

# Patagonia CloneSys — A Tool to Install Multi-Boot Environments Quick-Reference

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## 1 Initial Installation of a Patagonia Machine

We use a minimalistic boot-floppy / boot-Zip-disk combination based on the Linux distribution *muLinux* to boot a new or broken machine. With such a boot disk the empty machine can be booted and brought to the network.

The next steps are just to mount the `/images` directory from the imageserver over the network and to start the `initinstall` script which installes the initial image and configuration file. With this the machine can be booted in the Service-Linux system an the remaining operating systems can be installed with the `restore` or `rclone` scripts.

### 1.1 Example of an `initinstall`

Boot the machine with the muLinux boot floppy or zipdisk and login as root. Then mount the `/images` directory from the server

```
mount /images
```

or depending on your `/etc/fstab`

```
mount -t nfs imageserver:/images /images
```

(where *imageserver* is the machine which stores the partition images)

Start the installation script:

```
/images/scripts/initinstall hostname yourname
```

This will install the `sda_InitClone.gz` image to the device `sda` on the local machine an generate an initial configuration file for the machine in the `config`-directory (by copying the `initconfig` file).

After that the machine has to be rebooted into the now newly installed CloneSys (Linux) where the rest of the partitions can be installed with `rclone` or `restore`.

**Caution!** Don't boot uninstalled systems as they could be automatically removed from the boot-menu.

Restoring the partitions means that the same images that are specified in the `initconfig` shall be initialized. To restore one or more partitions on a cluster the `restore` script can be used as follows:

```
restore yourname -d sda5 sda6 sda7 sda8 sda9 sda10 -h hostname
```

This restores the images for all the partitions `sda5` to `sda10` on the machine with the given hostname. This command can be executed local or on a server.

It calls the `rclone` command for all the specified devices and machines with the `default` image which is the image specified in the config files.

If different images shall be installed the `rclone` script can be used as follows:

```
rclone sda5 WinNTEducNew yourname hostname
```

which would install the image WinNTEducNew on sda5.

## 2 Partition Backups

For saving installations and releases as well as to clone images to the cluster, backups to the image server have to be made. Therefore the `backup` and `rbackup` scripts are provided. They perform a backup of the raw device and gzip the data.

The file names are constructed as follows: `device_imagename.gz`, e.g. `sda1_SysCom.gz`.

A comment has to be provided for each image that is generated. This will be stored in the image description log which can be displayed with the `imagedesc` command.

### 2.1 Example of an image backup

```
backup sda5 WinNTEduc yourname "WindowsNT 4.0 SP4"
```

```
rbackup sda5 WinNTEduc clientname yourname "WindowsNT 4.0 SP4"
```

This backs up the device `sda5` to the `imageserver`. The image name will be `sda5.WinNTEduc.gz` and the comment in the image description database "WindowsNT 4.0 SP4". Note that the double quotes ("") are important! The `rbackup` script can be used to back up a remote machine. The only difference to `backup` is the parameter `clientname` which has to be provided.

## 3 Partition Installations and Releases

To install the saved partitions on to cluster machines the `clone` and `rclone` scripts are provided which read the image over the network, gunzip them and write the data to the specified partition. The script essentially uses the following command:

```
gunzip -c /ipath/iname |dd of=/dev/device bs=1024
```

### 3.1 Example of a clone

```
rclone sda5 WinNTEduc yourname client1
```

```
rclone sda5 default yourname 3 4 5
```

The first command will clone the image `sda5-WinNTEduc.gz` to the device `sda5` on host `client1`. After a successful clone it changes the entry in the config file to the appropriate values.

The second command runs the clone script on the machines with the alias `rifpc3`, `rifpc4` and `rifpc5`, which restores the last installed image defined in the config file of the machine.

## 4 Restores

Restoring partitions on a cluster means that the same image that was installed on the machines shall be reinitialized. To restore one or more partitions on a cluster the `restore` script can be used. It calls the `rclone` command for all the specified devices and machines with the `default` image which restores the last installed image specified in the config files.

### 4.1 Example of a restore

```
restore yourname -d sda6 sda7 -h 10 12 14
```

This restores the images for the partitions `sda6` and `sda7` on the machines with the aliases `rifpc10`, `rifpc12` and `rifpc14`.