

9--TETHERING FROM AN ANDROID CELL PHONE VIA A USB CABLE TO A "..LINUX.." COMPUTER

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Web location for this
presentation:

<http://aztcs.apcug.org>

Click on

"Meeting Notes"

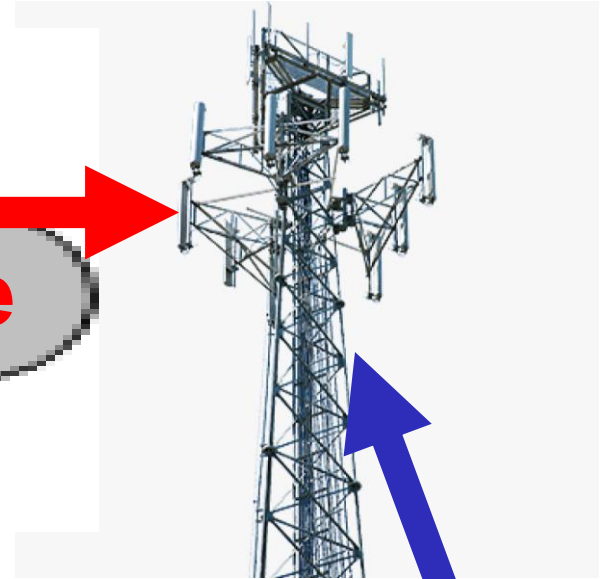
SUMMARY

You can use your Android cell phone and a "cell phone to USB" cable to provide an Internet connection for a "..Linux.." computer.

TOPICS

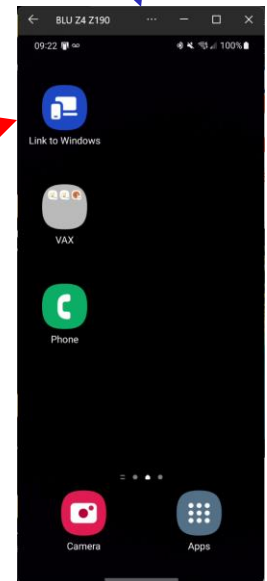
- Advantage of using USB tethering from a Android cell phone
- Big Steps (for computer experts)
- Small Steps (for the rest of us)
- Additional Advice

**Internet Cloud
(= "Data Plan" in cell phone
lingo)**



Option 3:

**Cell phone is tethered with a
"cell phone to USB" cable
so that a
client computer, tablet, or
another cell phone can access
the Internet**



"TETHERING" AND "HOTSPOT" FOR CELL PHONES

- ~~Four ways to tether or create a hotspot with a cell phone:~~
 - ~~Option 1: tethering using Wi Fi~~
 - Option 2: tethering using a "cell phone to USB" cable
 - ~~Option 3: tethering using Bluetooth~~
 - ~~Option 4: tethering using an add on wired Ethernet adapter~~

ADVANTAGE OF USING A USB TETHERING FROM A CELL PHONE

- Of the four configurations for tethering from a cell phone, only **OPTION 2: tethering a USB cable** avoids the radio-frequency collisions and interference that are sometimes encountered with Wi-Fi and Bluetooth communications.

OPTION 2 BIG STEPS

("Option 2:" = tethering using a
"cell phone to USB" cable)

- **BIG STEP 100:**
Connect the cell phone to the client computer using a "cell phone to USB" cable
- **BIG STEP 200:**
Activate "USB tether" in the "Settings" app of the cell phone

OPTION 2 BIG STEPS (continued)

- **BIG STEP 300:**
In "Network Connections" or "Settings" of the client device, enable the virtual Ethernet device that the Android phone provides for the client device

BIG STEP 100 (Connect the cell phone to the client device using a "cell phone to USB" cable)

SMALL STEP 101:

Physically connect the "cell phone to USB" cable between the Internet-providing cell phone and the client computer:

BIG STEP 100 (Connect the cell phone to the client device using a "cell phone to USB" cable)

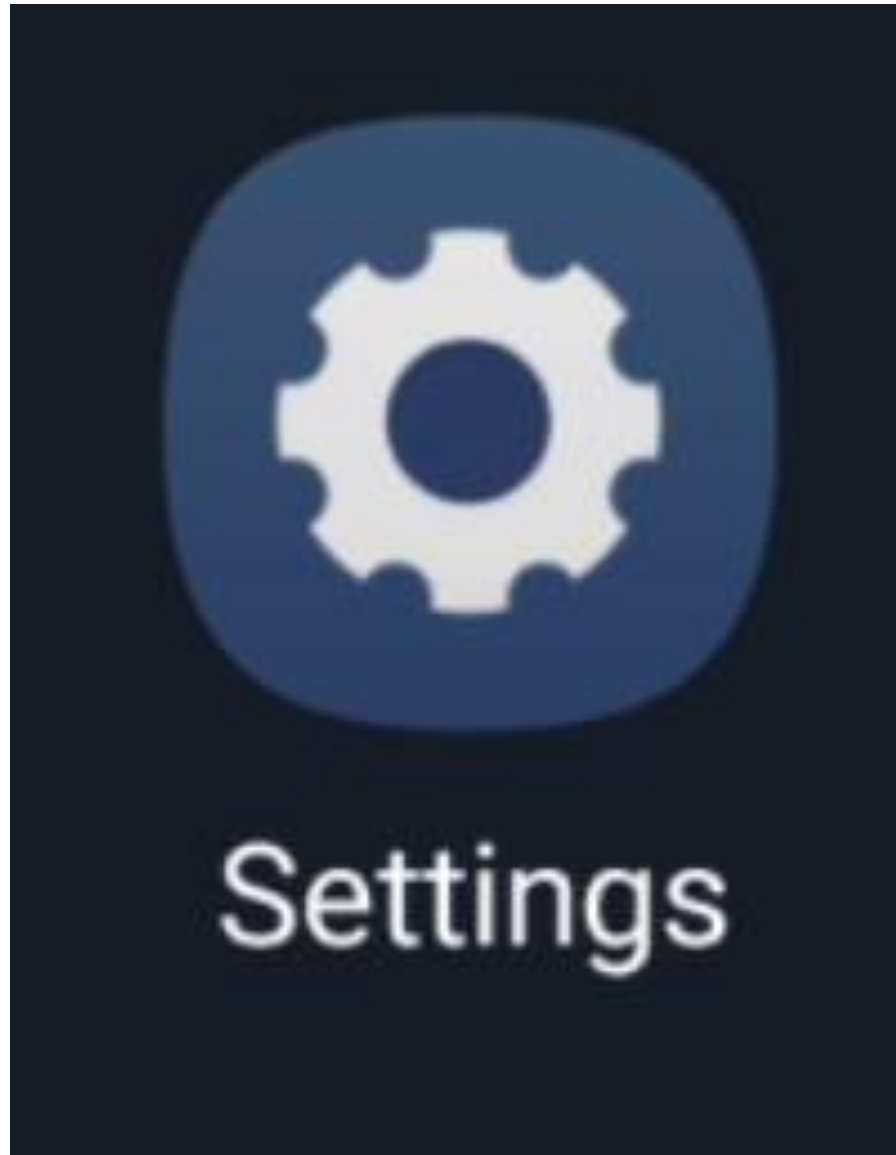
SMALL STEP 101 (continued):

- microUSB plug to USB A plug cable for older Android cell phones
- USB-C plug to USB-C plug cable or
USB-C plug to USB A plug for the newer Android cell phones

BIG STEP 200 (Activate "USB tether" in the "Settings" app of the Android cell phone)

SMALL STEP 201:

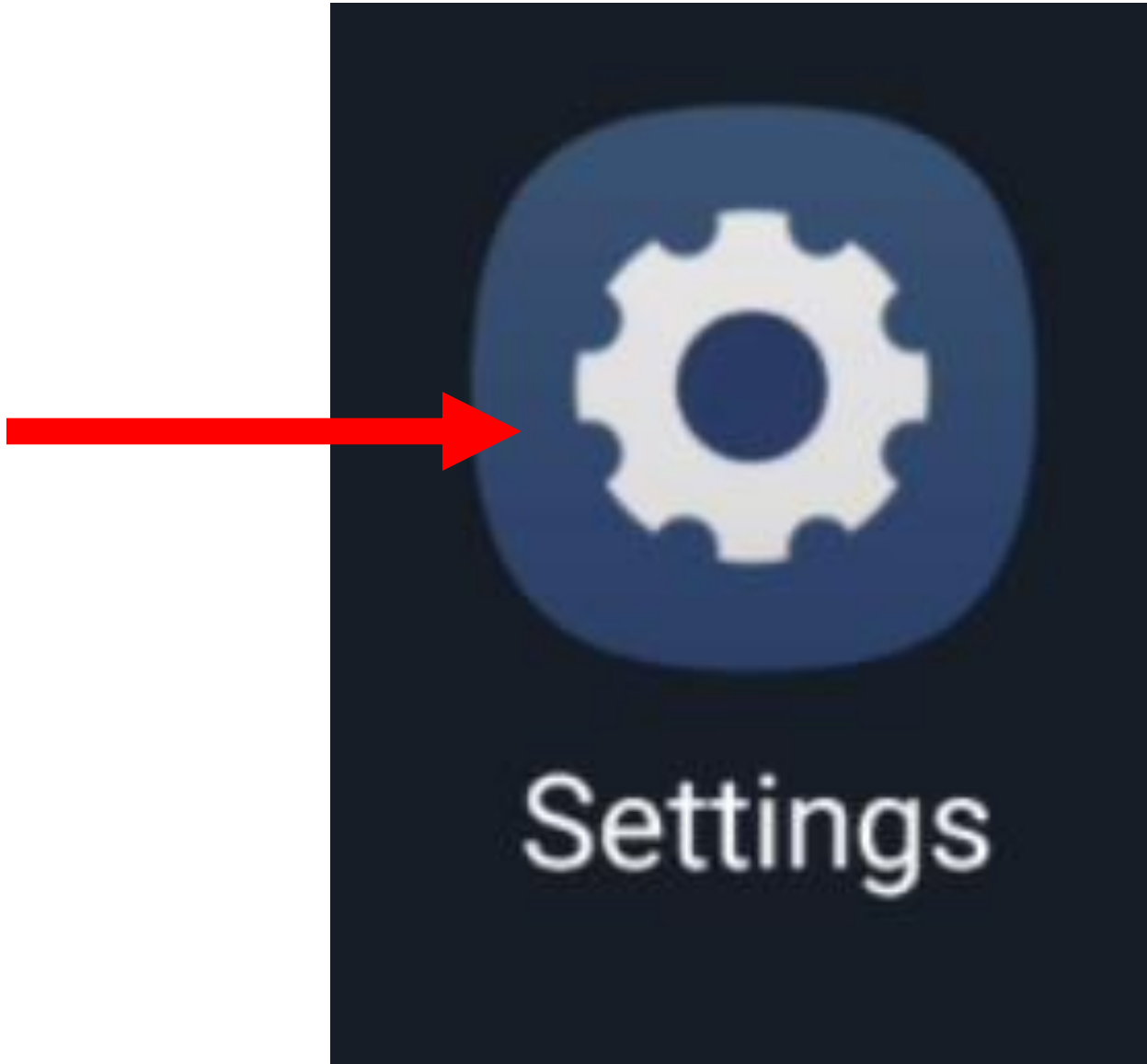
Locate the "Settings" icon in the Android cell phone:



BIG STEP 200 (Activate "USB tether" in the
"Settings" app of the Android cell phone)
(continued)

SMALL STEP 202:

Tap on the "Settings" icon:



BIG STEP 200 (Activate "USB tether" in the
"Settings" app of the Android cell phone)
(continued)

SMALL STEP 203:
Tap on "Connections":

11:41

5G UC 100%

Settings



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Connections

Wi-Fi • Bluetooth • Airplane mode



Connected devices

Quick Share • Android Auto



Modes and Routines

Modes • Routines



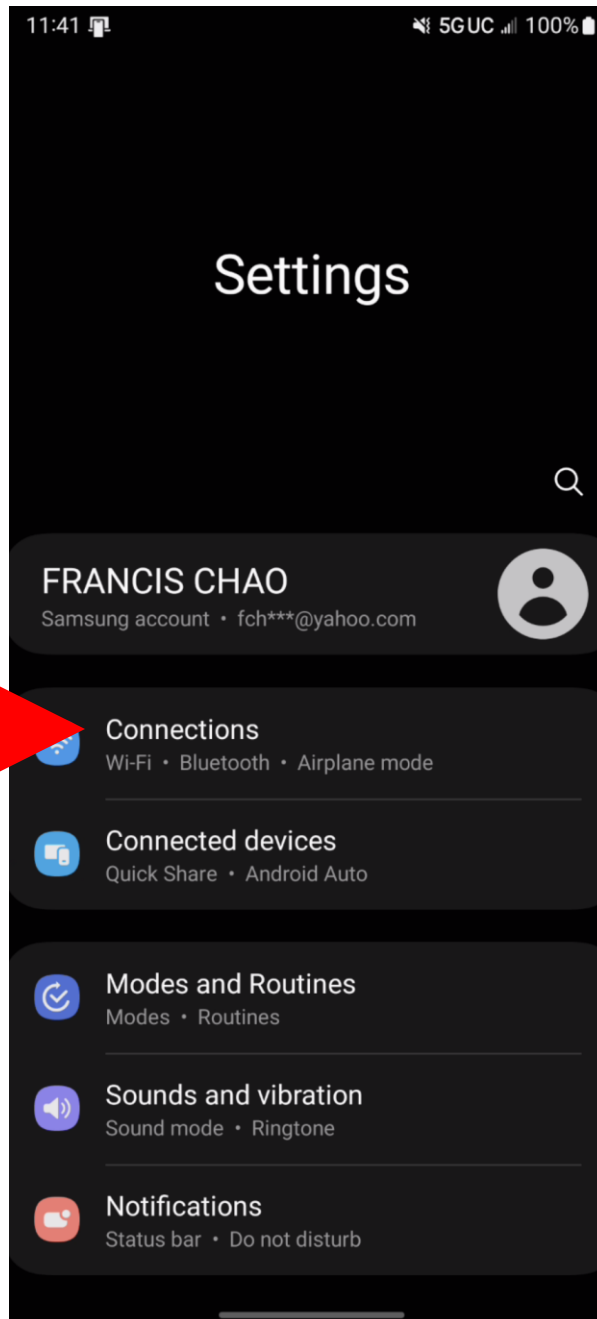
Sounds and vibration

Sound mode • Ringtone



Notifications

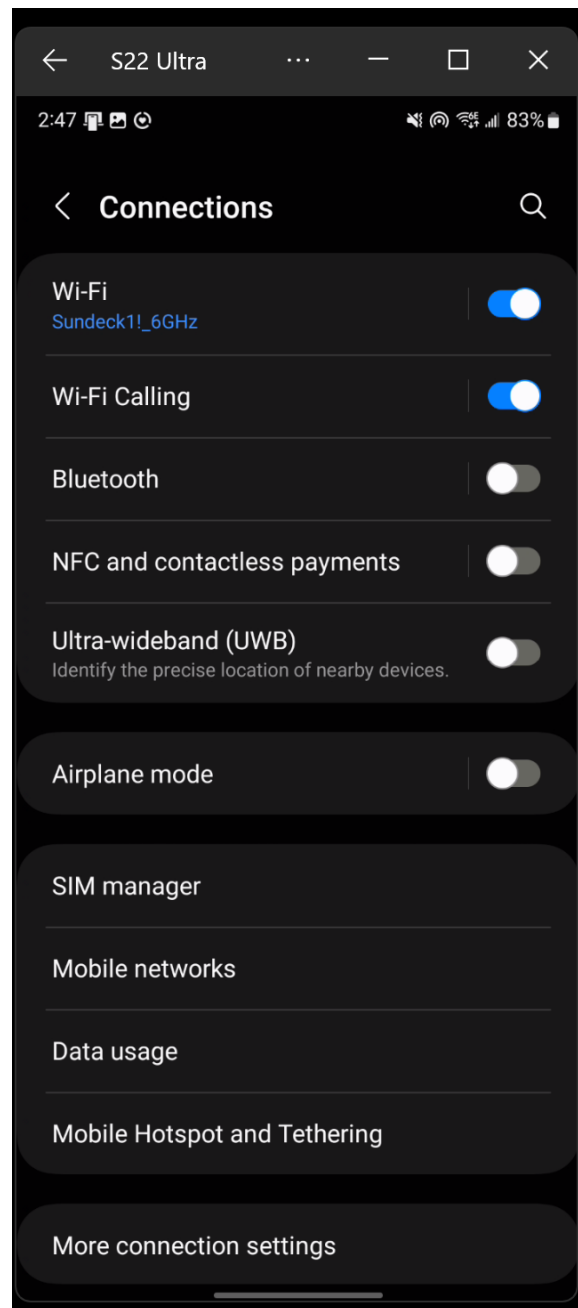
Status bar • Do not disturb

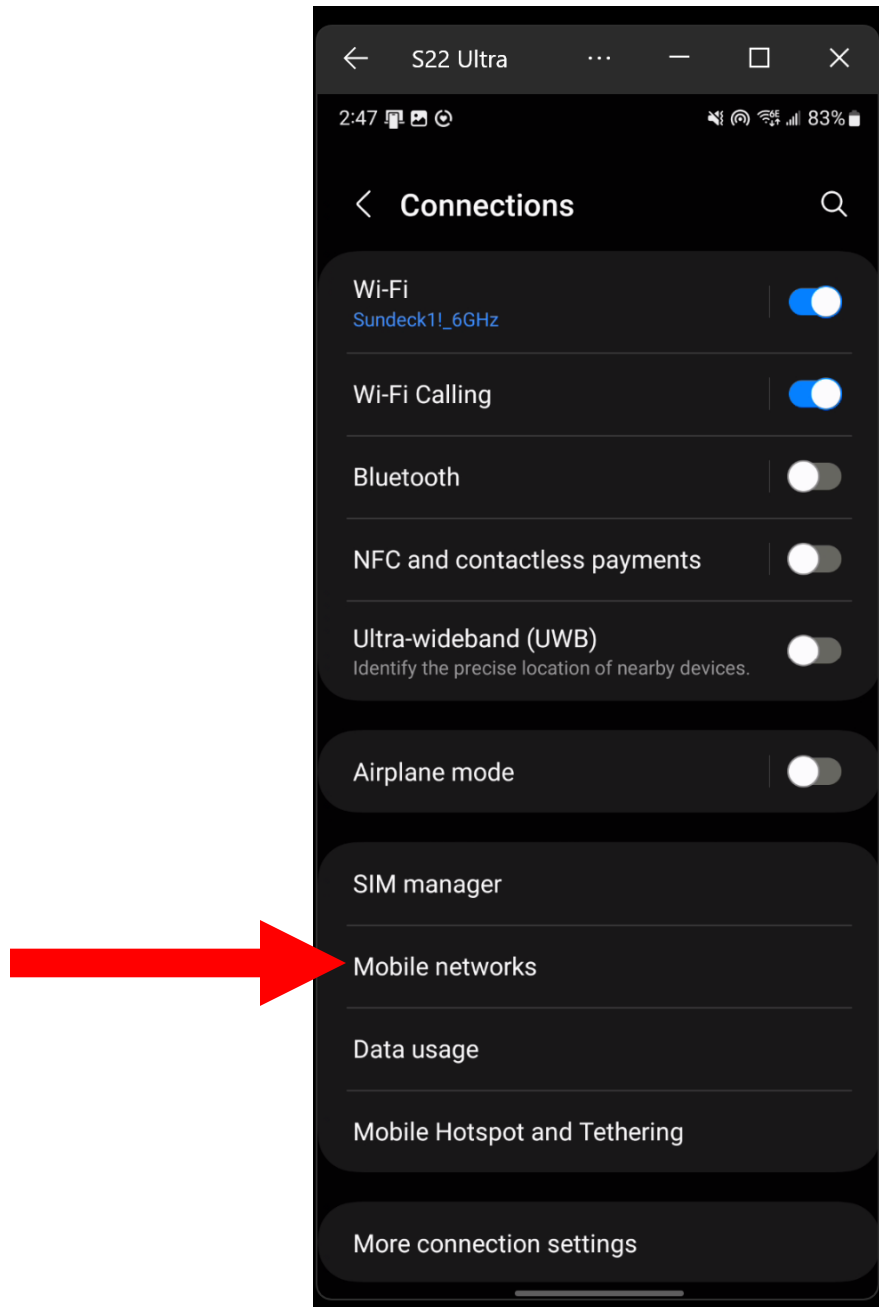


BIG STEP 200 (Activate "USB tether" in the
"Settings" app of the Android cell phone)
(continued)

SMALL STEP 204:

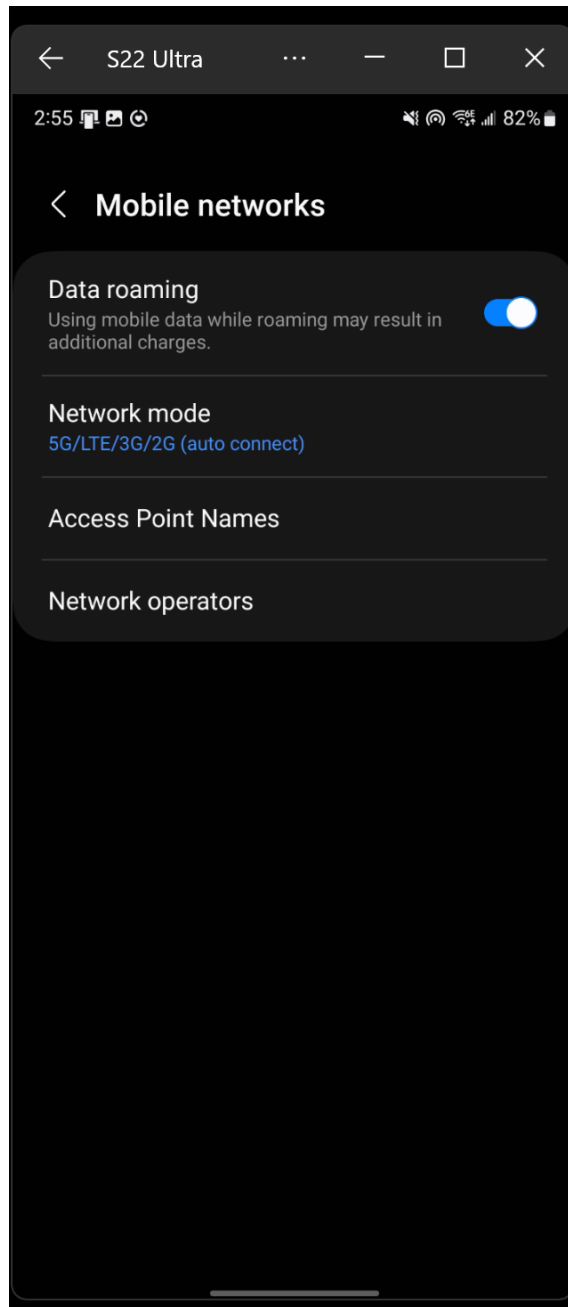
Tap on "Mobile networks":

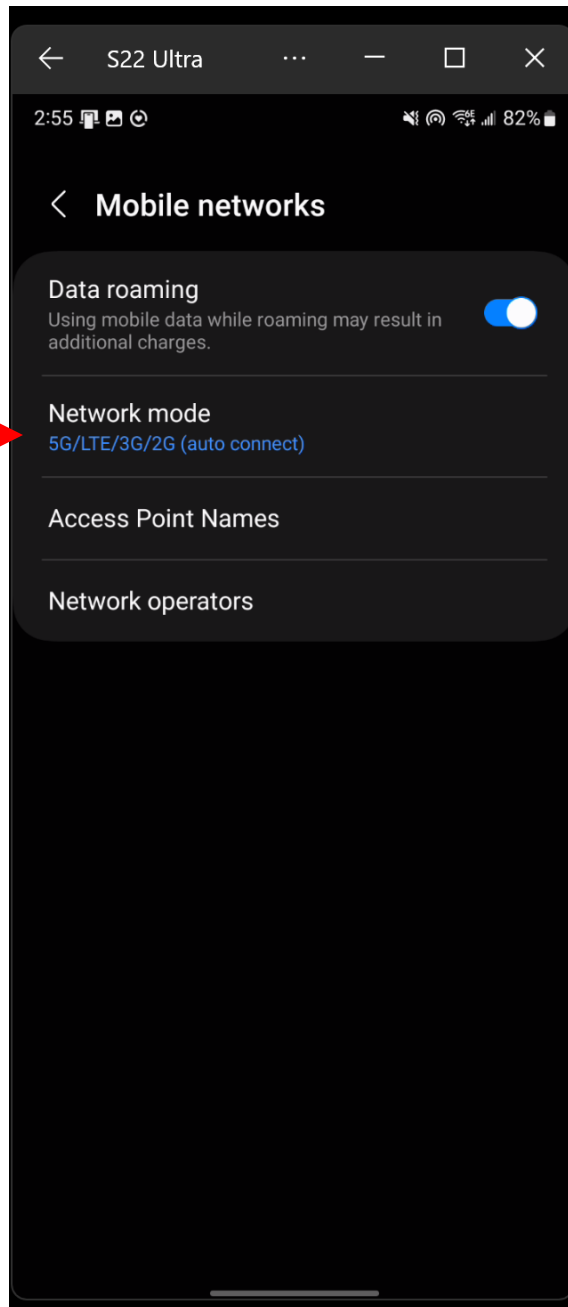




BIG STEP 200 (Activate "USB tether" in the
"Settings" app of the Android cell phone)
(continued)

SMALL STEP 205:
Tap on "Network mode".

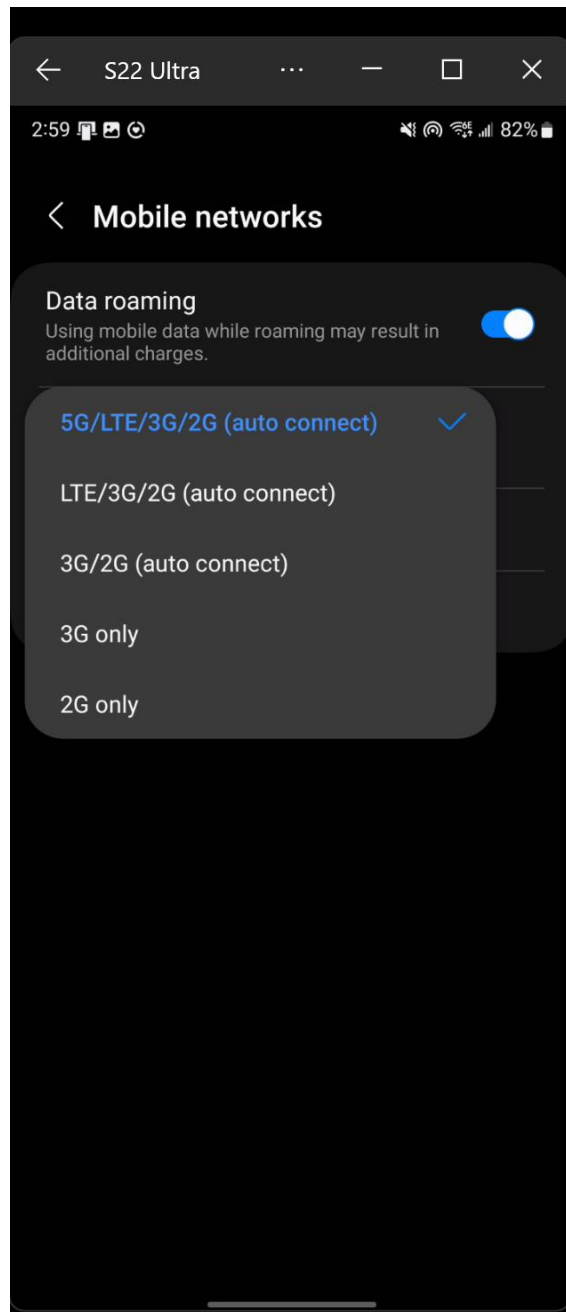


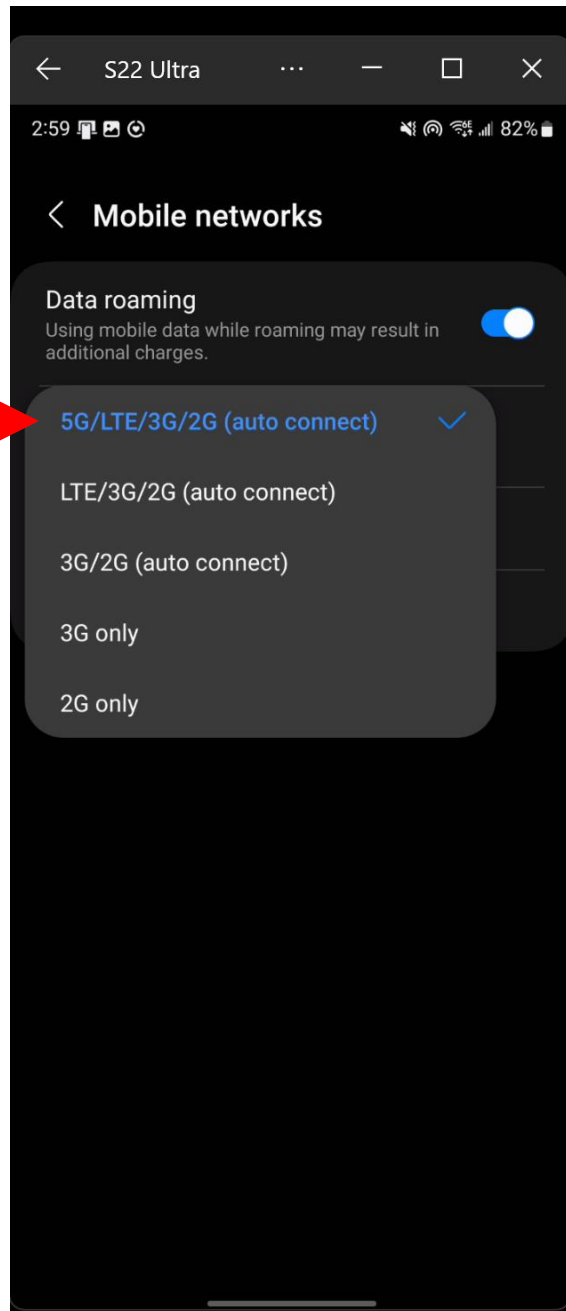


BIG STEP 200 (Activate "USB tether" in the
"Settings" app of the Android cell phone)
(continued)

SMALL STEP 206:

Tap on the highest level of "Network
mode" that your cell phone is
capable of communicating at:

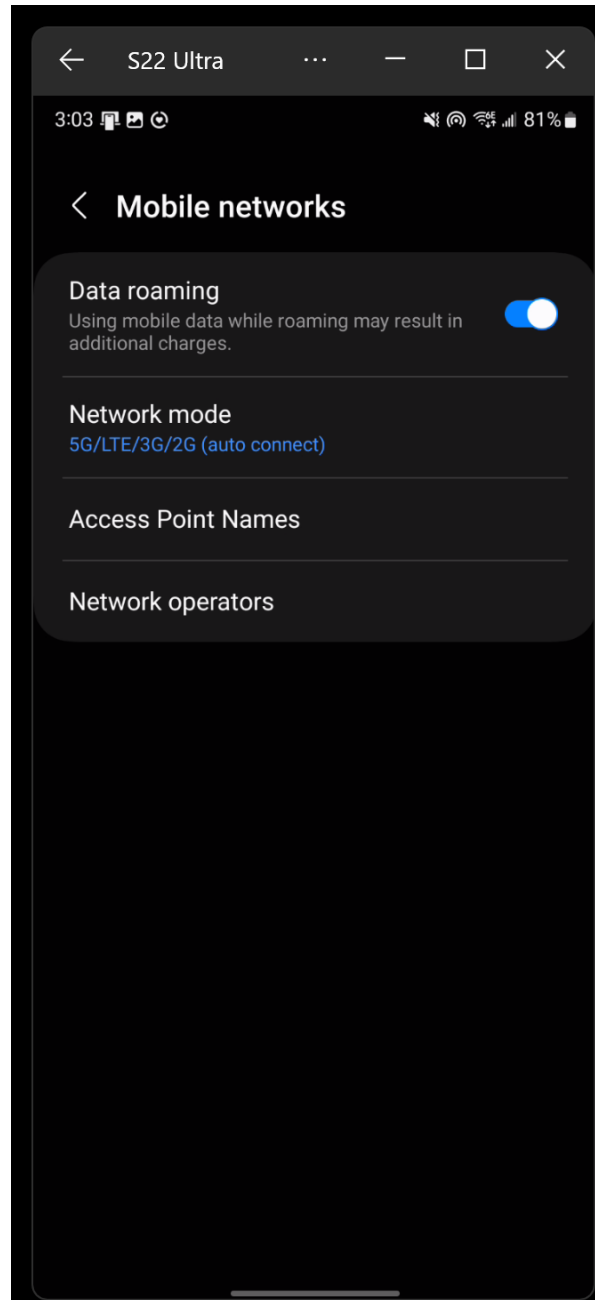


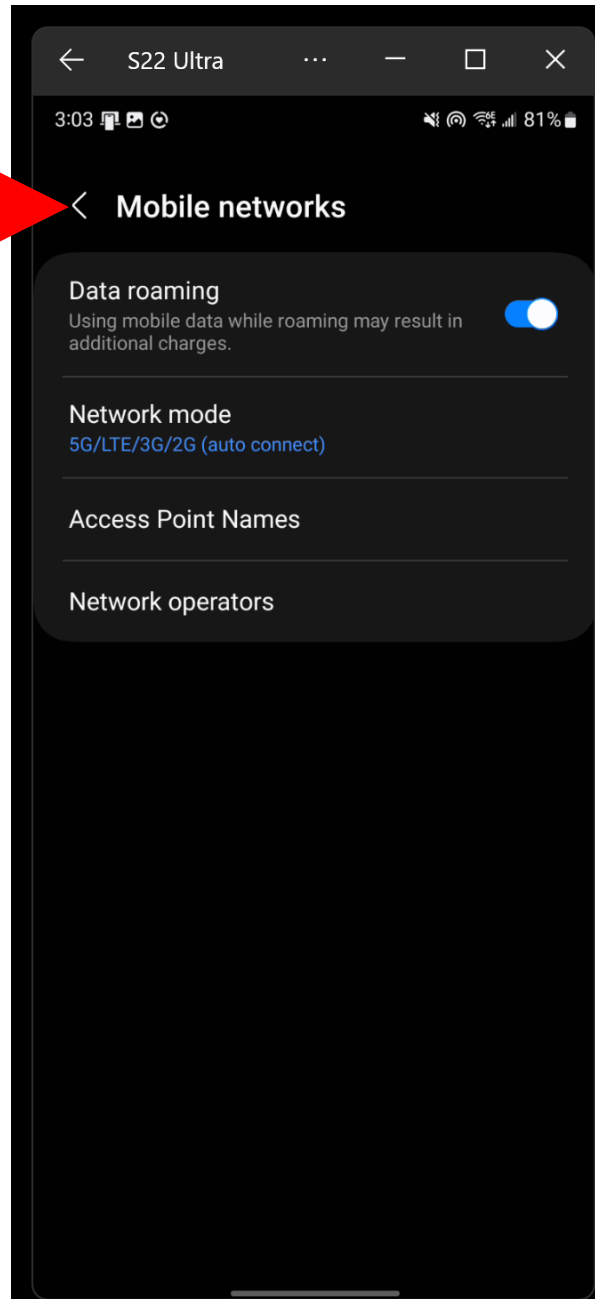


**BIG STEP 200 (Activate "USB tether" in the
"Settings" app of the Android cell phone)
(continued)**

SMALL STEP 207:

**Tap on the "<" to the left of "Mobile
networks"**

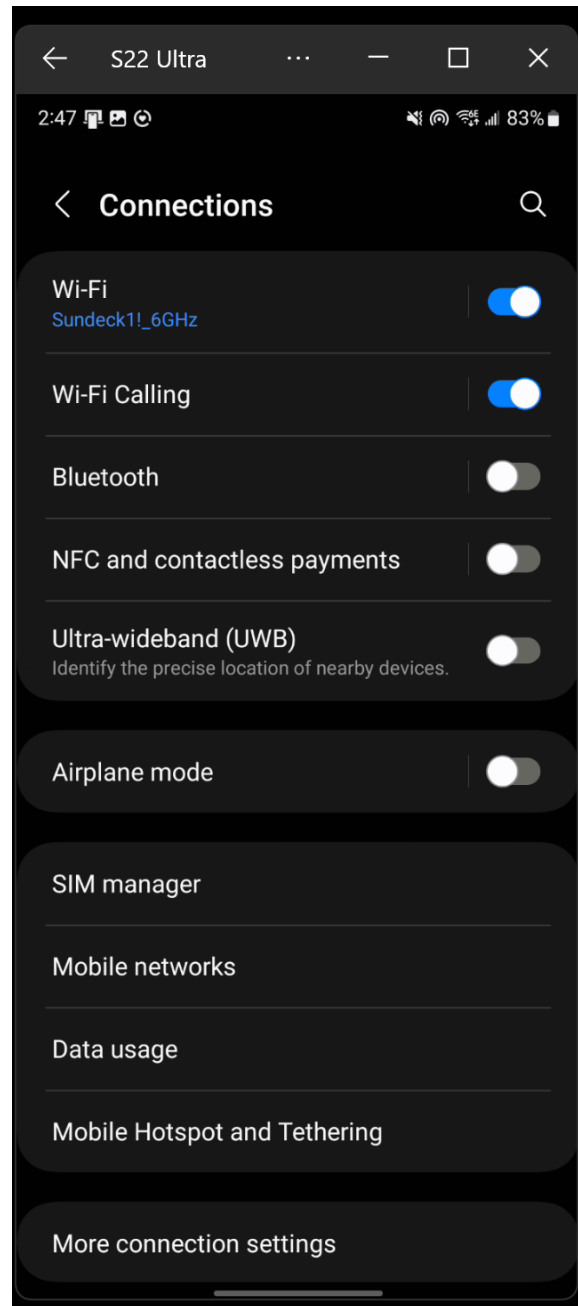


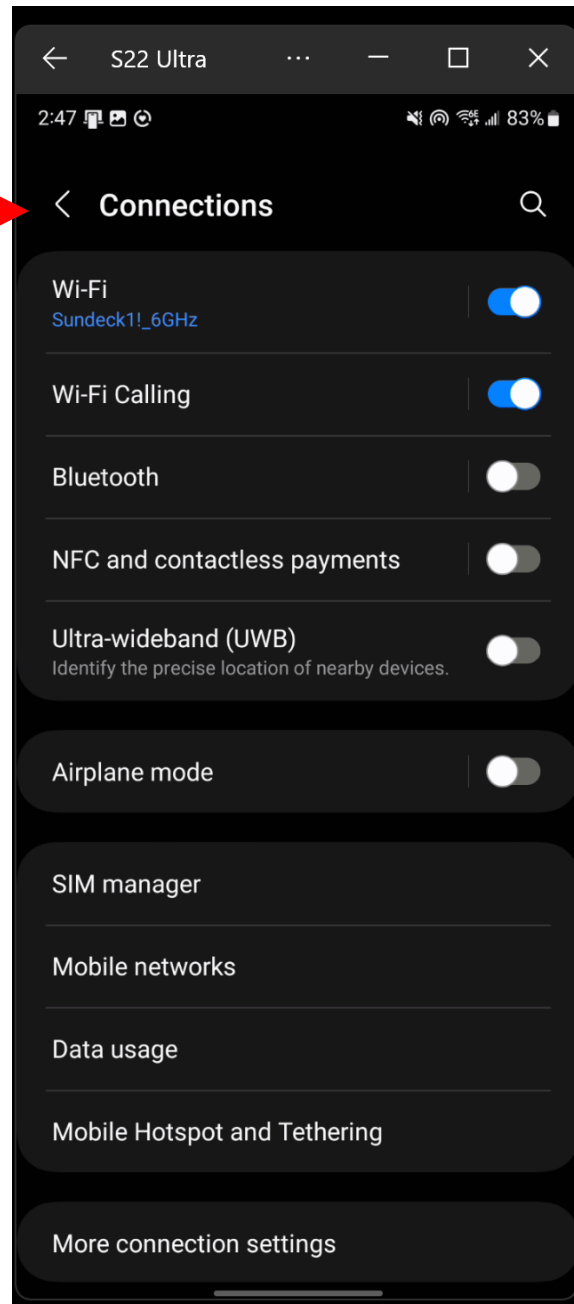


BIG STEP 200 (Activate "USB tether" in the
"Settings" app of the Android cell phone)
(continued)

SMALL STEP 208:

Tap on the "<" to the left of
"Connections"



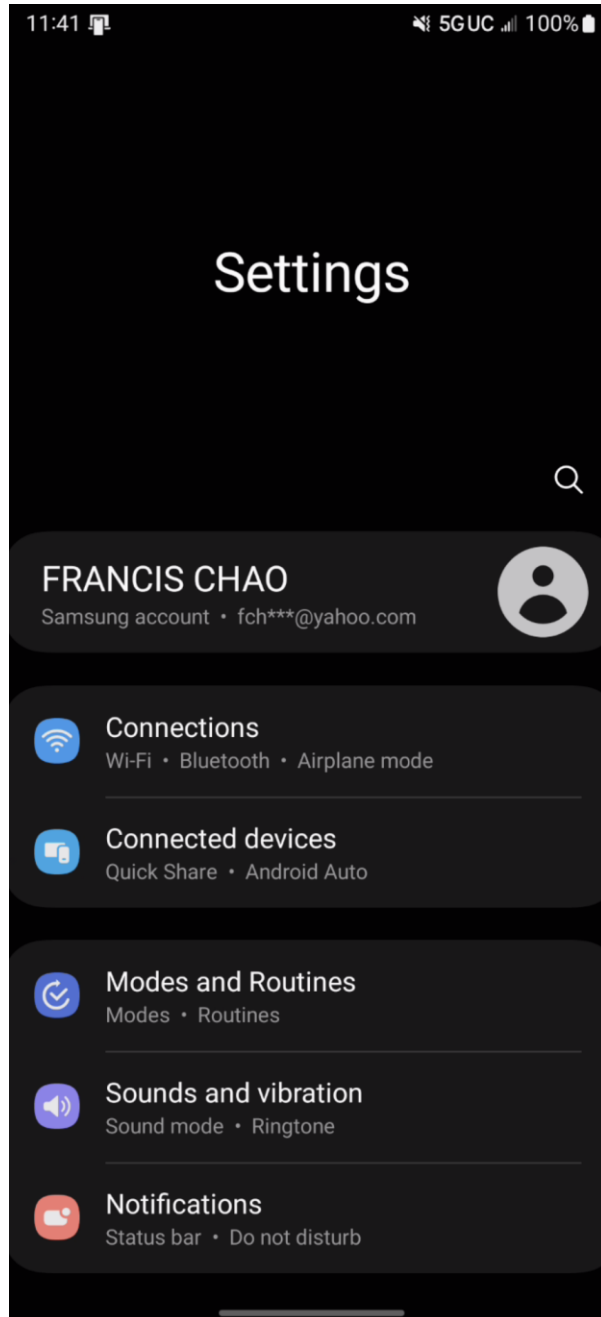


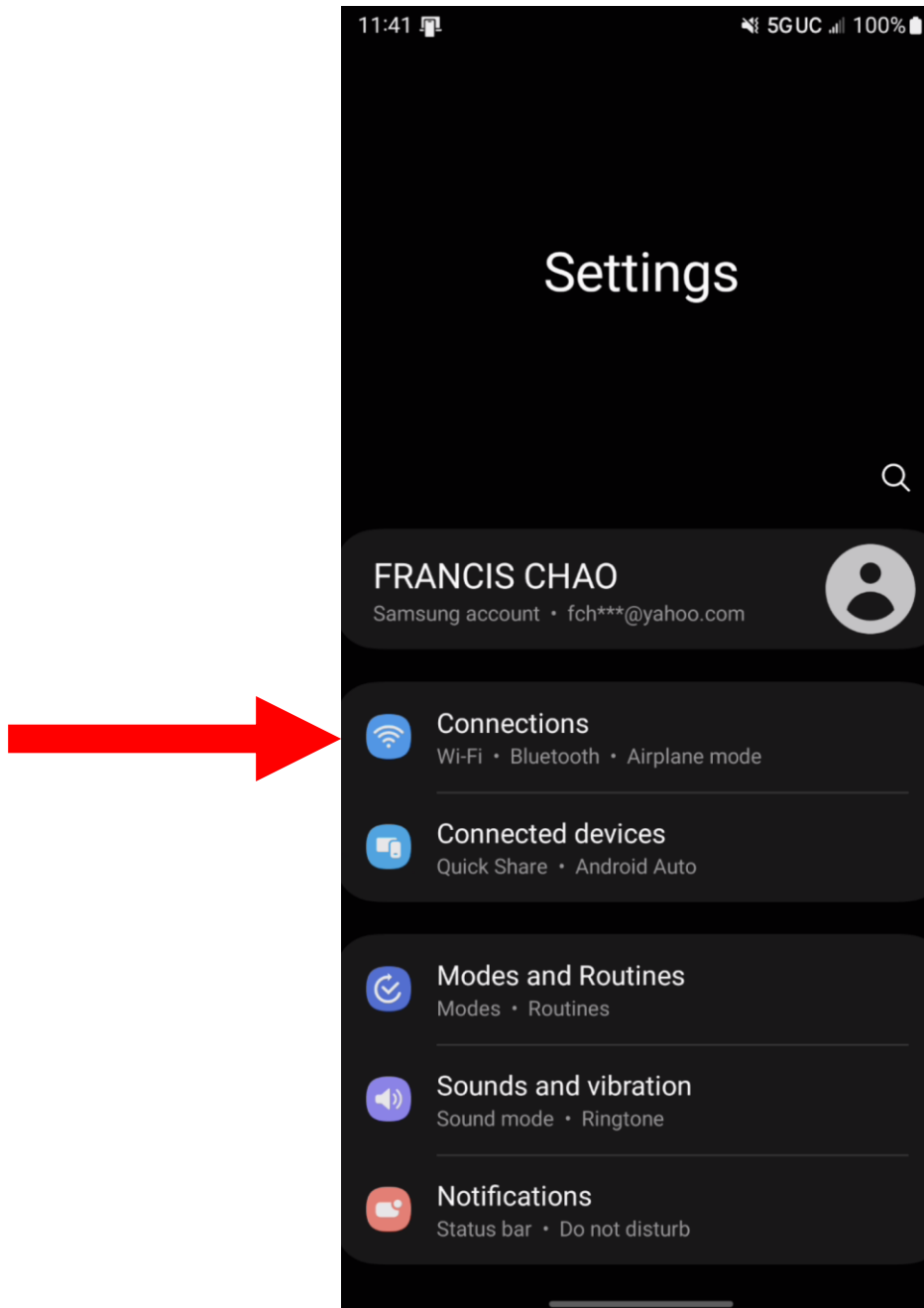
BIG STEP 200 (Activate "USB tether" in the
"Settings" app of the Android cell phone)
(continued)

SMALL STEP 209:

You should now be back at the top-
most level of the "Settings" app in the
Android cell phone.

Tap on "Connections":

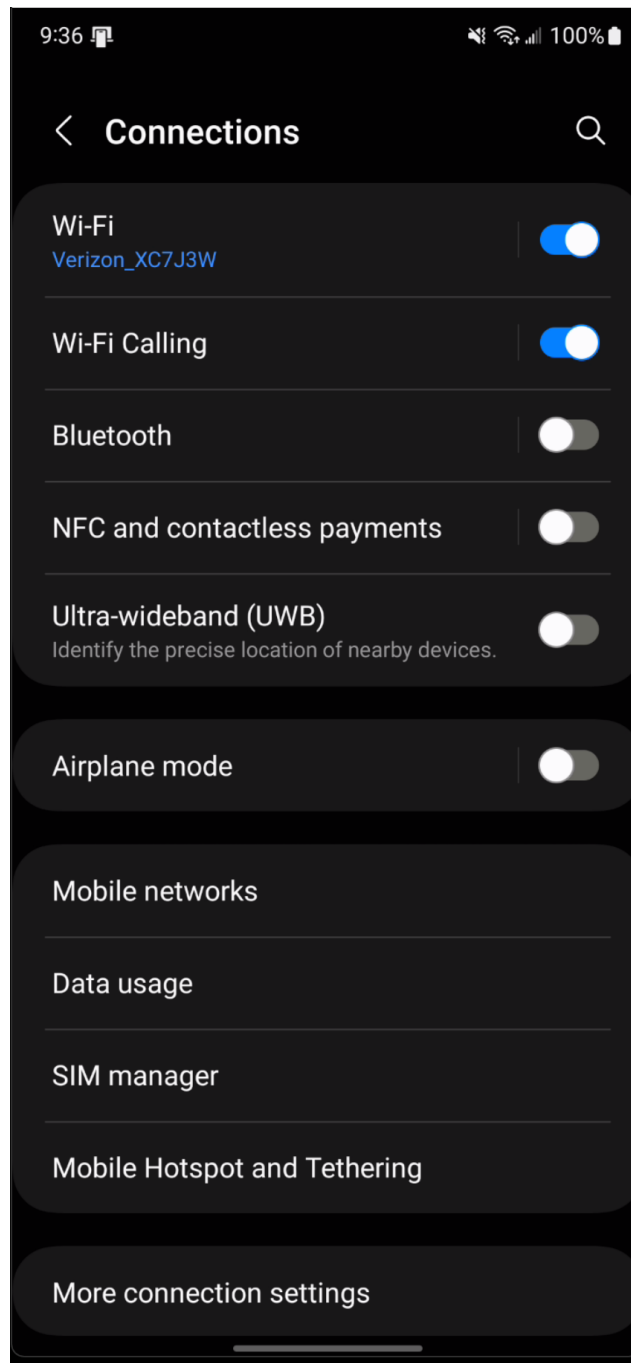


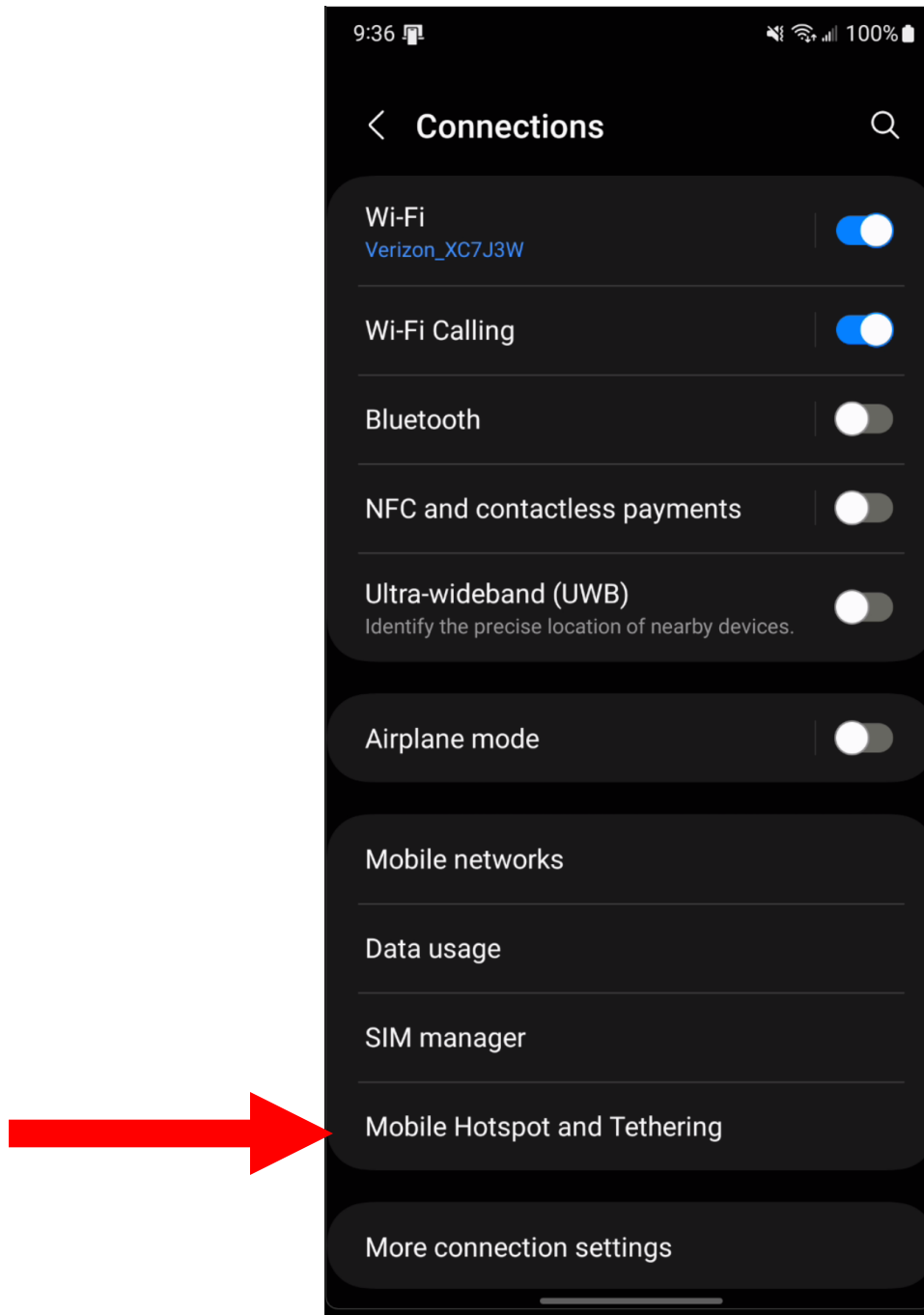


BIG STEP 200 (Activate "USB tether" in the "Settings" app of the cell phone) (continued)

SMALL STEP 210:

Tap on "Mobile Hotspot and Tethering":





BIG STEP 200 (Activate "USB tether" in the "Settings" app of the cell phone) (continued)

SMALL STEP 211:

Tap on "USB tethering" to enable it.

If "USB tethering" is already enabled, tap on it to disable it, and then tap on it to re-enable it.

< Mobile Hotspot and Tethering

Mobile Hotspot



Bluetooth tethering

Share your phone's internet connection using Bluetooth.



USB tethering

USB connected, check to tether



Ethernet tethering

No USB Ethernet adapter connected



< Mobile Hotspot and Tethering

Mobile Hotspot



Bluetooth tethering

Share your phone's internet connection using Bluetooth.



USB tethering

USB connected, check to tether



Ethernet tethering

No USB Ethernet adapter connected



View USB tethering help

Tap OK to learn more about using USB tethering.

☐ Do not show again

Cancel

OK

Help & feedback

USB tethering

Use USB tethering to share your device's mobile network connection with a single computer via a USB cable. To turn on USB tethering, you must have the Smartphone Mobile Hotspot service added to your payment plan.

To tether your device, connect it to a computer via a USB cable. Then, on your mobile device go to Settings > Connections > Mobile Hotspot and Tethering, and select USB tethering.

USB tethering works with Windows and Linux.

For more information, including how to use USB tethering with other operating systems, go to <http://www.android.com/tether>.

For Windows XP, you may have to install a USB driver on your computer before you can tether your device. To install the drivers, go to <http://www.samsung.com/support/>.

When you connect your device to a computer via a USB cable, you can either share your mobile network connection by tethering or you can share files. You cannot do both. Do not enable USB tethering if you want to access your device's SD card using your computer.

Mobile Hotspot

Turn your device into a Mobile Hotspot so you can share your mobile data connection with other devices.

To turn on Mobile Hotspot, you must have the Smartphone Mobile Hotspot service added to your payment plan.

To turn on Smartphone Mobile Hotspot, go to Settings > Connections > Mobile Hotspot and Tethering, and select Mobile Hotspot.

To configure Smartphone Mobile Hotspot, tap

OK

< Mobile Hotspot and Tethering

Mobile Hotspot



Bluetooth tethering

Share your phone's internet connection using Bluetooth.



USB tethering

Tethered



Ethernet tethering

No USB Ethernet adapter connected



BIG STEP 200 (Activate "USB tether" in the "Settings" app of the cell phone) (continued)

SMALL STEP 212:

Swipe up from the bottom of the screen to close "Settings"

BIG STEP 200 (Activate "USB tether" in the "Settings" app of the cell phone) (continued)

SMALL STEP 213:

Using the Android cell phone, swipe down from the top of the screen to the middle of the screen:

BIG STEP 200 (Activate "USB tether" in the "Settings" app of the cell phone) (continued)

SMALL STEP 214:

A "Notifications Panel" will be displayed.

9:06

100%

Sat, Feb 18



Device control

Media output



Connected to your PC 9:05 PM
Connected to Phone Link app on CP4.



USB for file transfer



Notification settings

Clear

T-Mobile Wi-Fi Calling

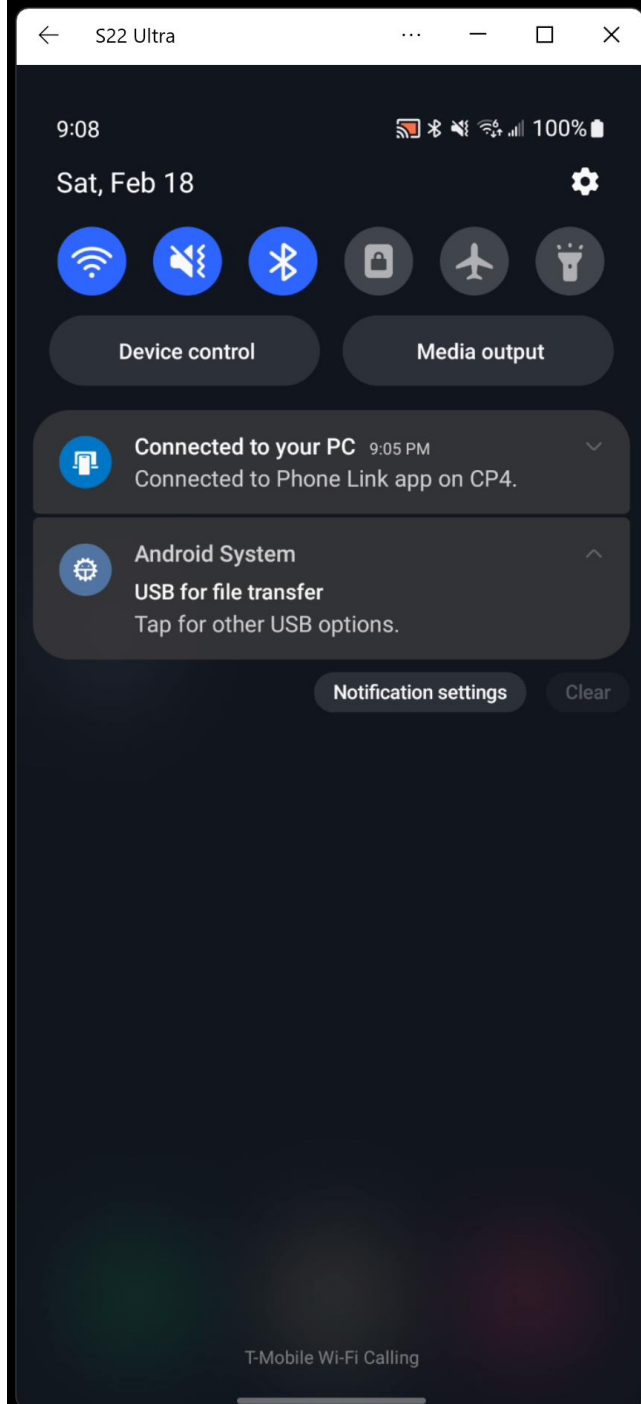


USB for file transfer



Notification settings

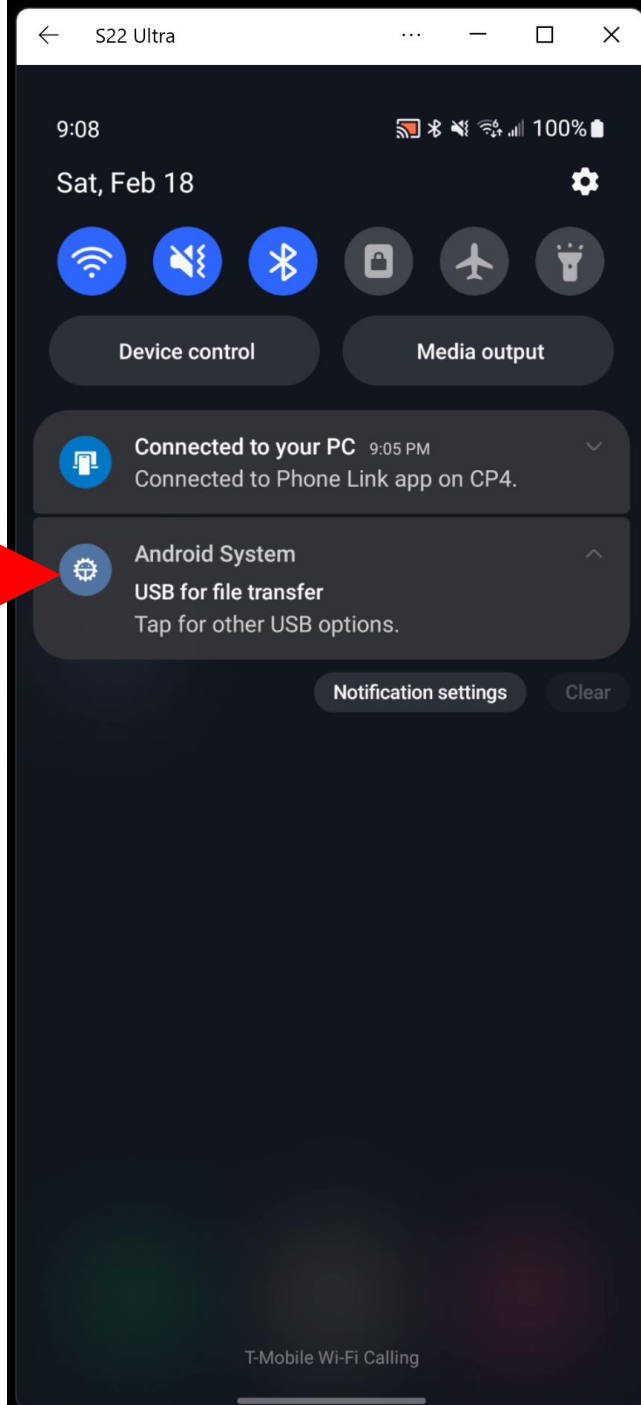
Clear



BIG STEP 200 (Activate "USB tether" in the "Settings" app of the cell phone) (continued)

SMALL STEP 215:

Tap twice on "USB for File Transfer"



< USB settings

USB controlled by

☐ Connected device

☒ This device

Use USB for

☒ Transferring files / Android Auto

☐ USB tethering

☐ MIDI

☐ Transferring images

☐ Charging phone only

File transfer options

Transcode exported video

Convert HEVC videos to AVC format so you can play them on your computer and other devices.



BIG STEP 200 (Activate "USB tether" in the "Settings" app of the cell phone) (continued)

SMALL STEP 216:
Select "USB tethering"

< USB settings

USB controlled by

☐ Connected device

☒ This device

Use USB for

☐ Transferring files / Android Auto

☒ USB tethering

☐ MIDI

☐ Transferring images

☐ Charging phone only

File transfer options

Transcode exported video

Convert HEVC videos to AVC format so you can play them on your computer and other devices.



BIG STEP 200 (Activate "USB tether" in the "Settings" app of the cell phone) (continued)

SMALL STEP 217:

Tap on "USB settings":

< USB settings

USB controlled by

☐ Connected device

☒ This device

Use USB for

☐ Transferring files / Android Auto

☒ USB tethering

☐ MIDI

☐ Transferring images

☐ Charging phone only

File transfer options

Transcode exported video

Convert HEVC videos to AVC format so you can play them on your computer and other devices.



BIG STEP 200 (Activate "USB tether" in the "Settings" app of the cell phone) (continued)

SMALL STEP 218:

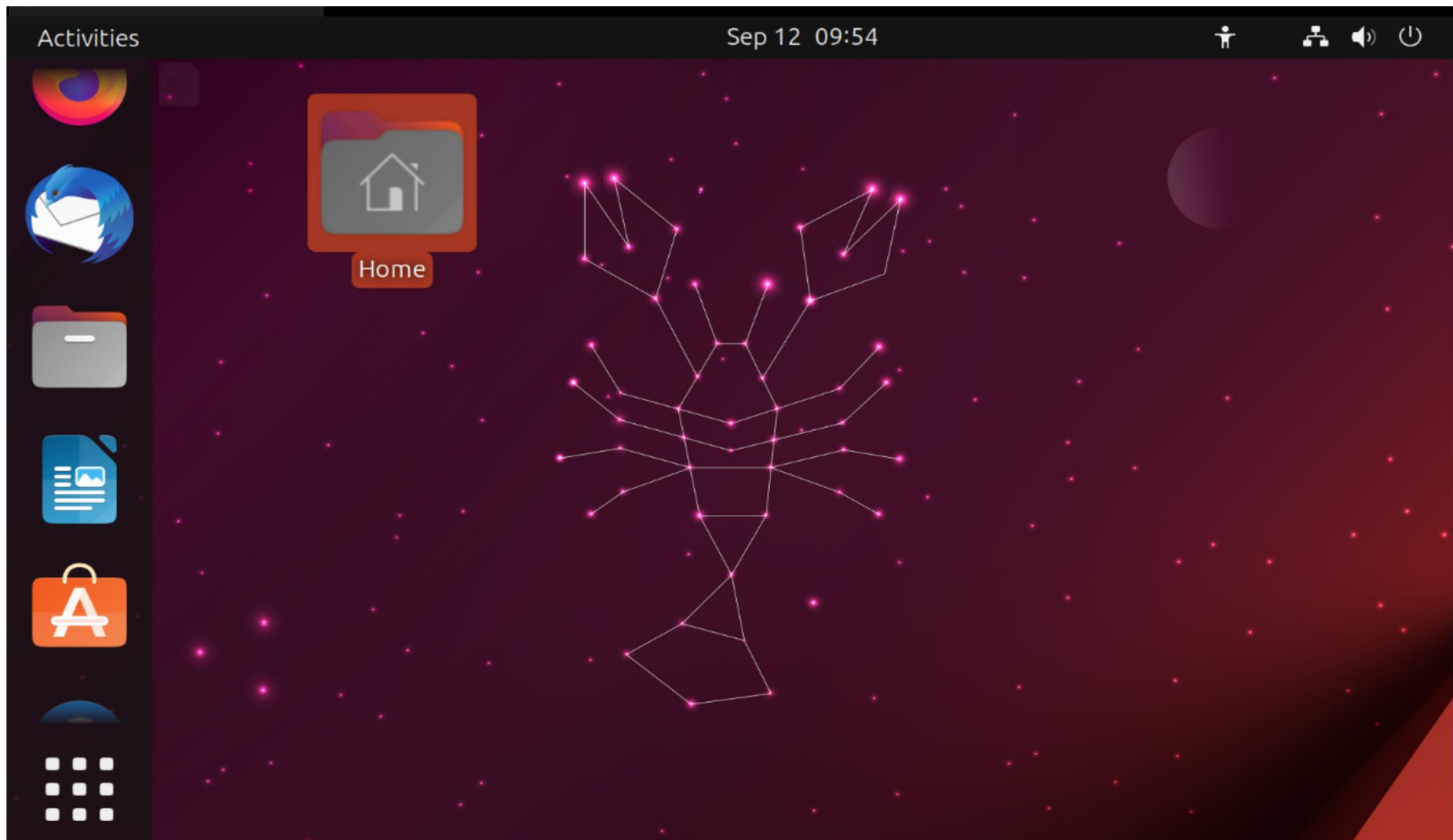
Swipe up from the bottom of the screen to close the "Notifications Panel" if it did not close when you tapped on "USB settings".

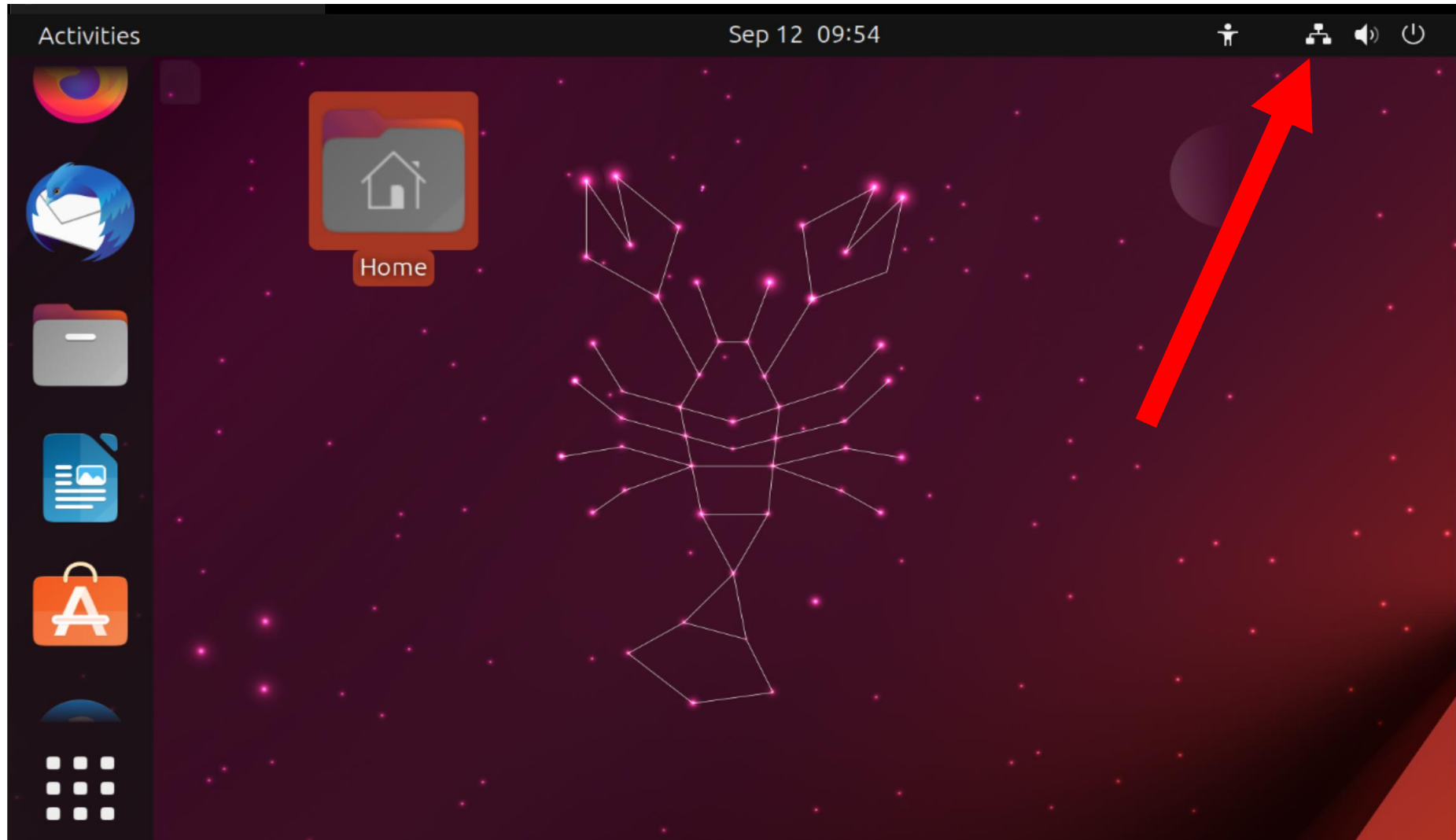
BIG STEP 300 (Activate the tethered Internet connection from the client device)

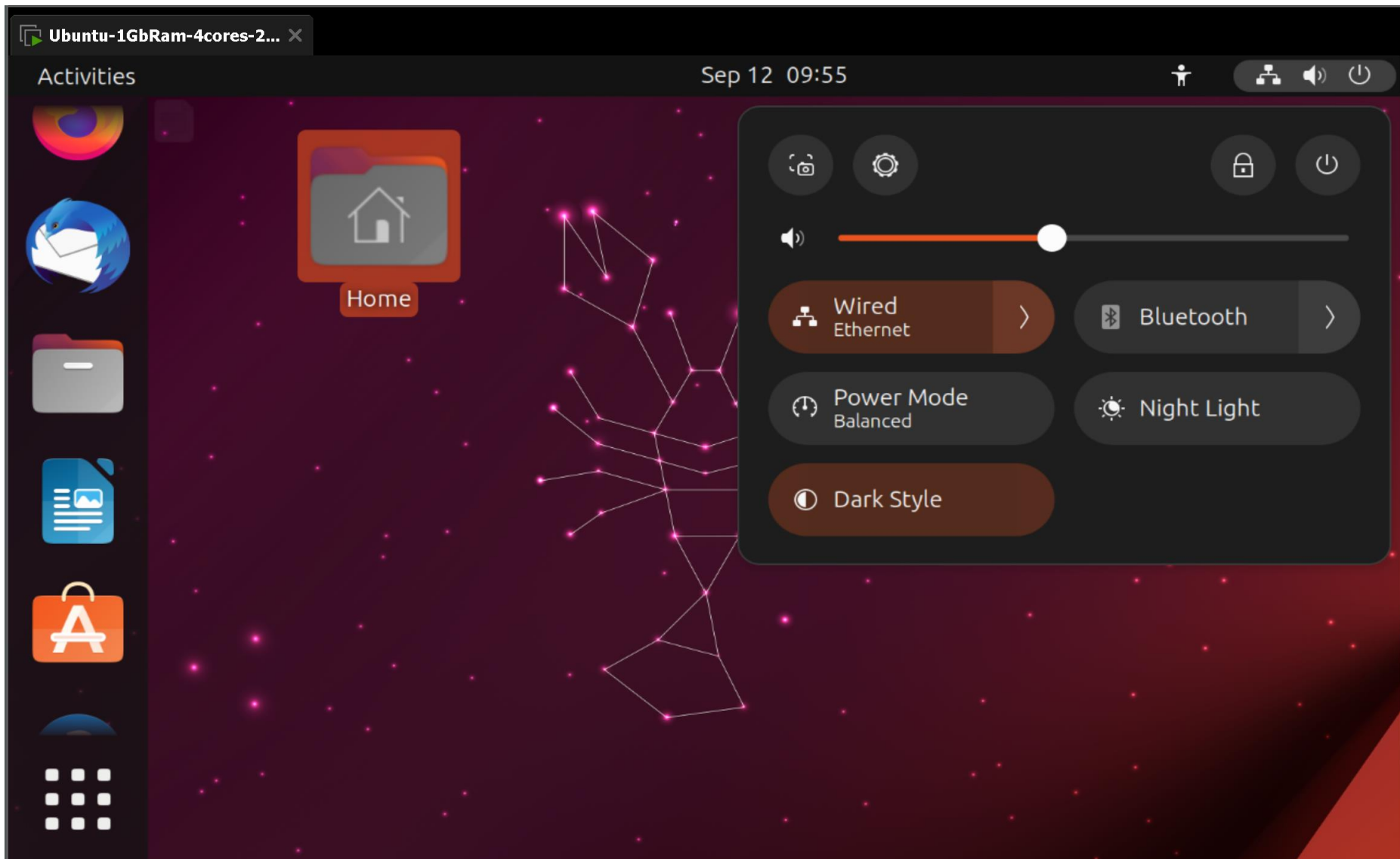
- **SMALL STEP 301:**
Inside the client Linux device (the Linux computer that you are providing Internet access for), the Android cell phone will appear as a virtual "Ethernet" adapter that can provide the client device with Internet access, if you "Enable" the virtual "Ethernet" adapter.

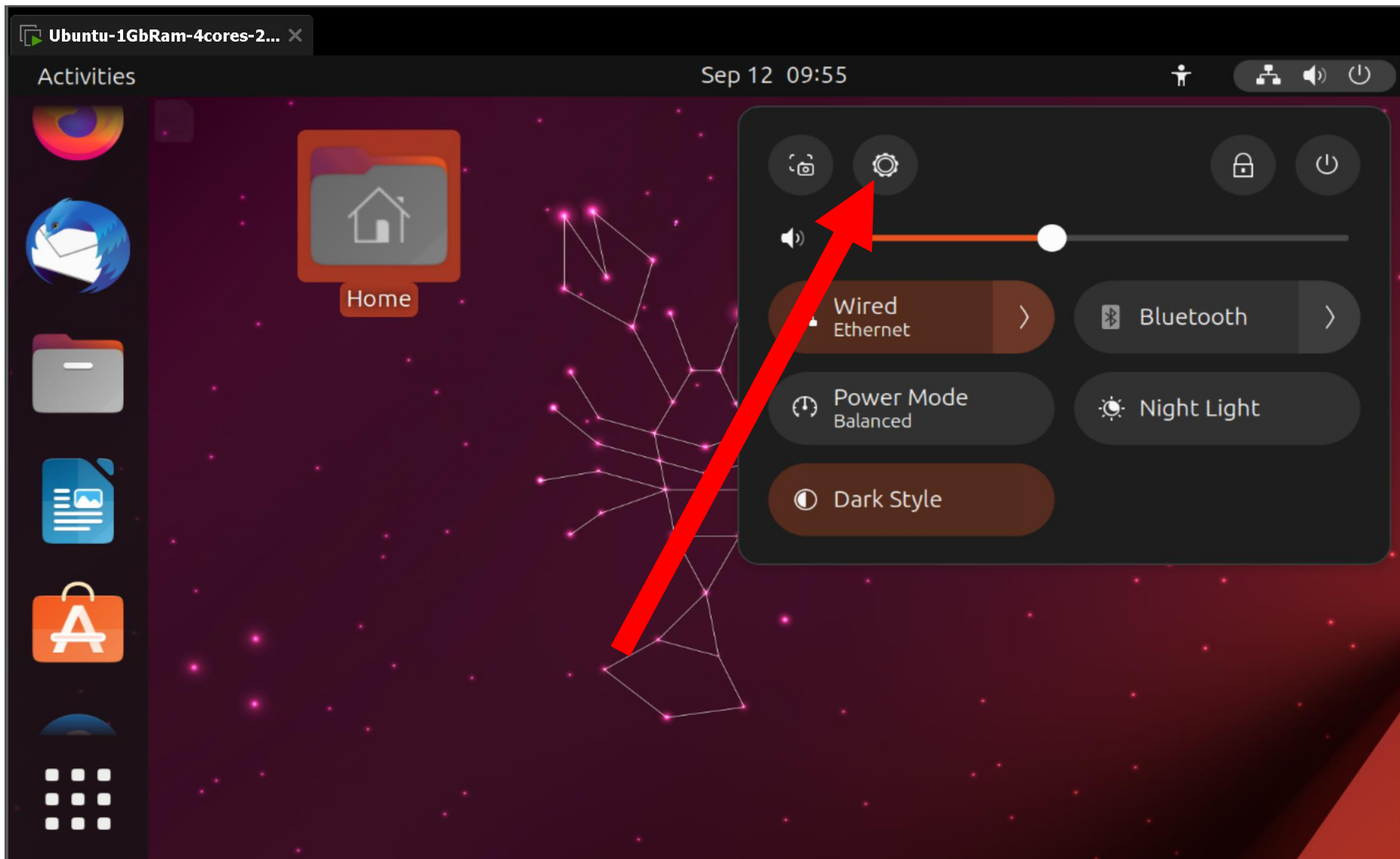
BIG STEP 300 (Activate the tethered Internet connection from the client device) (continued)

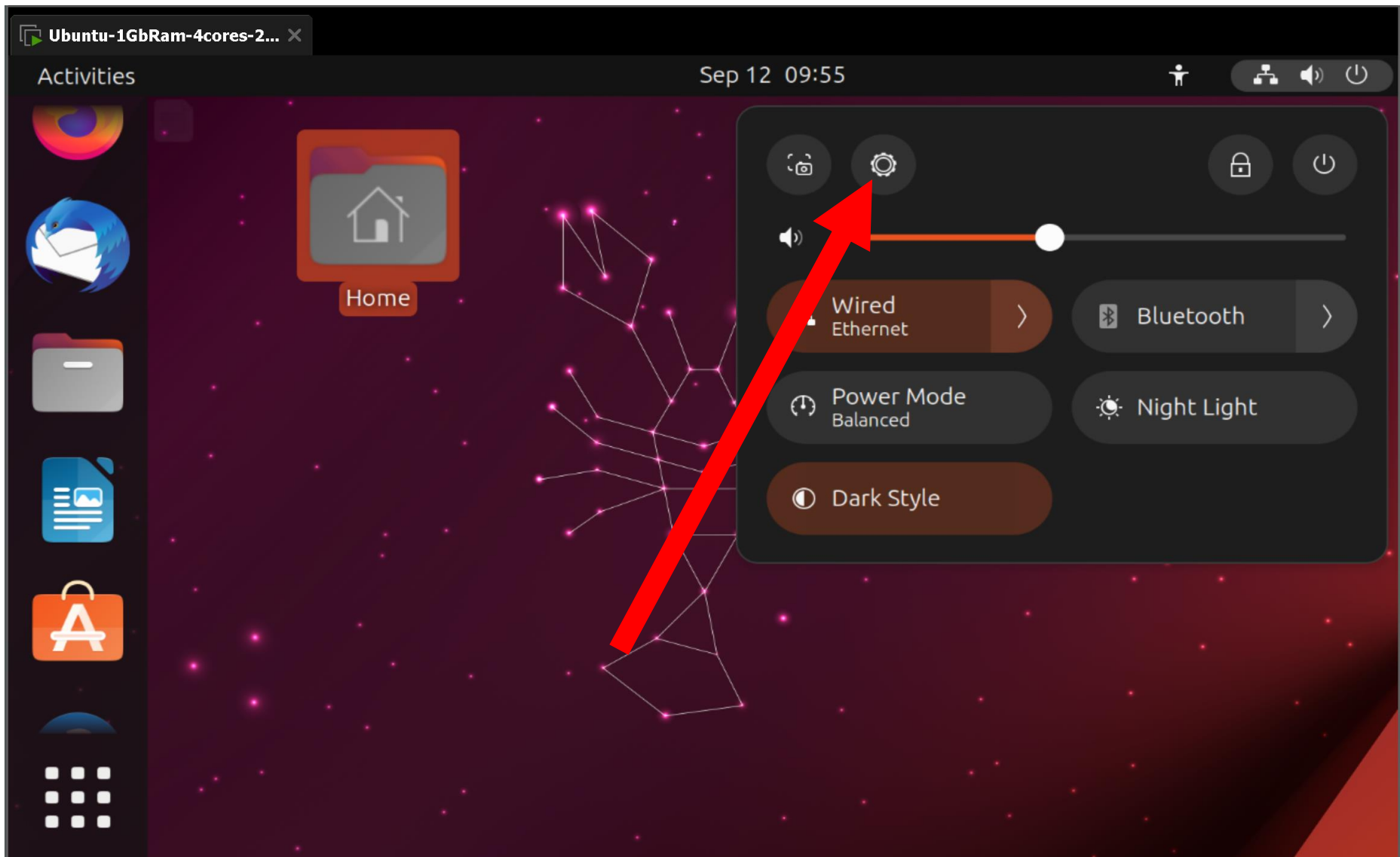
- **SMALL STEP 301 (continued):**
From the Linux computer, tablet, or cell phone, go to "Settings":
In Ubuntu, click on the "Network" icon in the upper-right corner and then click on the "gear" settings button:











BIG STEP 300 (Activate the tethered Internet connection from the client device) (continued)

- SMALL STEP 301 (continued):
Click on "Network" in the "Settings" windows:

Settings

Network

Bluetooth

Appearance

Ubuntu Desktop

Notifications

Search

Multitasking

Apps >

Privacy >

Network

PCI Ethernet

Connected - 1000 Mb/s

USB Ethernet

Connected

VPN

Not set up

Proxy

The image shows the Ubuntu Settings application with the 'Network' section selected. The left sidebar lists various settings categories, and the right pane displays the 'Network' configuration options.

Settings

- Network
- Bluetooth
- Appearance
- Ubuntu Desktop
- Notifications
- Search
- Multitasking
- Apps
- Privacy

Network

- PCI Ethernet**
 - Connected - 1000 Mb/s
- USB Ethernet**
 - Connected
- VPN**
 - Not set up
- Proxy**

BIG STEP 300 (Activate the tethered Internet connection from the client device) (continued)

- **SMALL STEP 301 (continued):**
Your Android cell phone acting as an Ethernet adapter with Internet access will be displayed as "USB Ethernet":
If it is not turned on, click on it to make the white dot go to the right:



Settings



Network



Bluetooth



Appearance



Ubuntu Desktop



Notifications



Search



Multitasking



Apps



Privacy



Network



PCI Ethernet



Connected - 1000 Mb/s



USB Ethernet



VPN



Not set up

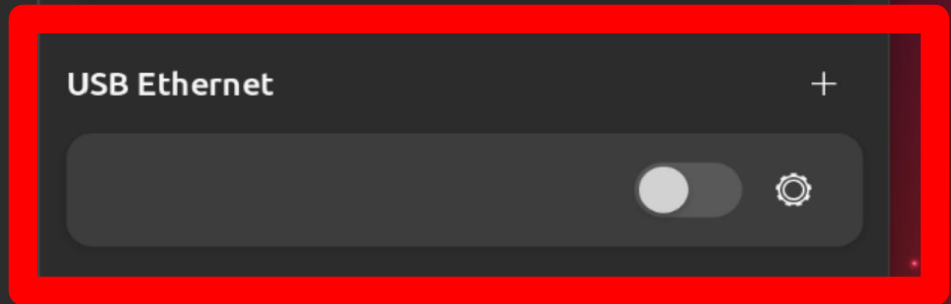
Proxy

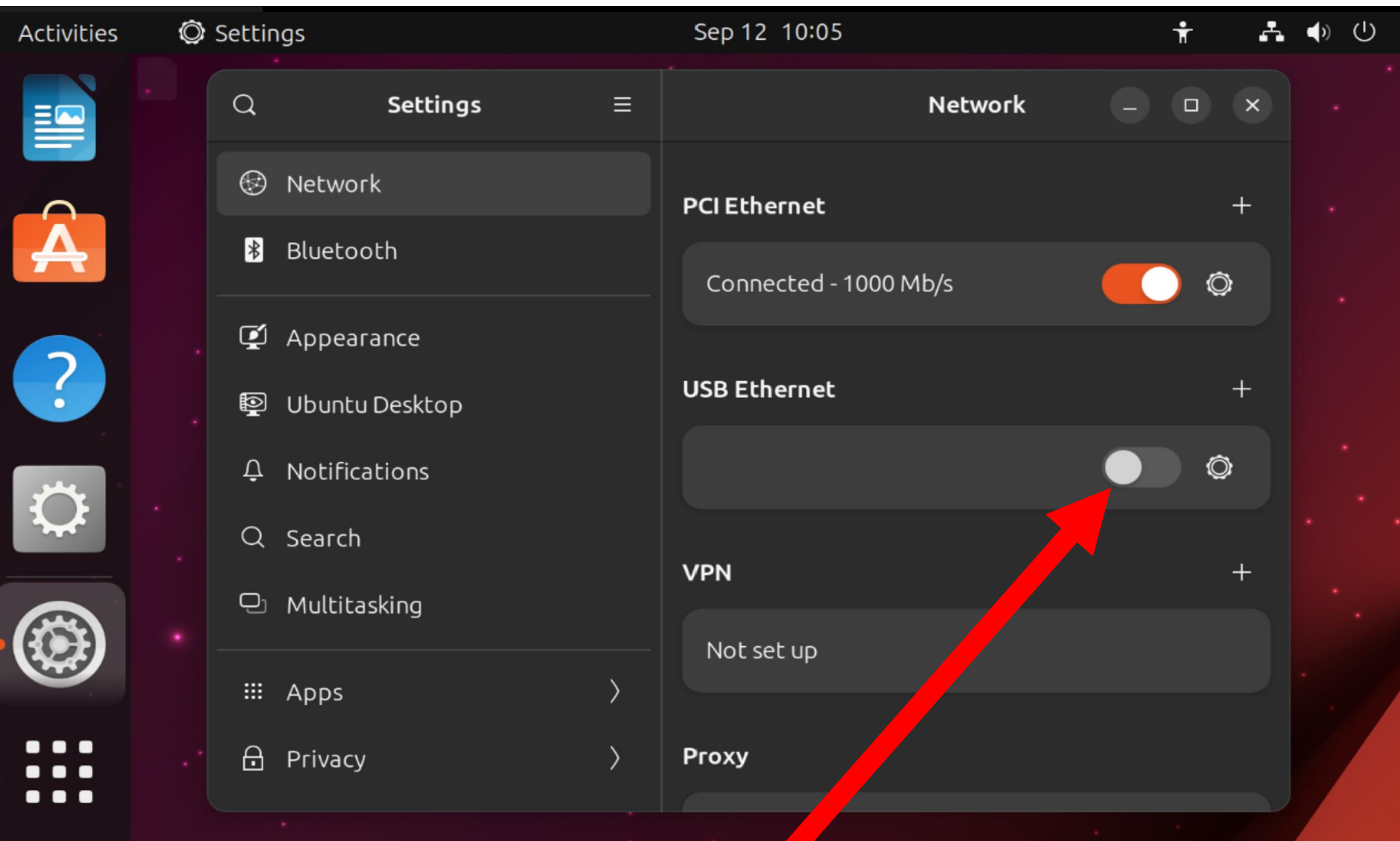


Network

 Privacy

Proxy





The image shows the Ubuntu Settings application with the 'Network' section selected in the left sidebar. The main panel displays network settings for 'PCI Ethernet' and 'USB Ethernet'. The 'USB Ethernet' toggle is turned on, and a red arrow points to it. Below it, the 'VPN' section is shown as 'Not set up', and the 'Proxy' section is partially visible at the bottom.

Settings

- Network
- Bluetooth
- Appearance
- Ubuntu Desktop
- Notifications
- Search
- Multitasking
- Apps
- Privacy

Network

PCI Ethernet

Connected - 1000 Mb/s

USB Ethernet

Connected

VPN

Not set up

Proxy

Settings

Network

Bluetooth

Appearance

Ubuntu Desktop

Notifications

Search

Multitasking

Apps >

Privacy >

Network

PCI Ethernet

Connected - 1000 Mb/s

USB Ethernet

Connected

VPN

Not set up

Proxy

BIG STEP 300 (Activate the tethered Internet connection from the client device) (continued)

- SMALL STEP 301 (continued):
Click on the "Settings" gear on the right side of "USB Ethernet" if you need to make changes to it's configuration:

The image shows the Ubuntu Settings application with the 'Network' section selected. The left sidebar lists various settings categories: Network, Bluetooth, Appearance, Ubuntu Desktop, Notifications, Search, Multitasking, Apps, and Privacy. The main panel displays network settings for 'PCI Ethernet' and 'USB Ethernet'. A red arrow points to the gear icon next to the 'Connected' toggle for 'USB Ethernet'.

Settings

- Network
- Bluetooth
- Appearance
- Ubuntu Desktop
- Notifications
- Search
- Multitasking
- Apps
- Privacy

Network

PCI Ethernet

Connected - 1000 Mb/s ☒

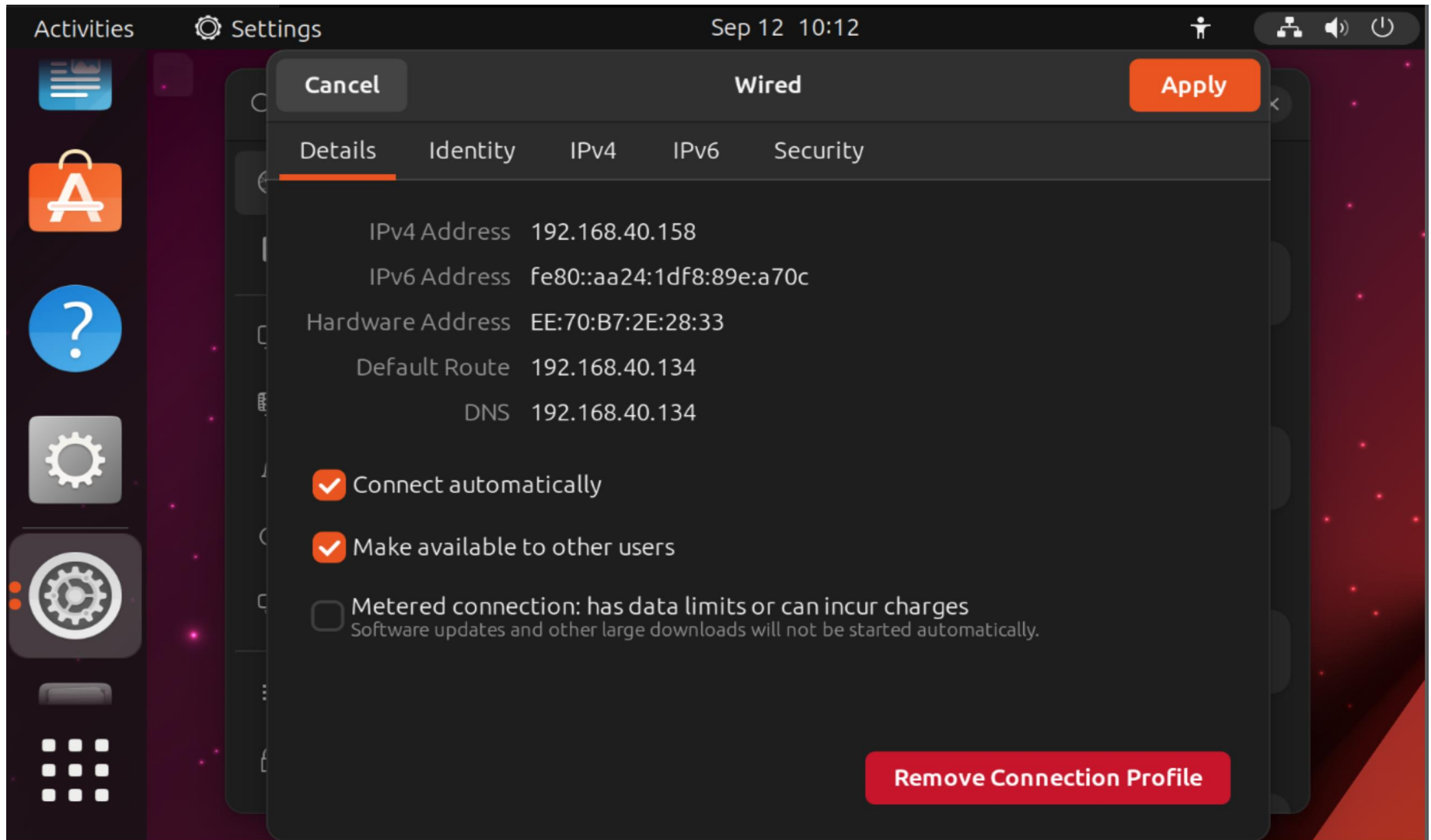
USB Ethernet

Connected ☒

VPN

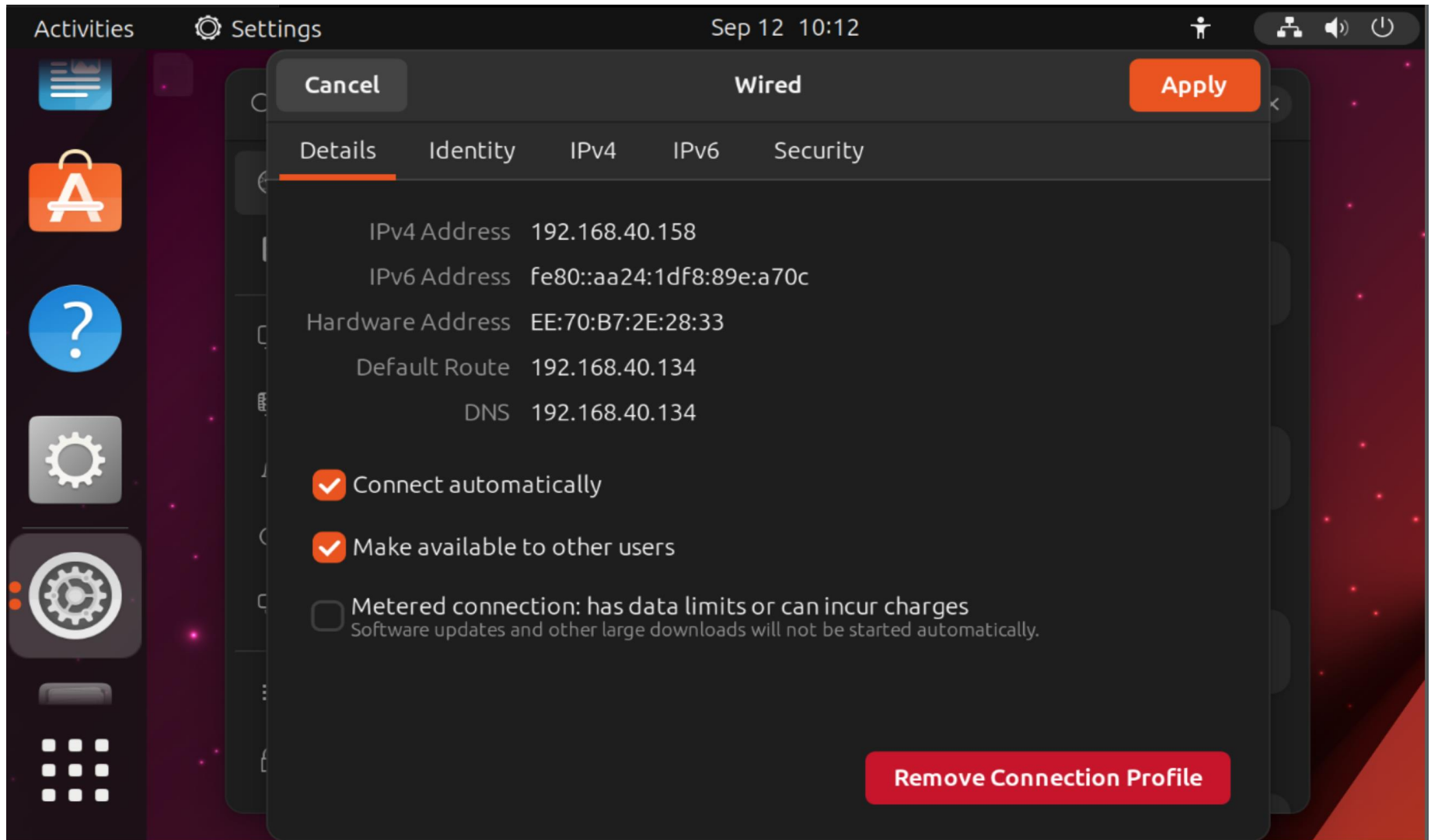
Not set up

Proxy



BIG STEP 300 (Activate the tethered Internet connection from the client device) (continued)

- **SMALL STEP 302:**
Click on the "Apply" button if you have made any changes.
Then close out all of the "Settings" windows and dialog boxes:



BIG STEP 300 (Activate the tethered Internet connection from the client device) (continued)

- **SMALL STEP 302:**
Check the download and upload speeds of the tethered cell phone's Internet connection by going to speedtest.net in a Web browser:



