NAME

rdist – remote file distribution program

SYNOPSIS

rdist [**–b**] [**-D**] [**–h**] [**–i**] [**–n**] [**–q**] [**–R**] [**–v**] [**–w**] [**–y**]
[**–d** *macro* = *value*] [**–f** *distfile*] [**–m** *host*] . . . [*package* . . .]

rdist [**–b**] [**–D**] [**–h**] [**–i**] [**–n**] [**–q**] [**–R**] [**–v**] [**–w**] [**–y**]
–c *pathname* . . . [*login*@] *hostname* [**:***destpath*]

AVAILABILITY

SUNWcsu

DESCRIPTION

rdist maintains copies of files on multiple hosts. It preserves the owner, group, mode, and modification time of the master copies, and can update programs that are executing. Normally, a copy on a remote host is updated if its size or modification time differs from the original on the local host. **rdist** reads the indicated *distfile* for instructions on updating files and/or directories. If *distfile* is '–', the standard input is used. If no **–f** option is present, **rdist** first looks in its working directory for **distfile**, and then for **Distfile**, for instructions.

rdist updates each *package* specified on the command line; if none are given, all packages are updated according to their entries in the *distfile*.

In order to be able to use **rdist** across machines, each host machine must have a **/etc/host.equiv** file, or the user must have an entry in the **.rhosts** file in the home directory. See **hosts.equiv**(4) for more information.

OPTIONS

–b Binary comparison. Perform a binary comparison and update files if they differ, rather than merely comparing dates and sizes.

–D Enable debugging.

–h Follow symbolic links. Copy the file that the link points to rather than the link itself.

–i Ignore unresolved links. **rdist** will normally try to maintain the link structure of files being transferred and warn the user if all the links cannot be found.

–n Print the commands without executing them. This option is useful for debugging a distfile.

–q Quiet mode. Do not display the files being updated on the standard output.

–R Remove extraneous files. If a directory is being updated, remove files on the remote host that do not correspond to those in the master (local) directory. This is useful for maintaining truly identical copies of directories.

–v Verify that the files are up to date on all the hosts. Any files that are out of date are displayed, but no files are updated, nor is any mail sent.

–w Whole mode. The whole file name is appended to the destination directory name. Normally, only the last component of a name is used when renaming files. This preserves the directory structure of the files being copied, instead of flattening the directory structure. For instance, renaming a list of files such as **dir1/dir2** to **dir3** would create files **dir3/dir1** and **dir3/dir2** instead of **dir3** and **dir3**. When the −**w** option is used with a filename that begins with **˜ ,** everything except the home directory is appended to the destination name.

−**y** Younger mode. Do not update remote copies that are younger than the master copy, but issue a warning message instead.

−**d** *macro*=*value* Define *macro* to have *value*. This option is used to define or override macro definitions in the distfile. *value* can be the empty string, one name, or a list of names surrounded by parentheses and separated by white space.

−**c** *pathname* . . . [*login*@]*hostname*[**:***destpath*]
Update each *pathname* on the named host. (Relative filenames are taken as relative to your home directory.) If the '*login*@' prefix is given, the update is performed with the user ID of *login*. If the '**:***destpath*' is given, the remote file is installed as that pathname.

−**f** *distfile* Use the description file *distfile*. A '−' as the *distfile* argument denotes the standard input.

−**m** *host* Limit which machines are to be updated. Multiple −**m** arguments can be given to limit updates to a subset of the hosts listed in the distfile.

USAGE

White Space Characters

NEWLINE, TAB, and SPACE characters are all treated as white space; a mapping continues across input lines until the start of the next mapping: either a single *filename* followed by a '→' or the opening parenthesis of a filename list.

Comments

Comments begin with **#** and end with a NEWLINE.

Macros

rdist has a limited macro facility. Macros must be defined outside of the packages. Macros are only expanded in filename or hostname lists, and in the argument lists of certain primitives. Macros cannot be used to stand for primitives or their options, or the **'**→**'** or **'**::' symbols.

A macro definition is a line of the form:

macro **=** *value*

A macro reference is a string of the form:

${*macro***}**

although (as with **make**(1S)) the braces can be omitted if the macro name consists of just one character.

Metacharacters

The shell meta-characters: **[**, **]**, **{**, **}**, * and **?** are recognized and expanded (on the local host only) just as they are with **csh**(1). Metacharacters can be escaped by prepending a backslash.

The ˜ character is also expanded in the same way as with **csh**, however, it is expanded separately on the local and destination hosts.

Filenames

File names that do not begin with '/' or '˜' are taken to be relative to user's home directory on each destination host; they are *not* relative to the current working directory. Multiple file names must be enclosed within parentheses.

Primitives

The following primitives can be used to specify actions **rdist** is to take when updating remote copies of each file.

install [−**b**] [−**h**] [−**i**] [−**R**] [−**v**] [−**w**] [−**y**] [*newname*]

Copy out-of-date files and directories (recursively). If no **install** primitive appears in the package entry, or if no *newname* option is given, the name of the local file is given to the remote host's copy. If absent from the remote host, parent directories in a filename's path are created. To help prevent disasters, a non-empty directory on a target host is not replaced with a regular file or a symbolic link by **rdist**. However, when using the −**R** option, a non-empty directory is removed if the corresponding filename is completely absent on the master host.

The options for **install** have the same semantics as their command line counterparts, but are limited in scope to a particular map. The login name used on the destination host is the same as the local host unless the destination name is of the format *login@host*. In that case, the update is performed under the username *login*.

notify *address . . .*

Send mail to the indicated TCP/IP *address* of the form:

user@host

that lists the files updated and any errors that may have occurred. If an address does not contain a '*@host*' suffix, **rdist** uses the name of the destination host to complete the address.

except *filename . . .*

Omit from updates the files named as arguments.

except_pat *pattern . . .*

Omit from updates the filenames that match each regular-expression *pattern* (see **ed**(1) for more information on regular expressions). Note that **'\'** and **'$'** characters must be escaped in the distfile. Shell variables can also be used within a pattern, however shell filename expansion is not supported.

special [*filename*] . . . **"***command-line***"**

Specify a Bourne shell, **sh**(1) command line to execute on the remote host after each named file is updated. If no *filename* argument is present, the *command-line* is performed for every updated file, with the shell variable **FILE** set to the file's name on the local host. The quotation marks allow *command-line* to span input lines in the distfile; multiple shell commands must be separated by semicolons (**;**).

The default working directory for the shell executing each *command-line* is the user's home directory on the remote host.

EXAMPLES

The following sample distfile instructs **rdist** to maintain identical copies of a shared library, a shared-library initialized data file, several include files, and a directory, on hosts named **hermes** and **magus**. On **magus**, commands are executed as super-user. **rdist** notifies **merlin@druid** whenever it discovers that a local file has changed relative to a timestamp file.

```
HOSTS = ( hermes root@magus )

FILES = ( /usr/local/lib/libcant.so.1.1
        /usrlocal/lib/libcant.sa.1.1 /usr/local/include/{*.h}
        /usr/local/bin )

(${FILES}) → (${HOSTS})
        install −R ;
${FILES} :: /usr/local/lib/timestamp
        notify merlin@druid ;
```

FILES

~/.rhosts	user's trusted hosts and users
/etc/host.equiv	system trusted hosts and users
/tmp/rdist*	temporary file for update lists

SEE ALSO

csh(1), **ed**(1), **make**(1S), **sh**(1), **stat**(2), **hosts.equiv**(4)

DIAGNOSTICS

A complaint about mismatch of **rdist** version numbers may really stem from some problem with starting your shell, for example, you are in too many groups.

WARNINGS

The super-user does not have its accustomed access privileges on NFS mounted file systems. Using **rdist** to copy to such a file system may fail, or the copies may be owned by user “nobody”.

BUGS

Source files must reside or be mounted on the local host.

There is no easy way to have a special command executed only once after all files in a directory have been updated.

Variable expansion only works for name lists; there should be a general macro facility.

rdist aborts on files that have a negative modification time (before Jan 1, 1970).

There should be a “force” option to allow replacement of non-empty directories by regular files or symlinks. A means of updating file modes and owners of otherwise identical files is also needed.