PC Image Backup Procedures

Clonezilla can be used for image backups of the PC hard drives.

Clonezilla can be run from a CD, DVD, or a USB device. A Clonezilla DVD is provided with the PaintWorks PC.

The files required to make an additional Clonezilla disc or USB are in PW Support/Clonezilla.

- "clonezilla-live-20120326-oneiric.iso" can be burned to a CD or DVD with standard windows software. Right click on the file, select "Open With", then "Windows Disc Image Burner"
- Run "tuxboot-0.2.exe" to make a USB startup device using "clonezilla-live-1.2.12-10-amd64.zip"

Image Backup Summary

The 2nd hard drive installed with the system is a bootable image of the C: drive. It can be swapped with the 1st disk for a quick recovery.

The 2nd hard drive also has image backups of the C: drive in the D:\Image folder.

Image backup DVDs are also provided to restore the PC if the D: drive is unavailable. You will need a USB hard drive. Create a folder for the image on the USB hard drive and copy the contents of all the Image Backup DVDs to the folder.

Using Clonezilla

Insert Clonezilla DVD or USB with the Clonezilla software. If you are making images to or restoring from a USB hard drive, you can attach it later. Restart the computer to start Clonezilla. While booting from the CD it may print confusing text on the screen and update slowly between menus. This is normal. Let it finish.

Choose language: Press enter to select English.

Configuring console-data: Press enter to select "Don't touch keymap".

Start Clonezilla: Press enter to select "Start Clonezilla"

There are two categories of operations available at this point:

- device-image – This allows backup up to or restoring from an image folder on another drive.
- device-device - This allows copying one drive to another, without making image files. It can be used for backup up C: to D: or restoring the C: drive from the D: Drive.

device-image – Image Backup and Restore
This allows backup up to or restoring from an image folder on another drive. The built in D: or an external USB drive can be used.
You will mount the drive that contains the image files.
Mount Clonezilla image directory: local_dev
If you are using an external USB drive for the images, attach it now. Wait a few seconds for it to be recognized before pressing enter to continue.
A list of drives is displayed for the image file storage.
Physical drives get a 3 letter name. Partitions are numbered at the end of the name. For the typical Dell configuration, C: is sda3. If D: was not cloned from C:, it will be sdb1. If D: was cloned from C: then it should be sdb3. An external USB drive will probably be sdc1.
Select the drive that holds the images.
Next you select a folder that contains the images – Each image gets its own folder under the selected folder. The default location on the D: drive is "Images"
Select "Beginner mode"
Backing up the C: drive to an image folder:
        Select "savedisk".
        It will give you the option to name the image folder or use the default name.
        Choose local disk as source – Select sda to backup the C: drive. This page has a slightly different selection process. Press space to select a device. Press enter to continue.
        Press enter to select "Skip checking/repairing source file system"
        Press enter to select "Yes, check the saved image"
        You'll need to press enter again and confirm with a "y" to get the process started.
Restoring the C: drive from an image:
        Select "restoredisk".
        Choose the folder containing the image you would like to restore.
        Choose the drive to be written to. Select sda to restore the C: drive.
        You'll need to press enter again and confirm with a "y" a couple times to get the process started.
When it is complete, press enter to continue.
Select (0) poweroff
Wait for it to finish. It will eject the boot CD or DVD.
Remove the disc and press enter. The computer will turn off.
Remove the USB drive.
Turn on the computer. PaintWorks should start normally.

device-device – Drive Cloning
This allows copying one drive to another, without making image files. It can be used for backup
up C: to D: or restoring the C: drive from the D: drive.
   Note: Backup up with this method erases everything on the target drive.
Use the arrows to move to "device-device" and press enter to start.
Select "beginner mode"
Select "disk_to_local_disk"
Now you will be asked to select the source disk. The names won't match the names in windows,
but they should be in the same order.   Typically, sda = C: and sdb = D:
Backing up the C: drive to the D: drive:
   Select "sda" for C: as the source.
   Select "sdb" for D: as the target.
Restoring the C: drive from the D: drive:
   Select "sdb" for D: as the source.
   Select "sda" for C: as the target.
If more choices are available, press the space bar to select the target.
Press enter to select "Skip checking/repairing source file system"
You'll need to press enter again and confirm with a "y" a couple times to get the process started.
When it asks to clone the boot loader, select yes by pressing y.
The typical Dell setup has three partitions which you'll see it run through as displays its progress.
When it is complete, press enter to continue.
Select (0) poweroff
Wait for it to finish. It will eject the boot CD or DVD.
Remove the disc and press enter. The computer will turn off.
Turn on the computer. PaintWorks should start normally.

If you made a backup, you may need to mount the D: drive.
Shut down PaintWorks. Open explorer and look for the D: drive.
If there is no D: drive or it does not look like a copy of the C: drive, you'll need to run fdisk.
Open the start menu and type "fdisk" in the search bar.
It will display the hard drives status.
You should see drive 0 with the C: partition.
Drive 1 may be offline. Right click on the disk icon and select "online"
It may assign default drive letters to out of the preferred order.
If the recovery partition is assigned a drive letter, right click on it and select "change drive letter
and Paths…" Then select remove to remove the assignment.
If the largest partition on the 2nd drive is not assigned to D:, right click on it and select "change
drive letter and Paths…" If it has the wrong assignement, select change. If there is no
assignment, select add. Assign D: to the partition.