

Upgrading Alpine

From Alpine Linux



Warning: Make sure that you have a backup of your important data before continuing to update your system.

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Upgrading an Alpine Linux Hard-disk installation

Upgrading Alpine v2.x to v3.x



Warning: Alpine Linux 3.x is using a different libc implementation compared to previous versions. Musl libc is not ABI compatible with uClibc. Additional steps are required for an upgrade.

Installing statically linked tools

Statically linked version of apk-tools is needed, otherwise it will stop working after libc upgrade (possibly in the middle of upgrade). Static version of busybox can be handy in case of the recovery from a failure.

```
apk add busybox-static apk-tools-static
```

Changing repositories to v3.x

To begin, you need to update your `/etc/apk/repositories` file. Here are some shortcuts for doing so:

- Launch

```
setup-apkrepos
```

Enter `e` to edit `/etc/apk/repositories`. Change the version number by hand.

- Or, edit the file in place. This is how you'd change v2.7 to v3.0:

```
sed -i -e 's/v2\.7/v3.0/g' /etc/apk/repositories
```

Upgrading system

Use statically linked version of apk to update content of repository:

```
apk.static update
```

Simulating upgrade is recommended in order to detect issues beforehand:

```
apk.static upgrade --no-self-upgrade --available --simulate
```

With no problems encountered or after resolving them, start proper upgrade:

```
apk.static upgrade --no-self-upgrade --available
```

Upgrading to latest release

When Alpine Linux is installed to hard drive, upgrading to a newer stable version is straightforward.

To begin, you need to update your `/etc/apk/repositories` file. Here are some shortcuts for doing so:

- Launch

```
setup-apkrepos
```

Enter `e` to edit `/etc/apk/repositories`. Change the version number by hand.

- Or, edit the file in place. This is how you'd change v2.5 to v2.6:

```
sed -i -e 's/v2\..5/v2.6/g' /etc/apk/repositories
```

Or you could do this manually: Edit the `/etc/apk/repositories` file using an editor (nano (https://pkgs.alpinelinux.org/package/main/x86_64/nano) for instance) and if necessary, add references to the Alpine package repositories. In the example below, the reference to the Alpine CD is maintained, so that if the requested package is available on the local media, it will be obtained from there instead of being downloaded from the remote repository:

Contents of `/etc/apk/repositories`

```
/media/cdrom/apks  
http://dl-3.alpinelinux.org/alpine/v2.6/main
```

Another example: upgrading from version 2.6 to 2.7 simply change:

```
http://dl-3.alpinelinux.org/alpine/v2.6/main
```

to

```
http://dl-3.alpinelinux.org/alpine/v2.7/main
```

Thus, the file will now look like this:

Contents of `/etc/apk/repositories`

```
/media/cdrom/apks  
http://dl-3.alpinelinux.org/alpine/v2.7/main
```

Only one repository is shown above; however, you may also replace `http://dl-3.alpinelinux.org/alpine/` with any of the mirrors below:

- <http://nl.alpinelinux.org/alpine/>

- <http://dl-2.alpinelinux.org/alpine/>
- <http://dl-3.alpinelinux.org/alpine/>
- <http://dl-4.alpinelinux.org/alpine/>
- <http://dl-5.alpinelinux.org/alpine/>
- <http://distrib-coffee.ipsl.jussieu.fr/pub/linux/alpine/alpine/>
- <http://mirror.yandex.ru/mirrors/alpine/>
- <http://mirrors.giganet.com/alpinelinux/>
- <http://repos.lax-noc.com/alpine/>

After updating the repositories file, obtain the latest index of available packages:

```
apk update
```

Tip: Adding the `-U/--update-cache` to another `apk` command, as in `apk add -U ...` or `apk upgrade -U`, has the same effect as running `apk update` before the other `apk` command.

If you're upgrading from a version of Alpine before `2.3.0_rc1`, ensure you have the latest available version of the Alpine Linux Package Manager first before upgrading anything else:

```
apk add --upgrade apk-tools
```

Next, upgrade all your packages:

```
apk upgrade --available
```

The `--available` switch is used to force all packages to be upgraded, even if they have the same version numbers. Sometimes changes in `uClibc` require doing this.

Note: You will need to restart any services that have been upgraded to begin using the upgraded versions. If the kernel is upgraded, you will need to reboot to begin using the upgraded version:

```
sync  
reboot
```

Upgrading to Edge

An upgrade of Alpine Linux from a stable version to the rolling development

version, *edge* can be done in a few simple steps. (These instructions assume that Alpine Linux is installed to a hard drive, rather than run-from-RAM.)

To begin, you need to update your `/etc/apk/repositories` file. Here are some shortcuts for doing so:

- Launch

```
setup-apkrepos
```

Enter `e` to edit `/etc/apk/repositories`. Change the version number (such as `v3.2`) to **edge**.

- Or, edit the file in place:

```
sed -i -e 's/v3\.2/edge/g' /etc/apk/repositories
```

The result should look like this:

Contents of `/etc/apk/repositories`

```
...  
http://dl-3.alpinelinux.org/alpine/edge/main
```

Next, upgrade all your packages in one shot:

```
apk upgrade --update-cache --available
```

The `--available` switch is used to force all packages to be upgraded, even if they have the same version numbers. Sometimes changes in `musl-libc` have required doing this.

Note: You will need to restart any services that have been upgraded to begin using the upgraded versions. If the kernel is upgraded, you will need to reboot to begin using the upgraded version:

```
sync  
reboot
```

To check your current release:

```
cat /etc/alpine-release
```

You will see the build date attached to the release.

Upgrading from older versions

See Upgrading from older versions.

Upgrading Alpine Linux on CD

You may have an installation where the boot media being used (such as a CD, for example) is separate from the media used to store the configuration information. In this case, simply download the latest ISO, and replace the boot media contents with the contents of the latest ISO. If you are booting from a CD, this would simply mean replacing the CD with a CD made from the new image and rebooting the Alpine Linux box.

Update remaining packages from Web repository

If you are using APK caching you should also perform the following steps. Edit the `/etc/apk/repositories` file using an editor (`nano` (https://pkgs.alpinelinux.org/package/main/x86_64/nano) for instance) and if necessary, add references to the Alpine package repositories. In the example below, the reference to the Alpine CD is maintained, so that if the requested package is available on the local media, it will be obtained from there instead of being downloaded from the remote repository:

Contents of `/etc/apk/repositories`

```
/media/cdrom/apks  
http://dl-3.alpinelinux.org/alpine/v2.6/main
```

Another example: upgrading from version 2.6 to 2.7 simply change:

```
http://dl-3.alpinelinux.org/alpine/v2.6/main
```

to

```
http://dl-3.alpinelinux.org/alpine/v2.7/main
```

Thus, the file will now look like this:

Contents of `/etc/apk/repositories`

```
/media/cdrom/apks  
http://dl-3.alpinelinux.org/alpine/v2.7/main
```

Only one repository is shown above; however, you may also replace `http://dl-3.alpinelinux.org/alpine/` with any of the mirrors below:

- `http://nl.alpinelinux.org/alpine/`
- `http://dl-2.alpinelinux.org/alpine/`
- `http://dl-3.alpinelinux.org/alpine/`
- `http://dl-4.alpinelinux.org/alpine/`
- `http://dl-5.alpinelinux.org/alpine/`
- `http://distrib-coffee.ipsl.jussieu.fr/pub/linux/alpine/alpine/`
- `http://mirror.yandex.ru/mirrors/alpine/`
- `http://mirrors.giganet.com/alpinelinux/`
- `http://repos.lax-noc.com/alpine/`

After updating the repositories file, obtain the latest index of available packages:

```
apk update
```

Tip: Adding the `-U/--update-cache` to another `apk` command, as in `apk add -U ...` or `apk upgrade -U`, has the same effect as running `apk update` before the other `apk` command.

If you're upgrading from a version of Alpine before `2.3.0_rc1`, ensure you have the latest available version of the Alpine Linux Package Manager first before upgrading anything else:

```
apk add --upgrade apk-tools
```

Next, upgrade all your packages:

```
apk upgrade --available  
sync
```

The `--available` switch is used to force all packages to be upgraded, even if they have the same version numbers. Sometimes changes in `uClibc` require doing this.

After upgrading packages, save any configuration changes (you should have backed up your earlier configuration prior to upgrading).

```
lbu ci
```

Upgrading Alpine Linux on other removable media (such as CF/USB)

The following instructions are for run-from-RAM Alpine installations running on Compact Flash or USB media. Updating your repositories using the procedures detailed above, then running:

```
apk upgrade --update-cache --available
```

will suffice for some purposes. (If you want the new packages to be used after a reboot, you should enable APK caching.)

However, this is not an adequate general solution because it won't honor any kernel upgrades and the like. For the general solution, you'll need to upgrade your boot medium (Compact Flash or USB). That is what the following steps describe how to do.

Setup environment variables

To make the documentation a bit more "generic" we start by setting some environment variables.

```
vi /etc/lbu/lbu.conf
```

Make sure that the variable `LBU_MEDIA` is not commented (by removing the leading '#').

You also need to set a appropriate value for your `LBU_MEDIA`. The media you choose will be the media where you store your settings/configuration.

Note: Even if you have you alpine installed on CF, HD or USB you can still choose to save your config on some other media that suits your needs. But remember that both the media where you have your Alpine system AND the media where you have your config need to be in your box when booting it.

Examples:


```
LBU_MEDIA=usb
```

or:

```
LBU_MEDIA=sda1
```

Now that you have your `/etc/lbu/lbu.conf` configured for your needs, we will set the environment variables (note the leading `.`).

```
. /etc/lbu/lbu.conf
```

You can test if your environment variable was set:

```
echo $LBU_MEDIA
```

It should output something like `usb`, `sda1`, or whatever you just configured.

Back up your config

Before starting to upgrade, it's wise to save your configuration.

```
lbu ci
```

Upgrade Operating System

Start by checking that you have enough space on your media. For a **standard** Alpine image, you need at least 400MB available space.

```
df -h | grep "Filesystem\|$LBU_MEDIA"
```

Download and verify new release

Make sure the media that holds your Alpine system is mounted readwrite.

```
mount -oremount,rw /media/$LBU_MEDIA
```

If using Alpine Linux 2.2.3 or newer: use the following command to download, mount and copy files as needed for you:

```
setup-bootable -u http://74.117.189.115/cgi-bin/dl.cgi/v3.3/releases/x86_64/alpine
```

Once the command completes, proceed to the Save changes section.

For older versions of Alpine

Start downloading a new '.iso' and a '.sha1' file

```
cd /media/$LBU_MEDIA
wget -c http://74.117.189.115/cgi-bin/dl.cgi/v3.3/releases/x86_64/alpine-3.3.1-x86
wget http://74.117.189.115/cgi-bin/dl.cgi/v3.3/releases/x86_64/alpine-3.3.1-x86_64
```

Check integrity of the downloaded files (*it might take some time*):

```
shasum -c alpine-3.3.1-x86_64.iso.sha1
```

*The output of the above command should say 'OK'.
If says 'FAILED', delete the iso file and download it again.*

If using Alpine Linux 1.10.4 or newer: there is a tool *setup-bootable* that will mount and copy the image you just downloaded to your boot medium. With this tool simply do:

```
setup-bootable -u alpine-3.3.1-x86_64.iso /media/$LBU_MEDIA
```

Instructions for older versions of Alpine are located elsewhere.

Save changes

Now that all upgrades are done, we should save our settings to our media (which you hopefully have backed up prior to doing this upgrade).

```
lbu ci
```

Load new kernel

In most cases you will need to reboot Alpine Linux (especially if there are changes in the kernel):

```
sync
```

reboot

Note: If you know what you are doing, you might not need to reboot. But make sure that all services affected by the upgrade are restarted.

Update remaining packages from Web repository

If you are using APK caching you should follow the instructions to Update remaining packages from Web repository, above.

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