

## Stata Tip 147: Porting downloaded packages between machines

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Stata users are often asked to work on Web-disabled machines, with little or no Internet access. So, it may not be possible for the user to download packages at will, using the `net` or `ssc` commands. This requirement may exist for good reasons, such as prevention of cyber-crime and data breaches.

Stata has the feature, shared with R and Genstat, that it is a statistical language, with potentially as many dialects as users. These dialects are defined by the optional packages that each user has downloaded, whose number may be hundreds for a high-power user. This is a major advantage of a statistical language (such as Stata) over a statistical package (such as SPSS). And Stata users would like to continue to have that advantage on Web-disabled machines.

Fortunately, downloaded packages can be ported between machines. Downloaded packages on a Web-enabled machine are stored in a folder called the PLUS folder, which is one of a list of folders, called the `ado-path`, which Stata searches when asked to run an `ado-file`. To list the `ado-path`, including the PLUS folder, the user should use the `adopath` command (see [P] `sysdir`). If we use the author's Stata Version 17 under Windows 10, then this gives the following output:

```
. adopath
[1] (UPDATES)  "C:\Program Files\Stata17\ado\updates/"
[2] (BASE)     "C:\Program Files\Stata17\ado\base/"
[3] (PERSONAL) "C:\Users\Roger Newson\ado\personal/"
[4] (PLUS)     "C:\Users\Roger Newson\ado\plus/"
[5] (SITE)     "C:\Program Files\Stata17\ado\site/"
[6]           " "
[7] (OLDPLACE) "c:\ado/"
```

We see that the PLUS folder is

```
"C:\Users\Roger Newson\ado\plus/"
```

which is a folder containing subfolders, which in turn contain the files belonging to the downloaded packages. In our case, there are over 100 packages, containing over 1000 files.

Most ways of porting a PLUS folder start by zipping it into a `.zip` folder to save space. The official Stata way to do this uses the `zipfile` command (see [D] `zipfile`). As in:

```
. zipfile "C:\Users\Roger Newson\ado\plus/", saving(myplus.zip, replace)
```

This command produces a large amount of output to the log, which we have omitted. However, it also produces the `.zip` folder `myplus.zip`, which contains a folder `Users`

containing a folder `Roger Newson` containing a folder `ado` containing a folder `plus`, which contains the subfolders and other contents of our original `PLUS` folder.

A `.zip` folder may be ported using a high-security file transfer utility, or it may be simply copied to a USB drive that is itself ported to the destination machine. Either way, the user copies the contents of the ported `PLUS` folder to a location on the destination machine. In our case, our destination machine also uses Windows, and this location will be:

```
S:\CPG\Studies\cpgplus\
```

To be able to use the packages on our destination machine, we simply add the location (and its subfolders) to our `ado-path`, using an `adopath +` command:

```
. adopath + "S:\CPG\Studies\cpgplus\"
[1] (BASE)      "C:\Program Files\Stata17\ado\base/"
[2] (SITE)     "C:\Program Files\Stata17\ado\site/"
[3]           " "
[4] (PERSONAL) "D:\Users\Roger.Newson\ado\personal/"
[5] (PLUS)     "D:\Users\Roger.Newson\ado\plus/"
[6] (OLDPLACE) "c:\ado/"
[7]           "S:\CPG\Studies\cpgplus\"
```

Once this is done, we can use any packages in the ported folder (or its subfolders). Note that the ported folder is ported as a single item, so this process takes no more time for 100 packages containing 1000 files than for 1 package containing 2 files. Therefore, no powers are lost, even for high-power users with a treble-figure number of downloaded packages.

Methods similar to these might also save time porting all a user's downloaded packages together from one machine to another, even if the destination machine is not Web-disabled. Or if the downloaded packages on the source machine live in a folder other than the `PLUS` folder.

#### **About the author**

Roger B. Newson is a medical statistician based at King's College, London, UK, who has written over 120 downloadable Stata packages.