Daily Use Guide for using Savannah for lwIP

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1 Obtaining lwIP from the CVS repository

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To perform an anonymous CVS checkout of the main trunk (this is where

bug fixes and incremental enhancements occur), do this:

cvs -z3 -d:pserver:anonymous@cvs.sv.gnu.org:/sources/lwip checkout lwip

Or, obtain a stable branch (updated with bug fixes only) as follows:

cvs -z3 -d:pserver:anonymous@cvs.sv.gnu.org:/sources/lwip checkout \

-r STABLE-0\_7 -d lwip-0.7 lwip

Or, obtain a specific (fixed) release as follows:

cvs -z3 -d:pserver:anonymous@cvs.sv.gnu.org:/sources/lwip checkout \

-r STABLE-0\_7\_0 -d lwip-0.7.0 lwip

3 Committers/developers CVS access using SSH

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The Savannah server uses SSH (Secure Shell) protocol 2 authentication and encryption.

As such, CVS commits to the server occur through a SSH tunnel for project members.

To create a SSH2 key pair in UNIX-like environments, do this:

ssh-keygen -t dsa

Under Windows, a recommended SSH client is "PuTTY", freely available with good

documentation and a graphic user interface. Use its key generator.

Now paste the id\_dsa.pub contents into your Savannah account public key list. Wait

a while so that Savannah can update its configuration (This can take minutes).

Try to login using SSH:

ssh -v your\_login@cvs.sv.gnu.org

If it tells you:

Authenticating with public key "your\_key\_name"...

Server refused to allocate pty

then you could login; Savannah refuses to give you a shell - which is OK, as we

are allowed to use SSH for CVS only. Now, you should be able to do this:

export CVS\_RSH=ssh

cvs -z3 -d:ext:your\_login@cvs.sv.gnu.org:/sources/lwip co lwip

after which you can edit your local files with bug fixes or new features and

commit them. Make sure you know what you are doing when using CVS to make

changes on the repository. If in doubt, ask on the lwip-members mailing list.

(If SSH asks about authenticity of the host, you can check the key

fingerprint against http://savannah.nongnu.org/cvs/?group=lwip)

3 Merging from DEVEL branch to main trunk (stable)

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Merging is a delicate process in CVS and requires the

following disciplined steps in order to prevent conflicts

in the future. Conflicts can be hard to solve!

Merging from branch A to branch B requires that the A branch

has a tag indicating the previous merger. This tag is called

'merged\_from\_A\_to\_B'. After merging, the tag is moved in the

A branch to remember this merger for future merge actions.

IMPORTANT: AFTER COMMITTING A SUCCESFUL MERGE IN THE

REPOSITORY, THE TAG MUST BE SET ON THE SOURCE BRANCH OF THE

MERGE ACTION (REPLACING EXISTING TAGS WITH THE SAME NAME).

Merge all changes in DEVEL since our last merge to main:

In the working copy of the main trunk:

cvs update -P -jmerged\_from\_DEVEL\_to\_main -jDEVEL

(This will apply the changes between 'merged\_from\_DEVEL\_to\_main'

and 'DEVEL' to your work set of files)

We can now commit the merge result.

cvs commit -R -m "Merged from DEVEL to main."

If this worked out OK, we now move the tag in the DEVEL branch

to this merge point, so we can use this point for future merges:

cvs rtag -F -r DEVEL merged\_from\_DEVEL\_to\_main lwip

4 How to release lwIP

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First, checkout a clean copy of the branch to be released. Tag this set with

tag name "STABLE-0\_6\_3". (I use release number 0.6.3 throughout this example).

Login CVS using pserver authentication, then export a clean copy of the

tagged tree. Export is similar to a checkout, except that the CVS metadata

is not created locally.

export CVS\_RSH=ssh

cvs -z3 -d:pserver:anonymous@cvs.sv.gnu.org:/sources/lwip checkout \

-r STABLE-0\_6\_3 -d lwip-0.6.3 lwip

Archive this directory using tar, gzip'd, bzip2'd and zip'd.

tar czvf lwip-0.6.3.tar.gz lwip-0.6.3

tar cjvf lwip-0.6.3.tar.bz2 lwip-0.6.3

zip -r lwip-0.6.3.zip lwip-0.6.3

Now, sign the archives with a detached GPG binary signature as follows:

gpg -b lwip-0.6.3.tar.gz

gpg -b lwip-0.6.3.tar.bz2

gpg -b lwip-0.6.3.zip

Upload these files using anonymous FTP:

ncftp ftp://savannah.gnu.org/incoming/savannah/lwip

ncftp>mput \*0.6.3.\*

Additionally, you may post a news item on Savannah, like this:

A new 0.6.3 release is now available here:

http://savannah.nongnu.org/files/?group=lwip&highlight=0.6.3

You will have to submit this via the user News interface, then approve

this via the Administrator News interface.