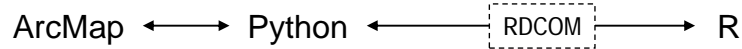


## Trouble Shooting Installation of the R-LoCoH ArcGIS Toolbox

For the LoCoH<sup>1</sup> toolbox to work in ArcGIS, ArcMap must be able to 'talk' to R. This requires two external programs, Python and RDCOM, as shown below:



The following steps may help trouble-shoot some of the problems that can be encountered to get this chain of communication working.

### A) Make Sure the Adehabitat Package (which contains the functions for LoCoH) is Installed and Working in R

As described on the instructions page<sup>2</sup> for the R-LoCoH script, the first step is to install (e.g., download) the packages needed to run LoCoH. Even if you never plan on using the R-console, this step is still needed. You need to install (i.e., download) the adehabitat package, which contains the functions for LoCoH. You can determine if the adehabitat package is already installed by typing the following command in R:

```
> library()
```

If you don't see the adehabitat package listed (as well as the gpclib, ade4, and shapefiles packages), download them by typing the following command:

```
> install.packages(c("gpclib", "ade4", "adehabitat", "shapefiles"), dependencies=TRUE)
```

Several of these packages have dependent packages that will also have to be downloaded, so this step may take some time depending on the speed of your internet connection. You can double-check if all the packages needed to run LoCoH are working by typing in the following set of commands in R:

```
> library(adehabitat)
> data(puechabon)
> xys<-puechabon$locs[,c("X", "Y")]
> homerange<-NNCH(xys, k=10)
> plot(homerange)
```

If you type in these commands in R and see the little map pop up at the end, LoCoH is working in your R environment.

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<sup>1</sup> <http://locoh.cnr.berkeley.edu>

<sup>2</sup> <http://locoh.cnr.berkeley.edu/rtutorial>

## B) Make Sure the DCOM Server is Working Properly

ArcGIS 'talks' to R through the Python scripting language, and the "R(D)COM Server" is a program that allows Python to talk to R. Thus RDCOM is a critical piece of the communication channel.

- 1) As described on the instructions page,<sup>3</sup> download the RDCOM Server from

<http://cran.r-project.org/contrib/extra/dcom>

As of mid-2010, the latest version of RDCOM is "R\_Scilab\_DCOM3.0-1B5.exe" (2008)

- 2) Run the RDCOM installation program. If you read the notes that pop up during the RDCOM installation, they tell you two important things:
  - a. When you install R, you need to make sure that you had the version number saved in the Registry. If for some reason you did a custom installation of R and deselected this option, you should reinstall R with this option turned on.
  - b. RDCOM can't talk to R until you install the R package 'rscproxy'. You can double-check if you already have this package by going to R and typing in:

```
> library()
```

If you don't see rscproxy in your list of installed packages, then you can install it by typing in:

```
> install.packages("rscproxy", dependencies = TRUE)
```

- 3) Double-check if RDCOM is talking to R by running the 'Server 01 - Basic Test' program that is installed with RDCOM. This little VB program has a button that will start R and tell you some things about it. If it works without error messages, then the connection between R and RDCOM is working. (Don't worry about the 'Start SciLab' button, that opens a different stats program that we're not concerned about here.)

## C) Add the LoCoH toolbox to ArcToolbox and run it with some sample data

If you haven't already done so, open make the ArcToolbox pane visible in ArcMap (or ArcCatalog), right-click in the pane, and select 'Add New Toolbox...' from the pop-up window, and then select the LoCoH.tbx file that you downloaded from. Run the Toolbox using some sample data. If it works, then you're done!

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<sup>3</sup> <http://locoh.cnr.berkeley.edu/arctutorial>

#### **D) Install the Python for Windows Extensions (if needed)**

If you get an error message when you run the LoCoH toolbox that says something like, "*No module named win32com.client*", then you probably have a small problem with your installation of Python - it's missing the "Python for Windows extensions". Perhaps ArcGIS didn't install these extensions when it installed Python, or perhaps you installed Python yourself, and/or upgraded your Python, and didn't install the extensions.

The good news is that you can fix this by installing the correct version "Python for Windows extensions" from:

<http://sourceforge.net/projects/pywin32>

Make sure you download the correction extension for your version of Python (which you can tell from the name of the folder where you've installed Python, for example c:\python25). If you're running Python 2.5 for example, then you probably want to download the version:

*pywin32-214.win32-py2.5.exe*

Similarly if you have Python 2.6 you'd probably want

*pywin32-214.win32-py2.6.exe*

After you've installed the correct 'Python for Windows extension', restart ArcMap and try running the toolbox again.