ArcGIS R API direction

May 22nd, 2023

Recently discussed R API with Lauren and there are a few key take-aways.

* Clean up user stories
  + notably that mentioning {arcgisbinding}’s ability to read remote services make the story muddy
  + Focus on capabilities more than user stories
* Initial release should support read at minimum and ideally write / update if feasible
  + can do incremental release at our own page with dev version on GitHub
* Should be on developer page as ArcGIS API for R or something similar

My thoughts:

## Path forward for ArcGIS API for R

We work towards an R metapackage like tidyverse or tidymodels. The metapackage will be called arcgis it will be composed of small R packages each with a specific purpose.

The first will support portal I/O and will cover only Feature Service, Image Server, and Map Severs–no tile support. Perhaps we call this arcgisio.

When arcgis is installed, arcgisio will be installed. Calling library(arcgis) will load arcgisio. The next package can be arcgisrouting which will do, you guessed it, routing. When we release that it will be incorporated into arcgis.

## Future of R-ArcGIS Bridge

I personally like Dima’s definition. The bridge is anything that make ArcGIS and R work together. Right now this is *only* arcgisbinding.. Right now “R-ArcGIS Bridge” refers to the R package arcgisbinding and the capability of ArcGIS to have an embedded R executor.

There are three possible ways I see us handling this:

* When we release the arcgis R package I think this should be part of the “R-ArcGIS bridge”
* If we don’t, then we make it very clear that the R-ArcGIS bridge is the ability to call R from ArcGIS and thus create GP tools using R scripts.
  + We then be very clear that {arcgisbinding} is the R package that can be used from R to interact with ArcGIS Pro.
* We refuse to acknowledge arcgisbinding as an R package distinct from the bridge and refuse to incorporate arcgis into the R-ArcGIS bridge umbrella. If so, it’s in our best interest to rename the R package from arcgisbinding to rarcgisbridge so our story is clear.

## Additional development tasks we should endeavor

* Embedded R GP script tools in ArcGIS pro
* an R package to create ArcGIS Toolboxes from code. Notably this would mean that the R scripts we write define the argument names and types. Currently this is done manually. **Prototype exists today**.