Title

net — Install and manage community-contributed additions from the Internet

Description　　Syntax　　Options　　Remarks and examples
Also see

Description

net downloads and installs additions to Stata. The additions can be obtained from the Internet or from physical media. The additions can be ado-files (new commands), help files, or even datasets. Collections of files that may be installed as a group are bound together into a *package*.

ado manages the packages you have installed by using net. The ado command lets you list and uninstall previously installed packages.

You can also access the net and ado features by selecting **Help > SJ and community-contributed features**; this is the recommended method to find and install additions to Stata.

Syntax

Set current location for net

　　net from *directory_or_url*

Change to a different net directory

　　net cd *path_or_url*

Change to a different net site

　　net link *linkname*

Search for installed packages

　　net search　　　　　　(see [R] **net search**)

Report current net location

　　net

Describe a package

　　net <u>describe</u> *pkgname* [, <u>from</u>(*directory_or_url*)]

Set location where packages will be installed

　　net set ado *dirname*

Set location where ancillary files will be installed

   net set other *dirname*

Report net 'from', 'ado', and 'other' settings

   net <u>q</u>uery

Install ado-files and help files from a package

   net <u>ins</u>tall *pkgname* [, all replace force <u>fr</u>om(*directory_or_url*)]

Install ancillary files from a package

   net get *pkgname* [, all replace force <u>fr</u>om(*directory_or_url*)]

Shortcut to access Stata Journal (SJ) net site

   net sj *vol-issue* [*insert*]

List installed packages

   ado [, <u>f</u>ind(*string*) <u>fr</u>om(*dirname*)]

   ado dir [*pkgid*] [, <u>f</u>ind(*string*) <u>fr</u>om(*dirname*)]

Describe installed packages

   ado <u>d</u>escribe [*pkgid*] [, <u>f</u>ind(*string*) <u>fr</u>om(*dirname*)]

Update installed packages

   ado update   (see [R] **ado update**)

Uninstall an installed package

   ado uninstall *pkgid* [, <u>fr</u>om(*dirname*)]

where

pkgname	is	name of a package
pkgid	is	name of a package
	or	a number in square brackets: [*#*]
dirname	is	a directory name
	or	PLUS (default)
	or	PERSONAL
	or	SITE

Options

all is used with net install and net get. Typing it with either one makes the command equivalent
to typing net install followed by net get.

replace is for use with net install and net get. It specifies that the downloaded files replace
existing files if any of the files already exists.

force specifies that the downloaded files replace existing files if any of the files already exists, even
if Stata thinks all the files are the same. force implies replace.

find(*string*) is for use with ado, ado dir, and ado describe. It specifies that the descriptions of
the packages installed on your computer be searched, and that the package descriptions containing
string be listed.

from(*dirname*), when used with ado, specifies where the packages are installed. The default is
from(PLUS). PLUS is a code word that Stata understands to correspond to a particular directory
on your computer that was set at installation time. On Windows computers, PLUS probably means
the directory c:\ado\plus, but it might mean something else. You can find out what it means
by typing sysdir, but doing so is irrelevant if you use the defaults.

from(*directory_or_url*), when used with net, specifies the directory or URL where installable packages
may be found. The directory or URL is the same as the one that would have been specified with
net from.

Remarks and examples

stata.com

For an introduction to using net and ado, see [U] **29 Using the Internet to keep up to date**. The
purpose of this documentation is

- to briefly, but accurately, describe net and ado and all their features and

- to provide documentation to those who wish to set up their own sites to distribute additions to
  Stata.

Remarks are presented under the following headings:

Definition of a package

A *package* is a collection of files—typically, `.ado` and `.sthlp` files—that together provide a new feature in Stata. Packages contain additions that you wish had been part of Stata at the outset. For instance, the package named zz49 might add the `xyz` command to Stata. At a minimum, such a package would contain `xyz.ado`, the code to implement the new command, and `xyz.sthlp`, the system help to describe it. We write such additions, and so do other users.

One source of these additions is the *Stata Journal*, a printed and electronic journal with corresponding software. If you want the journal, you must subscribe, but the software is available for free from our website.

The purpose of the net and ado commands

The `net` command makes it easy to distribute and install packages. The goal is to get you quickly to a package-description page that summarizes the addition, for example,

```
. net describe rte_stat, from(http://www.wemakeitupaswego.edu/faculty/sgazer/)
```
──
```
package rte_stat from http://www.wemakeitupaswego.edu/faculty/sgazer/
```
──
```
TITLE
      rte_stat.  The robust-to-everything statistic; update.
DESCRIPTION/AUTHOR(S)
      S. Gazer, Dept. of Applied Theoretical Mathematics, WMIUAWG Univ.
      Aleph-0 100% confidence intervals proved too conservative for some
      applications; Aleph-1 confidence intervals have been substituted.
      The new robust-to-everything supplants the previous robust-to-
      everything-conceivable statistic.  See "Inference in the absence
      of data" (forthcoming).  After installation, see help rte.
INSTALLATION FILES                            (type net install rte_stat)
      rte.ado
      rte.sthlp
      nullset.ado
      random.ado
```
──

If you decide that the addition might prove useful, `net` makes the installation easy:

```
. net install rte_stat
checking rte_stat consistency and verifying not already installed...
installing into c:\ado\plus\ ...
installation complete.
```

The `ado` command helps you manage packages installed with `net`. Perhaps you remember that you installed a package that calculates the robust-to-everything statistic, but you cannot remember the command's name. You could use `ado` to search what you have previously installed for the `rte` command,

```
. ado
[1] package tomata from https://fmwww.bc.edu/RePEc/bocode/t
      'TOMATA': module to make vectors in Mata of variables in Stata
  (output omitted )
[15] package rte_stat from http://www.wemakeitupaswego.edu/faculty/sgazer
      rte_stat.  The robust-to-everything statistic; update.
  (output omitted )
[21] package st0119 from https://www.stata-journal.com/software/sj7-1
      SJ7-1 st0119.  Rasch analysis
```

or you might type

```
. ado, find("robust-to-everything")
[15] package rte_stat from http://www.wemakeitupaswego.edu/faculty/sgazer
        rte_stat.  The robust-to-everything statistic; update.
```

Perhaps you decide that `rte`, despite the author's claims, is not worth the disk space it occupies. You can use `ado` to erase it:

```
. ado uninstall rte_stat
package rte_stat from http://www.wemakeitupaswego.edu/faculty/sgazer
        rte_stat.  The robust-to-everything statistic; update.
(package uninstalled)
```

`ado uninstall` is easier than erasing the files by hand because `ado uninstall` erases every file associated with the package, and, moreover, `ado` knows where on your computer `rte_stat` is installed; you would have to hunt for these files.

Content pages

There are two types of pages displayed by `net`: content pages and package-description pages. When you type `net from`, `net cd`, `net link`, or `net` without arguments, Stata goes to the specified place and displays the content page:

```
. net from https://www.stata.com
```
```
https://www.stata.com/
StataCorp
```
```
Welcome to StataCorp.
Below we provide links to sites providing additions to Stata, including
the Stata Journal and Statalist.  These are NOT THE OFFICIAL UPDATES;
you fetch and install the official updates by typing -update-.
PLACES you could -net link- to:
    sj                  The Stata Journal
DIRECTORIES you could -net cd- to:
    users               materials written by various people, including StataCorp
                          employees
    meetings            software packages from Stata Users Group meetings
    links               links to other locations providing additions to Stata
```

A content page tells you about other content pages and package-description pages. The example above lists other content pages only. Below, we follow one of the links for the *Stata Journal*:

```
. net link sj
```
───
```
https://www.stata-journal.com/
```
The Stata Journal
───
```
The Stata Journal is a refereed, quarterly journal containing articles
of interest to Stata users.  For more details and subscription information,
visit the Stata Journal website at https://www.stata-journal.com.

PLACES you could -net link- to:
    stata               StataCorp website

DIRECTORIES you could -net cd- to:
    production          Files for authors of the Stata Journal
    software            Software associated with Stata Journal articles
```
───
```
. net cd software
```
───
```
https://www.stata-journal.com/software/
```
The Stata Journal
───
```
PLACES you could -net link- to:
    stata               StataCorp website
    stb                 Historical materials published in the Stata Technical
                            Bulletin

DIRECTORIES you could -net cd- to:
  (output omitted )
    sj7-1               volume 7, issue 1
  (output omitted )
    sj1-1               volume 1, issue 1
```
───
```
. net cd sj7-1
```
───
```
https://www.stata-journal.com/software/sj7-1/
```
Stata Journal volume 7, issue 1
───
```
DIRECTORIES you could -net cd- to:
    ..                  Other Stata Journals

PACKAGES you could -net describe-:
    dm0027              File filtering in Stata: handling complex data
                        formats and navigating log files efficiently
    st0119              Rasch analysis
    st0120              Multivariable regression spline models
    st0121              mhbounds - Sensitivity Analysis for Average
                        Treatment Effects
```
───

dm0027, st0119, ..., st0121 are links to package-description pages.

1. When you type net from, you follow that with a location to display the location's content page.

   a. The location could be a URL, such as https://www.stata.com. The content page at that location would then be listed.

   b. The location could be e: on a Windows computer or a mounted volume on a Mac computer. The content page on that source would be listed. That would work if you had special media obtained from StataCorp or special media prepared by another user.

   c. The location could even be a directory on your computer, but that would work only if that directory contained the right kind of files.

2. Once you have specified a location, typing `net cd` will take you into subdirectories of that location, if there are any. Typing

```
. net from https://www.stata-journal.com
. net cd software
```

is equivalent to typing

```
. net from https://www.stata-journal.com/software
```

Typing `net cd` displays the content page from that location.

3. Typing `net` without arguments redisplays the current content page, which is the content page last displayed.

4. `net link` is similar to `net cd` in that the result is to change the location, but rather than changing to subdirectories of the current location, `net link` jumps to another location:

```
. net from https://www.stata-journal.com
```
───
```
https://www.stata-journal.com/
The Stata Journal
```
───
```
The Stata Journal is a refereed, quarterly journal containing articles
of interest to Stata users.  For more details and subscription information,
visit the Stata Journal website at
https://www.stata-journal.com.
PLACES you could -net link- to:
    stata             StataCorp website
DIRECTORIES you could -net cd- to:
    production        Files for authors of the Stata Journal
    software          Software associated with Stata Journal articles
```
───

Typing `net link stata` would jump to https://www.stata.com:

```
. net link stata
```
───
```
https://www.stata.com/
StataCorp
```
───
```
Welcome to StataCorp.
  (output omitted )
```
───

Package-description pages

Package-description pages describe what could be installed:

```
. net from https://www.stata-journal.com/software/sj7-1
```

```
https://www.stata-journal.com/software/sj7-1/
  (output omitted )
. net describe st0119
```

```
package st0119 from https://www.stata-journal.com/software/sj7-1
```

```
TITLE
      SJ7-1 st0119.  Rasch analysis
DESCRIPTION/AUTHOR(S)
      Rasch analysis
      by Jean-Benoit Hardouin, University of Nantes, France
      Support:  jean-benoit.hardouin@univ-nantes.fr
      After installation, type help gammasym, gausshermite,
          geekel2d, raschtest, and raschtestv7
INSTALLATION FILES                           (type net install st0119)
      st0119/raschtest.ado
      st0119/raschtest.hlp
      st0119/raschtestv7.ado
      st0119/raschtestv7.hlp
      st0119/gammasym.ado
      st0119/gammasym.hlp
      st0119/gausshermite.ado
      st0119/gausshermite.hlp
      st0119/geekel2d.ado
      st0119/geekel2d.hlp
ANCILLARY FILES                              (type net get st0119)
      st0119/data.dta
      st0119/outrasch.do
```

A package-description page describes the package and tells you how to install the component files. Package-description pages potentially describe two types of files:

1. Installation files: files that you type `net install` to install and that are required to make the addition work.

2. Ancillary files: additional files that you might want to install—you type `net get` to install them— but that you can ignore. Ancillary files are typically datasets that are useful for demonstration purposes. Ancillary files are not really installed in the sense of being copied to an official place for use by Stata itself. They are merely copied into the current directory so that you may use them if you wish.

You install the official files by typing `net install` followed by the package name. For example, to install st0119, you would type

```
. net install st0119
checking st0119 consistency and verifying not already installed...
installing into c:\ado\plus\ ...
installation complete.
```

You get the ancillary files—if there are any and if you want them—by typing `net get` followed by the package name:

```
. net get st0119
checking st0119 consistency and verifying not already installed...

copying into current directory...
      copying  data.dta
      copying  outrasch.do
ancillary files successfully copied.
```

Most users ignore the ancillary files.

Once you have installed a package—by typing `net install`—use `ado` to redisplay the package-description page whenever you wish:

```
. ado describe st0119
```

---

[1] package **st0119** from https://www.stata-journal.com/software/sj7-1

TITLE
      SJ7-1 st0119. Rasch analysis
DESCRIPTION/AUTHOR(S)
      Rasch analysis
      by Jean-Benoit Hardouin, University of Nantes, France
      Support: jean-benoit.hardouin@univ-nantes.fr
      After installation, type help **gammasym**, **gausshermite**,
          geekel2d, **raschtest**, and **raschtestv7**
INSTALLATION FILES
      r/raschtest.ado
      r/raschtest.hlp
      r/raschtestv7.ado
      r/raschtestv7.hlp
      g/gammasym.ado
      g/gammasym.hlp
      g/gausshermite.ado
      g/gausshermite.hlp
      g/geekel2d.ado
      g/geekel2d.hlp
INSTALLED ON
      24 Feb 2023

The package-description page shown by `ado` includes the location from which we got the package and when we installed it. It does not mention the ancillary files that were originally part of this package because they are not tracked by `ado`.

Where packages are installed

Packages should be installed in PLUS or SITE, which are code words that Stata understands and that correspond to some real directories on your computer. Typing `sysdir` will tell you where these are, if you care.

```
. sysdir
   STATA:  C:\Program Files\Stata18\
    BASE:  C:\Program Files\Stata18\ado\base\
    SITE:  C:\Program Files\Stata18\ado\site\
    PLUS:  c:\ado\plus\
PERSONAL:  c:\ado\personal\
OLDPLACE:  c:\ado\
```

If you type `sysdir`, you may obtain different results.

By default, `net` installs in the PLUS directory, and `ado` tells you about what is installed there. If you are on a multiple-user system, you may wish to install some packages in the SITE directory. This way, they will be available to other Stata users. To do that, before using `net install`, type

        . net set ado SITE

and when reviewing what is installed or removing packages, redirect `ado` to that directory:

        . ado ..., from(SITE)

In both cases, you type SITE because Stata will understand that SITE means the site ado-directory as defined by `sysdir`. To install into SITE, you must have write access to that directory.

If you reset where `net` installs and then, in the same session, wish to install into your private ado-directory, type

        . net set ado PLUS

That is how things were originally. If you are confused as to where you are, type `net query`.

A summary of the net command

The `net` command displays content pages and package-description pages. Such pages are provided over the Internet, and most users get them there. We recommend that you start at https://www.stata.com and work out from there. We also recommend using `net search` to find packages of interest to you; see [R] **net search**.

`net from` moves you to a location and displays the content page.

`net cd` and `net link` change from your current location to other locations. `net cd` enters subdirectories of the original location. `net link` jumps from one location to another, depending on the code on the content page.

`net describe` lists a package-description page. Packages are named, and you type `net describe` *pkgname*.

`net install` installs a package into your copy of Stata. `net get` copies any additional files (ancillary files) to your current directory.

`net sj` simplify loading files from the *Stata Journal*.

        net sj *vol-issue*

is a synonym for typing

        net from https://www.stata-journal.com/software/sj*vol-issue*

whereas

        net sj *vol-issue insert*

is a synonym for typing

        net from https://www.stata-journal.com/software/sj*vol-issue*
        net describe *insert*

`net set` controls where `net` installs files. By default, `net` installs in the PLUS directory; see [P] **sysdir**. `net set ado SITE` would cause subsequent `net` commands to install in the SITE directory. `net set other` sets where ancillary files, such as `.dta` files, are installed. The default is the current directory.

`net query` displays the current `net from`, `net set ado`, and `net set other` settings.

A summary of the ado command

The ado command lists the package descriptions of previously installed packages.

Typing ado without arguments is the same as typing ado dir. Both list the names and titles of the packages you have installed.

ado describe lists full package-description pages.

ado uninstall removes packages from your computer.

Because you can install packages from a variety of sources, the package names may not always be unique. Thus the packages installed on your computer are numbered sequentially, and you may refer to them by name or by number. For instance, say that you wanted to get rid of the robust-to-everything statistic command you installed. Type

```
. ado, find("robust-to-everything")
[15] package rte_stat from http://www.wemakeitupaswego.edu/faculty/sgazer
      rte_stat.  The robust-to-everything statistic; update.
```

You could then type

```
. ado uninstall rte_stat
```

or

```
. ado uninstall [15]
```

Typing ado uninstall rte_stat would work only if the name rte_stat were unique; otherwise, ado would refuse, and you would have to type the number.

The find() option is allowed with ado dir and ado describe. It searches the package description for the word or phrase you specify, ignoring case (alpha matches Alpha). The complete package description is searched, including the author's name and the name of the files. Thus if rte was the name of a command that you wanted to eliminate, but you could not remember the name of the package, you could type

```
. ado, find(rte)
[15] package rte_stat from http://www.wemakeitupaswego.edu/faculty/sgazer
      rte_stat.  The robust-to-everything statistic; update.
```

Relationship of net and ado to the point-and-click interface

Users may instead select **Help > SJ and community-contributed features**. There are advantages and disadvantages:

1. Flipping through content and package-description pages is easier; it is much like a browser. See [GS] **19 Updating and extending Stata—Internet functionality** (GSM, GSU, or GSW).

2. When browsing a product-description page, note that the .sthlp files are highlighted. You may click on .sthlp files to review them before installing the package.

3. You may not redirect from where ado searches for files.

Creating your own site

Users who wish to share content with the Stata community often do so via the Statistical Software Components (SSC) Archive. See [R] **ssc** and also see http://repec.org/bocode/s/sscsubmit.html.

The rest of this entry concerns how to create your own site to distribute additions to Stata. The idea is that you have written additions for use with Stata—say, xyz.ado and xyz.sthlp—and you wish to put them out so that coworkers or researchers at other institutions can easily install them. Or, perhaps you just have a dataset that you and others want to share.

In any case, all you need is a webpage. You place the files that you want to distribute on your webpage (or in a subdirectory), and you add two more files—a content file and a package-description file—and you are done.

Format of content and package-description files

The content file describes the content page. It must be named stata.toc:

```
────────────────────────────────────────────────── begin  stata.toc ──────────
OFF                                          (to make site unavailable temporarily)
* lines starting with * are comments; they are ignored

* blank lines are ignored, too

* v  indicates version—specify v 3, which is the current version of .toc files
v 3

* d  lines display description text
* the first  d  line is the title, and the remaining ones are text
* blank  d  lines display a blank line
d title
d text
d text
d
...
* l  lines display links
l word-to-show  path-or-url [description]
l word-to-show  path-or-url [description]
...
* t  lines display other directories within the site
t path [description]
t path [description]
...
* p  lines display packages
p pkgname [description]
p pkgname [description]
...
──────────────────────────────────────────────────── end  stata.toc ──────────
```

Package files describe packages and are named *pkgname*.pkg:

```
───────────────────────────────────────────────────── begin  pkgname.pkg ───────────
    * lines starting with * are comments; they are ignored
    * blank lines are ignored, too
    * v indicates version—specify v 3, which is the current version of .toc files
    v 3
    * d lines display package description text
    * the first d line is the title, and the remaining ones are text
    * blank d lines display a blank line
    d title
    d text
    d Distribution-Date: date
    d text
    d
    ...
    * f identifies the component files
    f [path/]filename [description]
    f [path/]filename [description]
    ...
    * e line is optional; it means stop reading
    e
───────────────────────────────────────────────────── end  pkgname.pkg ───────────
```

Note the Distribution-Date description line. This line is optional but recommended. Stata can look for updates to community-contributed programs with the `ado update` command if the package files from which those programs were installed contain a Distribution-Date description line.

Example 1

Say that we want the user to see the following:

```
. net from http://www.university.edu/~me
─────────────────────────────────────────────────────────────
http://www.university.edu/~me
Chris Farrar, Uni University
─────────────────────────────────────────────────────────────

PACKAGES you could -net describe-:
    xyz                 interval-truncated survival

. net describe xyz
─────────────────────────────────────────────────────────────
package xyz from http://www.university.edu/~me
─────────────────────────────────────────────────────────────

TITLE
      xyz.  interval-truncated survival.
DESCRIPTION/AUTHOR(S)
      C. Farrar, Uni University.
INSTALLATION FILES                           (type net install xyz)
      xyz.ado
      xyz.sthlp
ANCILLARY FILES                              (type net get xyz)
      sample.dta
─────────────────────────────────────────────────────────────
```

The files needed to do this would be

```
─────────────────────────────────────────────────────── begin  stata.toc ───────────
    v 3
    d Chris Farrar, Uni University
    p xyz interval-truncated survival
─────────────────────────────────────────────────────── end  stata.toc ───────────
```

```
                                                            ───── begin  xyz.pkg ─────────
   v 3
   d xyz.   interval-truncated survival.
   d C. Farrar, Uni University.
   f xyz.ado
   f xyz.sthlp
   f sample.dta
                                                            ───── end  xyz.pkg ─────────
```

On his homepage, Chris would place the following files:

stata.toc	(shown above)
xyz.pkg	(shown above)
xyz.ado	file to be delivered (for use by net install)
xyz.sthlp	file to be delivered (for use by net install)
sample.dta	file to be delivered (for use by net get)

Chris does nothing to distinguish ancillary files from installation files.

Example 2

S. Gazer wants to create a more complex site:

```
. net from http://www.wemakeitupaswego.edu/faculty/sgazer
───────────────────────────────────────────────────────────────────────────
http://www.wemakeitupaswego.edu/faculty/sgazer
Data-free inference materials
───────────────────────────────────────────────────────────────────────────

S. Gazer, Department of Applied Theoretical Mathematics
Also see my homepage for the preprint of "Irrefutable inference".
PLACES you could -net link- to:
    stata            StataCorp website
DIRECTORIES you could -net cd- to:
    ir               irrefutable inference programs (work in progress)
PACKAGES you could -net describe-:
    rtec             Robust-to-everything-conceivable statistic
    rte              Robust-to-everything statistic
```

```
. net describe rte
```

package **rte** from http://www.wemakeitupaswego.edu/faculty/sgazer/

TITLE
      rte. The robust-to-everything statistic; update.
DESCRIPTION/AUTHOR(S)
      S. Gazer, Dept. of Applied Theoretical Mathematics, WMIUAWG Univ.
      Aleph-0 100% confidence intervals proved too conservative for some
      applications; Aleph-1 confidence intervals have been substituted.
      The new robust-to-everything supplants the previous robust-to-
      everything-conceivable statistic. See "Inference in the absence
      of data" (forthcoming). After installation, see help **rte**.

      Distribution-Date: 20190320

      Support: email sgazer@wemakeitupaswego.edu
INSTALLATION FILES   (type **net install rte_stat**)
      rte.ado
      rte.sthlp
      nullset.ado
      random.ado
ANCILLARY FILES   (type **net get rte_stat**)
      empty.dta

The files needed to do this would be

——————————————————————————————————————— begin stata.toc ———————
```
v 3
d Data-free inference materials
d S. Gazer, Department of Applied Theoretical Mathematics
d
d Also see my homepage for the preprint of "Irrefutable inference".
l stata https://www.stata.com
t ir irrefutable inference programs (work in progress)
p rtec Robust-to-everything-conceivable statistic
p rte  Robust-to-everything statistic
```
——————————————————————————————————————— end stata.toc ———————

——————————————————————————————————————— begin rte.pkg ———————
```
v 3
d rte.  The robust-to-everything statistic; update.
d {bf:S. Gazer, Dept. of Applied Theoretical Mathematics, WMIUAWG Univ.}
d Aleph-0 100% confidence intervals proved too conservative for some
d applications; Aleph-1 confidence intervals have been substituted.
d The new robust-to-everything supplants the previous robust-to-
d everything-conceivable statistic.  See "Inference in the absence
d of data" (forthcoming).  After installation, see help {bf:rte}.
d
d Distribution-Date: 20190320
d
d Support:  email sgazer@wemakeitupaswego.edu
f rte.ado
f rte.sthlp
f nullset.ado
f random.ado
f empty.dta
```
——————————————————————————————————————— end rte.pkg ———————

On his homepage, Mr. Gazer would place the following files:

```
stata.toc       (shown above)

rte.pkg         (shown above)
rte.ado         (file to be delivered)
rte.sthlp       (file to be delivered)
nullset.ado     (file to be delivered)
random.ado      (file to be delivered)
empty.dta       (file to be delivered)

rtec.pkg        the other package referred to in stata.toc
rtec.ado        the corresponding files to be delivered
rtec.sthlp

ir/stata.toc    the contents file for when the user types net cd ir
ir/...          whatever other .pkg files are referred to
ir/...          whatever other files are to be delivered
```

If Mr. Gazer later updated the `rte` package, he could change the Distribution-Date description line in his package. Then, if someone who had previously installed the `rte` packaged wanted to obtain the latest version, that person could use the `ado update` command; see [R] **ado update**.

For complex sites, a different structure may prove more convenient:

```
stata.toc       (shown above)
rte.pkg         (shown above)
rtec.pkg        the other package referred to in stata.toc

rte/            directory containing rte files to be delivered:
rte/rte.ado     (file to be delivered)
rte/rte.sthlp   (file to be delivered)
rte/nullset.ado (file to be delivered)
rte/random.ado  (file to be delivered)
rte/empty.dta   (file to be delivered)

rtec/           directory containing rtec files to be delivered:
rtec/...        (files to be delivered)

ir/stata.toc    the contents file for when the user types net cd ir
ir/*.pkg        whatever other package files are referred to
ir/*/...        whatever other files are to be delivered
```

If you prefer this structure, it is simply a matter of changing the bottom of the `rte.pkg` from

```
f rte.ado
f rte.sthlp
f nullset.ado
f random.ado
f empty.dta
```

to

```
f rte/rte.ado
f rte/rte.sthlp
f rte/nullset.ado
f rte/random.ado
f rte/empty.dta
```

In writing paths and files, the directory separator forward slash (/) is used, regardless of operating system, because this is what the Internet uses.

It does not matter whether the files you put out are in Windows, Mac, or Unix format (how lines end is recorded differently). When Stata reads the files over the Internet, it will figure out the file format on its own and will automatically translate the files to what is appropriate for the receiver.

Additional package directives

F *filename* is similar to f *filename*, except that, when the file is installed, it will always be copied to the system directories (and not the current directory).

With f *filename*, the file is installed into a directory according to the file's suffix. For instance, xyz.ado would be installed in the system directories, whereas xyz.dta would be installed in the current directory.

Coding F xyz.ado would have the same result as coding f xyz.ado.

Coding F xyz.dta, however, would state that xyz.dta is to be installed in the system directories.

g *platformname filename* is also a variation on f *filename*. It specifies that the file be installed only if the user's operating system is of type *platformname*; otherwise, the file is ignored. The platform names are WIN64 (64-bit x86-64) for Windows; MACARM64 (Apple Silicon, GUI) and OSX.ARM64 (Apple Silicon, console), MACINTEL64 (64-bit Intel, GUI) and OSX.X8664 (64-bit Intel, console) for Mac; and LINUX64 (64-bit x86-64) and LINUX64P (64-bit x86-64, libpng v1.6) for Linux. For LINUX64P, the LINUX64-specific version of a file will be installed if no LINUX64P-specific one exists. LINUX64 will not install a LINUX64P-specific version of a file because of possible changes in system libraries.

G *platformname filename* is a variation on F *filename*. The file, if not ignored, is to be installed in the system directories.

g *platformname filename1 filename2* is a more detailed version of g *platformname filename*. In this case, *filename1* is the name of the file on the server (the file to be copied), and *filename2* is to be the name of the file on the user's system; for example, you might code

```
g WIN64 mydll.forwin mydll.plugin
g LINUX64 mydll.forlinux mydll.plugin
```

When you specify one *filename*, the result is the same as specifying two identical *filename*s.

G *platformname filename1 filename2* is the install-in-system-directories version of g *platformname filename1 filename2*.

h *filename* asserts that *filename* must be loaded, or this package is not to be installed; for example, you might code

```
g WIN64 mydll.forwin mydll.plugin
g LINUX64 mydll.forlinux mydll.plugin
h mydll.plugin
```

if you were offering the plugin mydll.plugin for Windows and Linux only.

SMCL in content and package-description files

The text listed on the second and subsequent d lines in both stata.toc and *pkgname*.pkg may contain SMCL as long as you include v 3; see [P] **smcl**.

Thus, in rte.pkg, S. Gazer coded the third line as

```
d {bf:S. Gazer, Dept. of Applied Theoretical Mathematics, WMIUAWG Univ.}
```

Error-free file delivery

Most people transport files over the Internet and never worry about the file being corrupted in the process because corruption rarely occurs. If, however, the files must be delivered perfectly or not at all, you can include checksum files in the directory.

For instance, say that `big.dta` is included in your package and that it must be sent perfectly. First, use Stata to make the checksum file for `big.dta`

```
. checksum big.dta, save
```

That command creates a small file called `big.sum`; see [D] **checksum**. Then, copy both `big.dta` and `big.sum` to your homepage.

If you do this, be cautious. If you put `big.dta` and `big.sum` on your homepage and then later change `big.dta` without changing `big.sum`, people will think that there are transmission errors when they try to download `big.dta`.

Also see

[R] **ado update** — Update community-contributed packages

[R] **net search** — Search the Internet for installable packages

[R] **netio** — Control Internet connections

[R] **search** — Search Stata documentation and other resources

[R] **sj** — Stata Journal installation instructions

[R] **ssc** — Install and uninstall packages from SSC

[R] **update** — Check for official updates

[D] **checksum** — Calculate checksum of file

[P] **smcl** — Stata Markup and Control Language

[GSM] **19 Updating and extending Stata—Internet functionality**

[GSU] **19 Updating and extending Stata—Internet functionality**

[GSW] **19 Updating and extending Stata—Internet functionality**

[U] **29 Using the Internet to keep up to date**