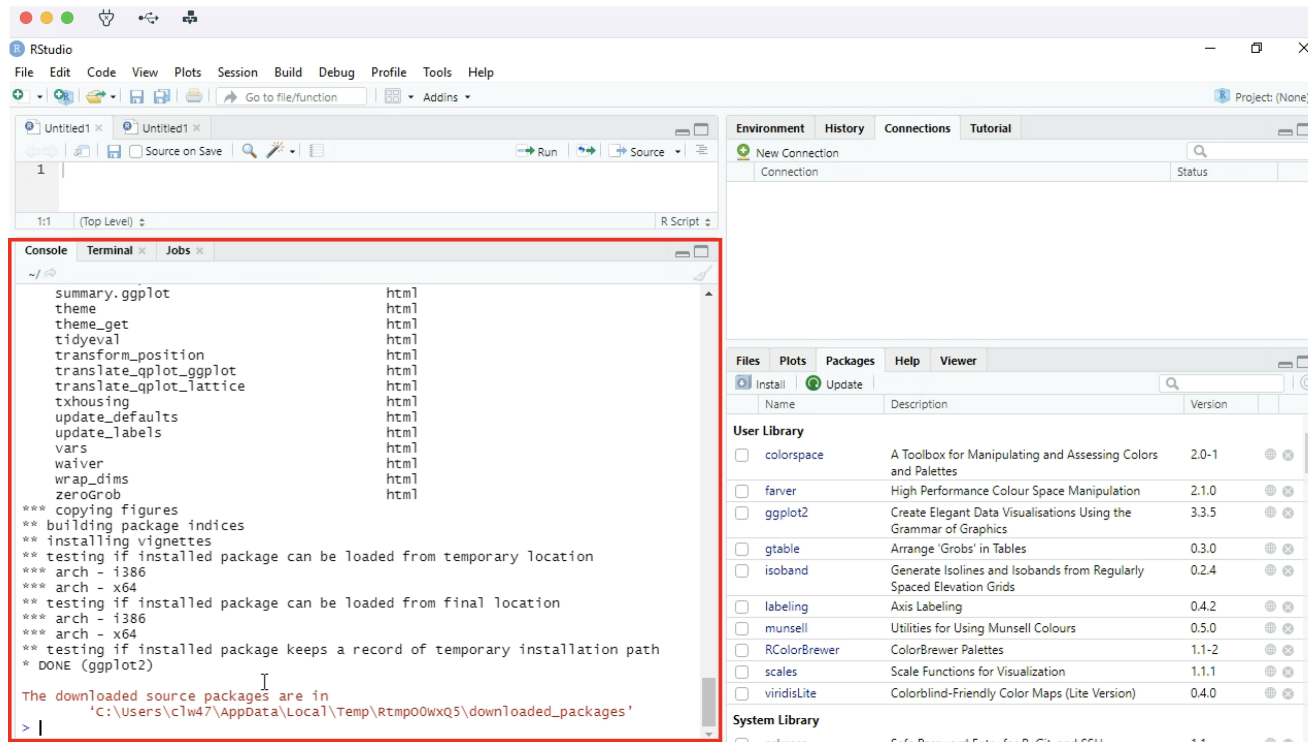
For projects requiring strict reproducibility, RStudio Support recommends configuring R to use a repository URL with a transaction ID. Versioning is available for all repository and source types.



Example 1: Installing ggplot2, a popular graphics package in R

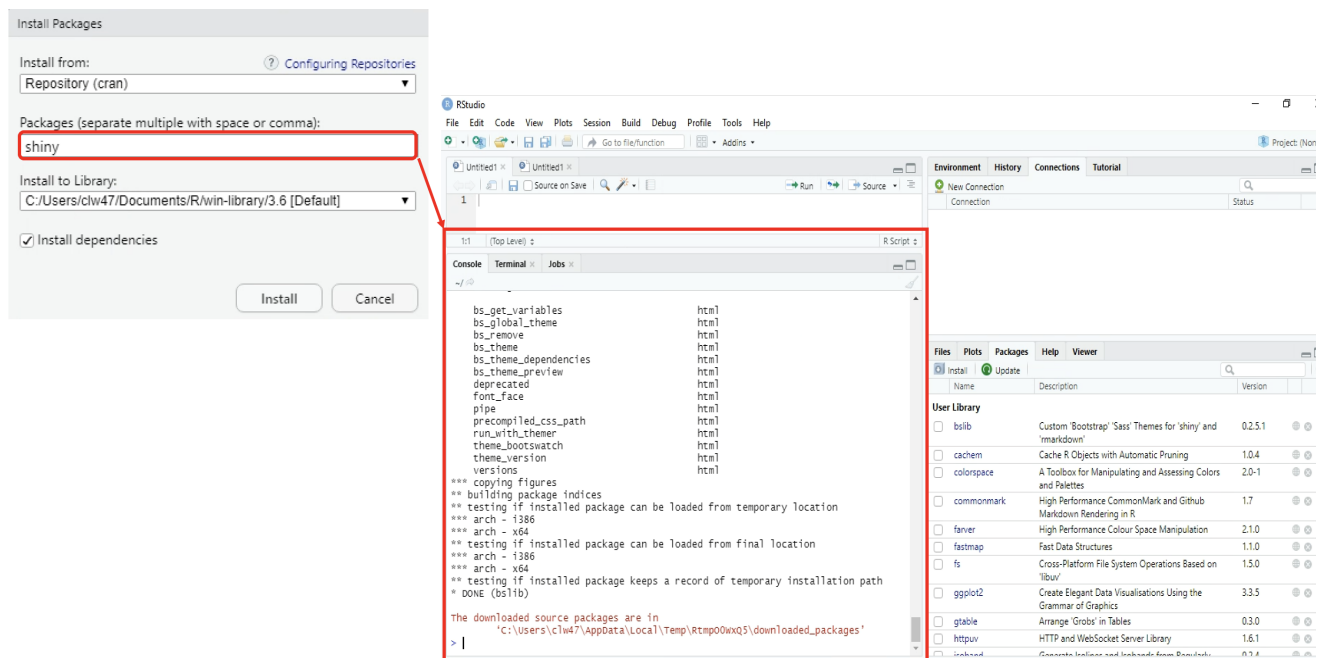


You can also run the following command `install.packages("ggplot2")` from the Console



Example 2 – Installing shiny

You can also run the following command `install.packages("shiny")` from the Console



Using Packages OUTSIDE RStudio

To configure R outside of RStudio, you can make use of the [RSPM guided setup](#) as follows.

1. Click **Setup**
2. Click **prod-cran** repository mirror
3. Choose your Distribution (OS)
4. Click **Latest**

Setup

This page helps you obtain frozen URLs and has instructions on how to use those frozen URLs to install packages. For more information about this feature, please refer to the [Quick Start guide](#).

Before you begin, check to see if R is already configured to use this repository. Run `options('repos')` in an R console to identify where R will look for packages. If this doesn't show a URL to your RSPM instance, like <https://rspm.analyticsenclave.org/prod-cran>, or if you'd like to change to a different snapshot, read on.

Repository URL

Use the latest packages, or freeze to the packages that were available on a particular date. All dates presented by RSPM are in UTC to avoid any timezone discrepancies between environments.

Optional - "latest" satisfies most use cases

SCROLL DOWN FOR SETUP STEPS

Scroll down and follow the tailored RSPM instructions on the page based on your selections.

Add the following line to your R startup file (**Rprofile.site** or **.Rprofile**) to maintain the configuration across R sessions.

```
options(repos = c(REPO_NAME = "https://rspm.analyticsenclave.org/prod-cran/latest"))
```

III. Using RSPM to Search for Packages

RSPM is a public mirror of CRAN, Bioconductor and Pypi public repositories.

As such, RSPM simplifies the search for (and installation of) packages right from its Web UI, let's use it to search for the R package **dplyr** as follows :

R Packages

Q dplyr

dplyr 1.1.1
A Grammar of Data Manipulation

dplyr.teradata archived
A 'Teradata' Backend for 'dplyr'

dplyrAssist 0.1.0
RStudio Addin for Teaching and Learning Data Manipulation Using 'dplyr'

extdplyr archived
Data Manipulation Extensions of 'Dplyr' and 'Tidyr'

dplyr A Grammar of Data Manipulation

Overview **Readme**

A fast, consistent tool for working with data frame like objects, both in memory and out of memory.

INSTALL CODE **Copy**

```
install.packages("dplyr")
```

VERSION 1.1.1

ABOUT
<https://dplyr.tidyverse.org>, <https://github.com/tidyverse/dplyr>

13 **IMPORTS**

As you can see, the Overview page provides important details such as installation code, source file, binary file and available versions of the package(s).

You may even download the OS-specific binary version of the package:

1. Change the Operating System selection
2. Change the R version

NEEDS COMPILATION

yes

SIZE

1.08 MB

SOURCE FILE

https://rspm.analyticsenclave.org/prod-cran/latest/src/contrib/dplyr_1.1.1.tar.gz

BINARY FILE FOR WINDOWS AND R 4.2

https://rspm.analyticsenclave.org/prod-cran/latest/bin/windows/contrib/4.2/dplyr_1.1.1.zip

ARCHIVED VERSIONS

1.1.0

Jan 29, 2023 10:50 PM UTC

1.0.10

Sep 1, 2022 9:20 AM UTC

1.0.9

Apr 28, 2022 1:30 PM UTC

1.0.8

Feb 8, 2022 9:30 AM UTC

1.0.7

Jun 18, 2021 11:20 PM UTC

IV. Relevant References

RStudio Package Manager Webinar - <https://www.rstudio.com/resources/webinars/introduction-to-the-rstudio-package-manager/>

Managing R with .Rprofile, .Renv, Rprofile.site, Renv.site, rsession.conf, and repos.conf

R Markdown Reference Guide - <https://www.rstudio.com/wp-content/uploads/2015/03/rmarkdown-reference.pdf>

