**Goal:** Copy an installed OS file-system image onto a drive that you will install into a LANforge system that lacks display hardware.

Many LANforge ICE WAN emulator machines are embedded systems that lack display hardware. Installing an OS using only the serial console can be very inconvenient. The easy solution is to perform the installation on similar hardware that does have display hardware, and then move the drive to the embedded device. Here, we learn how to use Etcher on Windows to write a compressed disk image to an mSata drive plugged into a USB3 adapter.

1. Here we’re using Etcher which handles compressed file system images without any trouble. There are other programs (like Win32 Disk Imageer or dd for windows) but those are more complex to use.

2. Items we’ll want:
   A. 30GB or larger mSATA drive
   B. USB3 mSATA drive adapter
3. Download and install Etcher

4. Identify your drive in **Control Panel → Hardware and Sound → Hardware and Printers**.
5. Download your image file:

6. Start Etcher

7. Select the compressed image:
8. Select the removable drive

9. You might have to enable unsafe mode if the drive you plugged in has previously been used
A. in Settings, enable **Unsafe mode**

![Etcher Settings]

- Anonymously report errors and usage statistics to resin.io
- Eject on success
- Validate write on success
- Include unstable update channel

**Advanced**

- Unsafe mode

![Etcher Advanced]

B. Select the removable drive

![Etcher Drive Selection]

10. Select the removable drive
11. Write image.
   A. click `Flash`
12. Make coffee.

13. When the image is finished writing, close etcher and use the Safely Eject Thing dialog in the system tray.
   A. right click

   ![Safely Remove Hardware and Eject Media](image)

   B. select device

   ![Open Devices and Printers](image)

14. Unplug your drive from the computer, remove the msata drive drive from the USB caddy and then install into your embedded device