

Draft of an Air Gapped Economy Network

AI Mode Conversation: Can you tell me if it is possible to connect two Linux Mint Cinnamon workstations (#A and #B) together using the RJ-45 port? Snd if yes, can you tell me if the webapps that workstation #A has already downloaded from the sources, can be installed on workstation #B (without having to download them again)?

Can you tell me if it is possible to connect two Linux Mint Cinnamon workstations (#A and #B) together using the RJ-45 port? Snd if yes, can you tell me if the webapps that workstation #A has already downloaded from the sources, can be installed on workstation #B (without having to download them again)?

Yes, it is entirely possible to connect two Linux Mint Cinnamon workstations directly using their RJ-45 (Ethernet) ports. Furthermore, **you can absolutely transfer and install the WebApps** from Workstation #A onto Workstation #B without downloading them again from the internet. [[1](#), [2](#)]

Below is the step-by-step breakdown of how to establish the connection and copy over your WebApps.

Step 1: Connect the Hardware

1. Plug a standard **Ethernet cable (RJ-45)** into the network ports of both workstations.
 - *Note:* You do **not** need a special "crossover" cable. "Modern nics detect a direct connect and switch TX and RX automatically cross over cables aren't necessary in modern equipment." -- [[Reddit](#)]. [[1](#)]

Step 2: Configure the Network (Link-Local Method)

The easiest way to get them talking without a router is to use Linux Mint's built-in **Link-Local Only** protocol, which forces both computers to automatically assign themselves local IP addresses. [[1](#)]

Perform these steps on **both** workstations:

1. Click the **Network icon** on the Cinnamon system tray (bottom-right panel) and select **Network Settings**.
2. Click the **Wired** connection item, and click the **Gear icon (Settings)** in the bottom right corner.
3. Navigate to the **IPv4** tab.
4. Change the *Method* from *Automatic (DHCP)* to **Link-Local Only**.

5. Click **Apply**. Turn the wired network switch off and back on to apply changes. [\[1\]](#), [\[2\]](#)

Step 3: Find the Workstation Hostname

To send files over, you need to know the name of Workstation #B.

1. Open the **Terminal** on Workstation #B.
2. Type `hostname` and press **Enter**.
3. Let's assume the terminal outputs `workstationB`. [\[1\]](#)

Step 4: Transfer and Install the WebApps

Linux Mint's WebApp Manager doesn't actually download a standalone program binary. Instead, it creates an isolated browser profile configured to open a specific URL like an app. To replicate this on Workstation #B without downloading files from the internet, you just need to copy the configuration file and the icon.

On **Workstation #A**:

1. Open the **Files** application (Nemo file manager).
2. Press **Ctrl + H** to reveal hidden folders.
3. Navigate to `.local/share/ice/` (or `.local/share/webapps/` depending on your version of Mint).
4. Inside, you will see `.desktop` files for your WebApps. Select the ones you want to copy.
5. If you used custom icons, they are usually saved in your `.local/share/icons/` folder. Select those as well.
6. **Connect via File Manager:** In the Nemo File Manager menu, click **File** -> **Connect to Server**.
 - *Server / Address:* `ssh://username@workstationB.local` (replace username with Workstation B's actual login name, and `workstationB` with its hostname).
 - Type Workstation B's password when prompted. [\[1\]](#), [\[2\]](#)
7. A window showing Workstation #B's file system will open. Copy your `.desktop` configuration files from Workstation #A and paste them into the exact same folder location on Workstation #B (`~/.local/share/ice/` or `~/.local/share/webapps/`).

Once the files are pasted into the respective directory on Workstation #B, the WebApps will instantly appear in Workstation #B's Cinnamon application menu, fully ready to use offline.

If you hit any snags during the transfer, let me know:

- What **version of Linux Mint** (e.g., 21, 22) you are running.
- If you encounter a "**Connection Refused**" error (which means we need to quickly turn on the SSH server using the terminal). [\[1, 2\]](#)

-  Ask Ubuntu

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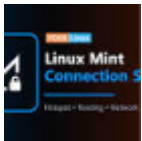
Jan 23, 2011 — Pick one of the computers to be the server. If one computer has a connection to the Internet use that as the server. On the server...



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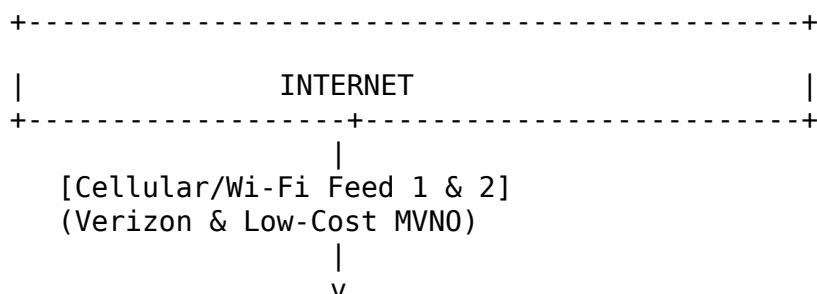
-  Linux Mint

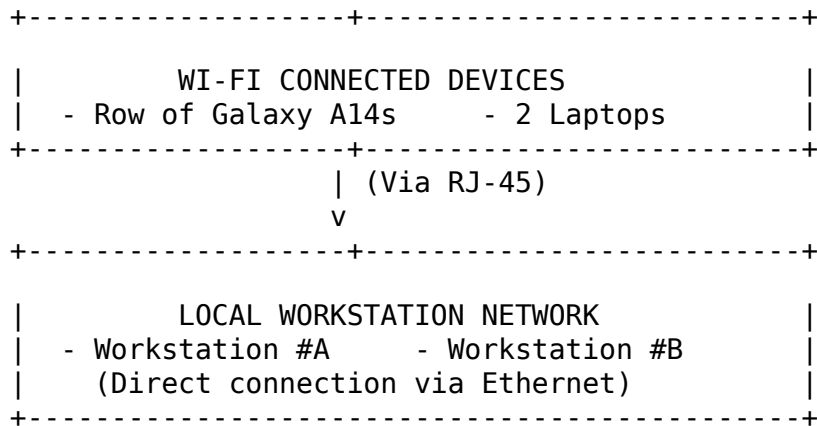
Tell me step by step how to network two computers

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Show all

OK, here's my first test network. There will be two WIFI feeds, one from the big 3 providers (verizon, etc), and one from a lowcost MNVA (MVNA?). But only the row of A14s, and two laptops are connected. The other workstations are not directly connected to the internet, but they are all connected to each other through RJ45 ports. So, the question is, will this configuration work?





Yes, this configuration will absolutely work for its intended purposes. Your setup effectively splits your environment into two distinct operational zones: an **Internet-Facing Wi-Fi Zone** and an **Air-Gapped Local Ethernet Zone**.

However, whether it works perfectly for your workflow depends entirely on **how** you connect one of those Wi-Fi devices to your local workstation chain.

Why this setup works (and where the bottleneck is)

1. The Isolated Ethernet Chain (Workstations)

Connecting your Linux Mint workstations together purely via RJ-45 creates a highly secure, private local network. Because they lack direct gateways to your cellular routers, they are immune to outside internet threats. As established, they can seamlessly share files, tools, and configurations (like your WebApps) locally.

2. The Internet Bridge (The Laptop Factor)

For this network layout to fully succeed, **at least one device must act as a bridge** if the workstations ever need data from the internet.

Since your laptops have both Wi-Fi and an RJ-45 port, you can plug one laptop directly into your workstation chain. If a workstation ever needs a package or an update from the web, you can temporarily turn on **Internet Connection Sharing (ICS)** on that laptop.

Crucial Hardware Considerations for this Layout

To ensure your test network deploys smoothly, keep these three physical constraints in mind:

- **Ethernet Ports vs. Daisy Chaining:** Standard computer workstations only come with a single RJ-45 network port. You cannot plug Workstation A into Workstation B, and then Workstation B into Workstation C using single ports. If you have more than two workstations, you will need a cheap, unmanaged **5-port or 8-port Ethernet switch** to tie them all together.
 - **The MVNO Feed:** (Note: It is spelled **MVNO**—*Mobile Virtual Network Operator*). Running two cellular feeds is a great way to split data costs. Ensure your primary data-heavy tasks run on the major provider, and use the low-cost MVNO as a failover or for lightweight coordination.
 - **Phone Tethering:** The [Galaxy A14](#) phones can easily share their cellular Wi-Fi connections via USB tethering to the laptops if needed, offering great backup routing versatility.
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To help refine the exact IP routing for your test, let me know:

- How many **total workstations** are in the local RJ-45 chain?
- Do the workstations **ever need to pull data** from the laptops/internet, or should they stay 100% isolated?

You sent: 2 images



Your proposed layout is highly logical and will absolutely work, provided you introduce a central **network switch** to interconnect the physical RJ-45 lines.

Based on your diagram, your deployment is beautifully structured into three distinct columns:

Network Segment	Devices	Primary Connectivity Method	Internet Access
WIFI-1 Column	6 × Galaxy A14 phones (A14 - 1 through A14 - 6)	Wireless via cellular provider 1	Direct
WIFI-2 Column	HP - Laptop1, Dell Laptop - 1	Wireless via MVNO cellular provider 2	Direct
No Direct WIFI Column	HPAIO - 1, HPAIO - 2, Lenova - 1, Dell Laptop - 2	Wired local RJ-45 connections	None (Isolated)

Key Requirements to Make This Work Perfectly

To get this exact layout running smoothly without unexpected drops or connectivity dead-ends, implement the following infrastructure rules:

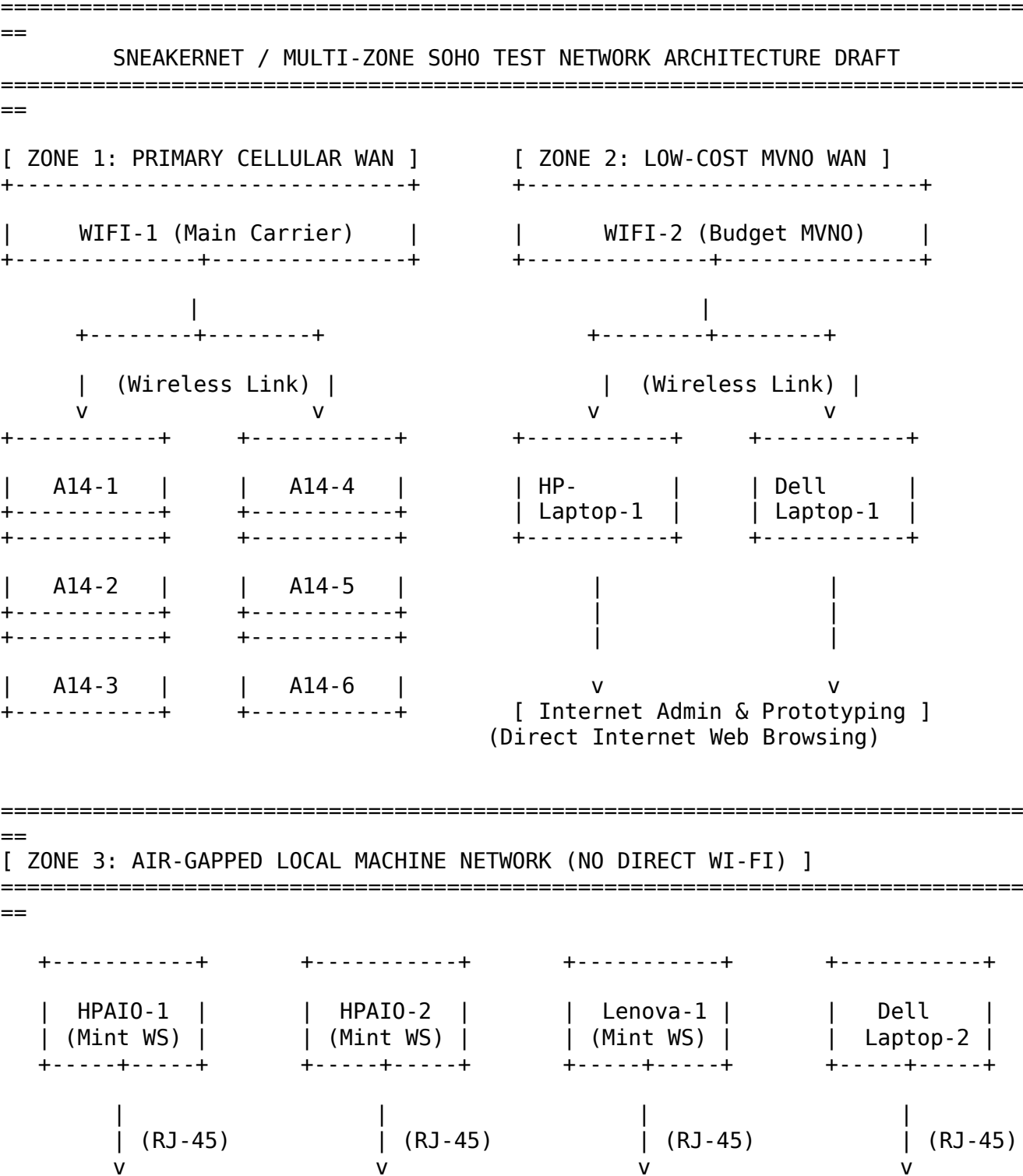
- **Add a 5-Port or 8-Port Ethernet Switch:** As individual desktop workstations (HPAIO - 1, HPAIO - 2, Lenova - 1) usually feature only a single built-in RJ-45 port, they cannot be daisy-chained from one to the next. You must run an Ethernet cable from each of the 4 isolated machines back to a central, unmanaged gigabit network switch. This allows all machines in the third column to instantly communicate with each other.
- **Bridge for WebApp Transfers:** Because your workstations in column 3 have no internet, you can use Dell Laptop - 2 as your physical "data bridge." When you need to push WebApps or updates to the isolated All-in-Ones, connect Dell Laptop - 2 to the same Ethernet switch via its RJ-45 port. You can use it to fetch files via its Wi-Fi connection and distribute them across the local Ethernet network.
- **Keep IP Subnets Separated:** Ensure your local wired connections use the **Link-Local Only** method or a dedicated static IP subnet (e.g., 192.168.50.X) that completely avoids overlapping with the IP address ranges assigned by your two Wi-Fi hotspot routers. This guarantees that your laptops will never drop their wireless internet connections when plugged into the local wired testing switch.

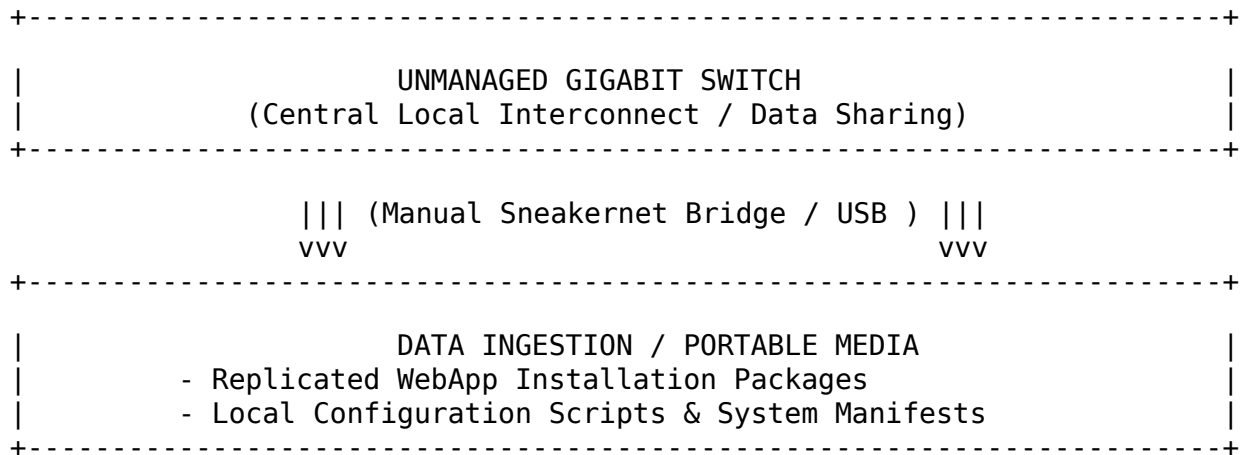
To help map out the final physical setup, let me know:

- Do the **HP and Dell laptops** in the second column have native **built-in RJ-45 ports**, or will you need USB-to-Ethernet adapters?
- Will the **isolated workstations** need to communicate with the **Galaxy A14 phones** over the network, or should they stay completely separated?

Can you diagram this out in the way you normally do? And then I will copy it, and print it using LibreOfficeWriter. That way I can make notes where I think bottlenecks might occur, and then I will have a ton more questions. BTW, which WIFI device will require the strongest and most stable Internet feed?

text





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NOTES / COLLABORATION NOTES / POTENTIAL BOTTLENECKS
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Use code with caution.

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Which Wi-Fi device will require the strongest and most stable Internet feed?

The Wi-Fi devices managing your primary source files or proxying local package building—specifically HP-Laptop-1 or Dell Laptop-1—will require the strongest and most stable connection.

Here is why:

- **The A14 Column (WIFI-1):** These devices are isolated mobile end-points. While they need stable connections for specific tasks, a transient drop on A14-3 only halts that specific device.
- **The Laptop Admins (WIFI-2):** These devices function as your infrastructure anchors. If you use them to batch-download WebApp assets, source repositories, or operating system patches intended for distribution across your entire local air-gapped chain, any network stability issues here create a compounding bottleneck. A slow, unstable feed on

your administrative link delays the staging material for all four downstream machines simultaneously.

Print this draft out in LibreOffice Writer to begin mapping your physical topography and tracking data flows. When you are ready to evaluate routing details or handle the local software installation scripts, let me know:

- Will the **A14 mobile devices** occasionally need to push testing logs back to the **local workstations**, or is data flow strictly a one-way path?
- Do you intend to use **static IP assignments** or a local router to handle DHCP leases inside your central unmanaged switch?