

## **docoll GNU-Linux rsync client sysadmin guide**



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# 1 Introduction

This document describes the procedure for setting up a GNU-Linux system as an rsync client. It was created for the docoll system but could be of more general use.

The content has been tested on Slackware64 13.1 and Ubuntu 10.04 Lucid.

## 1.1 Related documentation

In descending order of likely usefulness to a new reader:

- "docoll system introduction"
- "docoll rsync server sysadmin guide"
- "docoll sysadmin guide"
- "docoll files and directories"

# 2 Prerequisites

## 2.1 Software

- rsync. Version 3.0.7 (presumed already installed) is known to work.
- docoll\_gnulinix\_client-0.5.tgz or later.

## 2.2 Access

root

## 2.3 Data

The password configured in the server's rsync.secrets file for the client.

# 3 Preparation

Set up the rsync server to service the new client. Details in "docoll rsync server sysadmin guide".

# 4 Installation

In the sample session below, change the version number **0.5** as appropriate.

As root, change directory to wherever docoll\_gnulinix\_client-**0.5**.tgz is and:

```
tar xvzf rsync_script.0.5.tgz --directory /
```

The expected output is:

```
./
./etc/
./etc/opt/
./etc/opt/rsync_script/
```

```

./etc/opt/rsync_script/samples/
./etc/opt/rsync_script/samples/rsync.files_from
./etc/opt/rsync_script/samples/rsync.sh.ISC.crontab
./etc/opt/rsync_script/samples/rsync.sh.conf
./etc/opt/rsync_script/samples/rsync.sh.dcron.crontab
./opt/
./opt/rsync_script/
./opt/rsync_script/rsync.sh
./var/
./var/opt/
./var/opt/rsync_script/
./var/opt/rsync_script/log/

```

## 5 Configuration

Configuration is done as root by copying two files from `/etc/opt/rsync_script/samples` to `/etc/opt/rsync_script/` and editing them:

```
cd /etc/opt/rsync_script/ && cp samples/rsync.sh.conf samples/rsync.files_from .
```

### 5.1 `/etc/opt/rsync_script/rsync.sh.conf`

Change the password and server\_ID. The password must match the password configured in the server's `rsync.secrets` file for the client.

```

# rsync.sh configuration file

# Empty lines are ignored.
# Comments, starting with # are ignored.
# Configuration lines are of the form keyword = data.
# Leading and trailing whitespace on keyword and data is ignored.
# Keywords are not case-sensitive.

# exclude_from is optional.
# Its pathname may not include whitespace characters.
# The format of its contents is described in the rsync man page.

# files_from is required
# The format of its contents is described in the rsync man page.
files_from = /etc/opt/rsync_script/rsync.files_from

# include_from is optional.
# Its pathname may not include whitespace characters.
# The format of its contents is described in the rsync man page.

# password is required
password = password

# server_ID is required
# It may be an IP address or a hostname
server_ID = 192.168.1.2

# verbose is optional
# If given must be 0 to 3. The larger the number, the more verbosity
# (it is the number of --verbose options inserted in the rsync command).
verbose = 0

```

### 5.2 `/etc/opt/rsync_script/rsync.files_from`

Here is the sample which needs to be changed to list the directories to be synchronised.

```

# rsync --files-from file

# The rsync man page details the format

```

# Paths are relative to the SRC argument on the rsync command. rsync.sh uses / for the SRC argument.

# Any trailing / is irrelevant because rsync.sh uses rsync's --recursive option.

home/c/

## 5.3 Firewall configuration

rsync requires a TCP "stream" to port 873 on the server.

## 5.4 cron job

Determine whether the system uses Vixie a.k.a ISC cron or Dillon a.k.a. dcron cron. If man pages are installed, an easy way is to look at the bottom of the man page – for cron or crond, depending on the distro.

Copy the appropriate sample crontab (rsync.sh.ISC.crontab or rsync.sh.dcron.crontab) to /etc/cron.d/rsync\_script and ensure it is owned by root and only writeable by root:

```
f=/etc/cron.d/rsync_script; cp -p /etc/opt/rsync_script/samples/rsync.sh.dcron.crontab $f \
&& chown root $f && chmod 644 $f
```

Edit /etc/cron.d/rsync\_script, changing the sample synchronisation times to suit local usage and to avoid many systems synchronising at the same time.

Note: dcron checks /etc/cron.d/ for new files every hour.

## 6 Testing

Reboot and review /var/opt/rsync\_script/log/rsync.sh.<timestamp>.log. If that looks OK, on the rsync server, check:

- the /srv/rsync/docoll/<module name>/ tree.
- the /var/log/rsync.log file.

Check again after the time configured in /etc/cron.d/rsync\_script has passed.

## 7 Troubleshooting

### 7.1 No log

Check root's mail for error messages from cron.

Try running /opt/rsync\_script/rsync.sh manually, details below.

### 7.2 Run /opt/rsync\_script/rsync.sh manually

Must be done as root.

When running /opt/rsync\_script/rsync.sh manually it may produce more output on the terminal than is convenient. In this case use `export SET_HAVE_TTY_FALSE=true` to redirect it to the log file. This can be cancelled by using `unset SET_HAVE_TTY_FALSE`

### 7.3 Increasing rsync's verbosity

For more information about what rsync is doing, increase rsync's verbosity using the verbosity setting in `/etc/opt/rsync_script/rsync.conf`. This results in duplicated messages from rsync on screen or in the log, but you can't have too much of a good thing, eh?

### 7.4 rsync error messages

The page listed in 7.5 Online resources below lists some rsync error messages and some of their causes. rsync generates a `chdir` error message if the target directory on the rsync server does not exist.

### 7.5 Online resources

- rsync error messages: <http://steven-linux.javaeye.com/blog/688243> and <http://www.rollingr.net/wordpress/2007/05/01/installing-and-running-rsync/4/>
- rsync mailing list archive: <http://lists.samba.org/archive/rsync>
- rsync man pages: <http://rsync.samba.org/ftp/rsync/rsyncd.conf.html> and <http://rsync.samba.org/ftp/rsync/rsync.html>

## 8 Appendix – creating the tarball

**Caution: make sure the current directory is correct before running the `chown` and `find` commands below. Accidentally running these commands from the root directory will require re-installing GNU-Linux.**

As root, change directory to the root of where the development files are kept, remove any existing tarball then:

```
version=0.5; tarball=docoll_gnulinux_client-$version.tgz; \
&& cd "rsync_script/$version" \
&& chown -R root:root * \
&& find . -type d -exec chmod 755 {} \; \
&& chmod 644 etc/opt/rsync_script/samples/* \
&& chmod 744 opt/rsync_script/rsync.sh \
&& tar -cvzf /tmp/$tarball . \
&& mv /tmp/$tarball .
```

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