

# Instructions for Disk Imaging

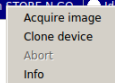
Princeton University Archives

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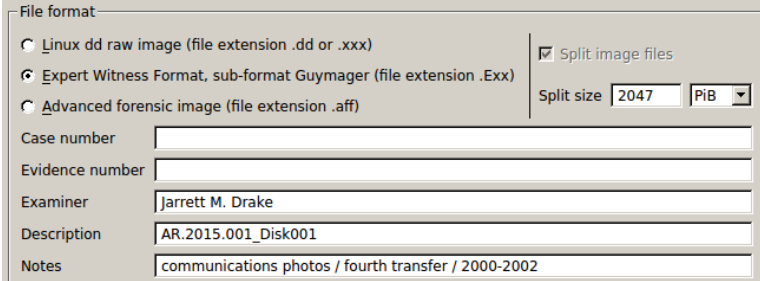
**About:** The purpose of this optional step is to create a forensic disk image of digital media acquired by the Library. A forensic disk image will allow Library staff to 1) regenerate a bit-for-bit copy of a drive or disk and 2) mount the drive or disk as a read-only filesystem, from which staff can explore or extract data. **Important: not all media warrants imaging.** As a general practice, the Library creates disk images for internal hard drives, floppy disks, zip disks, and DVD's, but does not create them for external hard drives, USB drives, and CD's.

1. Click on **GuyMager** from the side Desktop ribbon.
2. Right click on the desired device and select **Acquire image**.
3. The **Acquire image** dialog box will appear. In the **File Format** section:

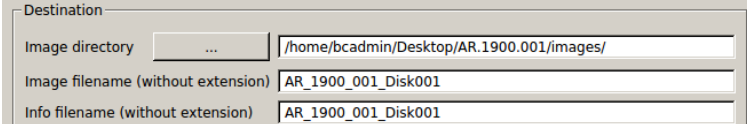
Serial nr.	Linux device	Model	State	Size	Hidden areas
VBa3a109b6-b07f1102	/dev/sda	ATA VBOX HARDDISK	<input type="radio"/> Idle	274.9GB	unknown
	/dev/zram0		<input type="radio"/> Idle	1.2GB	unknown
1256000000000697	/dev/sdb	Verbatim STORE N GO	<input checked="" type="radio"/> Running	8.0GB	unknown



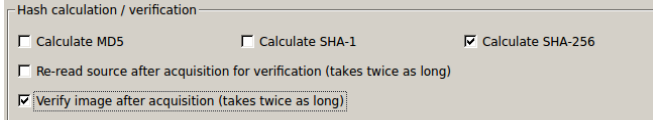
- Select the **Expert Witness Format**.
- In the **Examiner** field, type your name.
- In the **Description** field, enter the accession number and disk number. For example: "AR.2015.001\_Disk001"
- In the **Notes** field, enter the information you previously transcribed from the disk label into AT field **User Defined Text 3**.



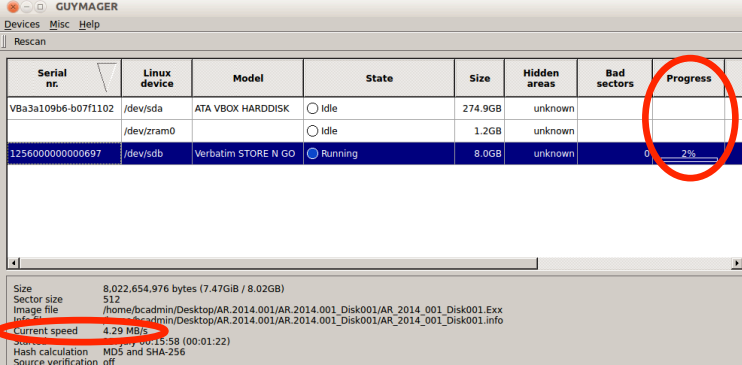
4. In the **Destination** section:
  - Under **Image Directory** field, click the **ellipsis** to browse to the accession's **images** folder.
  - Under **Image filename**, enter the Accession Number followed by an underscore and the disk number. For example: "AR\_2015\_001\_Disk001"



5. In the **Hash calculation / verification** section, ensure that the following boxes are checked:
  - "Calculate SHA-256"
  - "Verify image after acquisition (takes twice as long)"



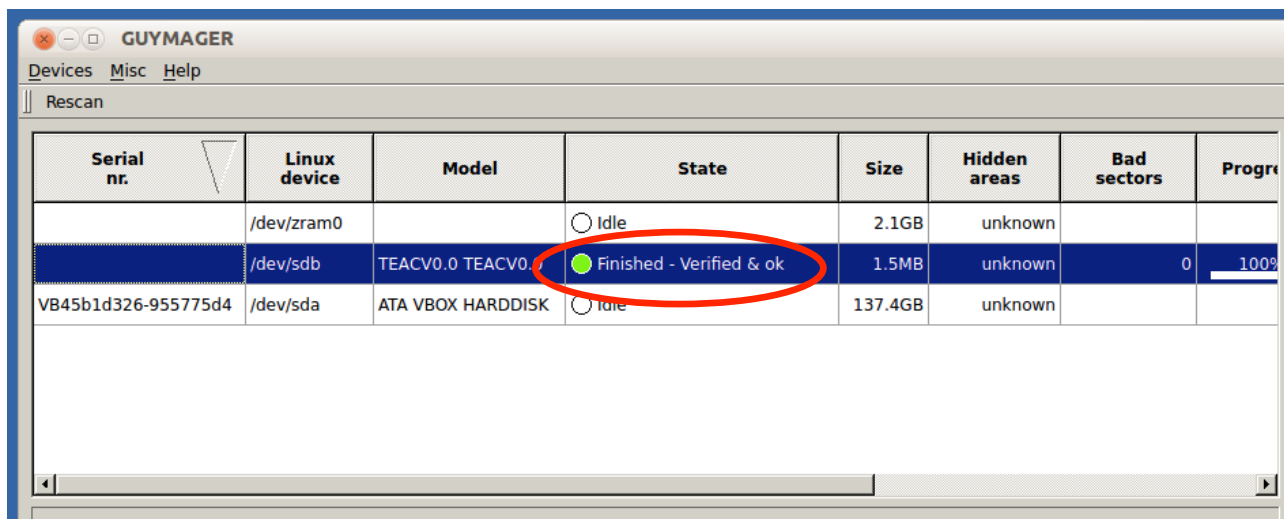
6. Click **Start**.
7. While the imaging is taking place, a dialog box will appear that reports on the image's progress and speed.



Serial nr.	Linux device	Model	State	Size	Hidden areas	Bad sectors	Progress
VBa3a109b6-b07f1102	/dev/sda	ATA VBOX HARDDISK	<input type="radio"/> Idle	274.9GB	unknown		
	/dev/zram0		<input type="radio"/> Idle	1.2GB	unknown		
1256000000000697	/dev/sdb	Verbatim STORE N GO	<input checked="" type="radio"/> Running	8.0GB	unknown	0	2%

Size: 8,022,654,976 bytes (7.47GiB / 8.02GB)  
Sector size: 512  
Image file: /home/bcadmin/Desktop/AR.2014.001/AR.2014.001\_Disk001/AR.2014.001\_Disk001.Exx  
Current speed: 4.29 MB/s  
Hash calculation: MD5 and SHA-256  
Source verification: off  
Image verification: on

8. After the image is created, the dialog box's "State" field will change to **Finished – Verified & ok**.



9. Close Guymager. Safely unmount and disconnect the drive or device. If you have more disks in the accession, return to the **Running a Virus Scan** step. If you have no more disks, proceed below.
10. Make an appropriate entry in the AT accession record noting the results of the imaging process. See separate log entry documentation for language to use.