

# Prerequisites

## Manual for R package `reservoir`

### Step 1: Get R and R Studio

**R** is an open source, statistical programming environment, popular with academics in a variety of fields, including hydrology and water resources engineering.

You can download and install the latest version of R from <https://cran.r-project.org/>.

**R Studio** is a powerful Integrated Development Environment (IDE) for R. Whilst an IDE is not absolutely necessary to use `reservoir`—or indeed any R library—it makes life lot easier. There are various IDEs for R, but R Studio is the most popular and its capabilities extend well beyond writing basic R code (this manual was written using R Studio, for instance).

Download and install the latest version of R-Studio from <https://www.rstudio.com/products/rstudio/download/>.

Some basic knowledge of R is recommended (though not absolutely necessary) for following this manual and working with *reservoir*. Here are some popular introductory courses for first-time users:

- DataCamp’s free introduction to R
- ComputerWorld’s Beginners Guide to R
- swirl

### Step 2: Get the *reservoir* package

You can download *reservoir* directly from the R console. Two versions will be available at any time: a stable release version (recommended), stored on the Comprehensive R Archive Network (CRAN), and a development version, stored on Github.

You can get the release (CRAN) version using `install.packages`:

```
install.packages("reservoir")
```

New developments to *reservoir* won’t be always be available on CRAN. If you want to make sure you have all new features, you can install the development version using `devtools`:

```
install.packages("devtools")
devtools::install_github("swd-turner/reservoir")
```

Once installed, load *reservoir* into the working environment using:

```
library("reservoir")
```

Access package documentation using:

```
?reservoir
```