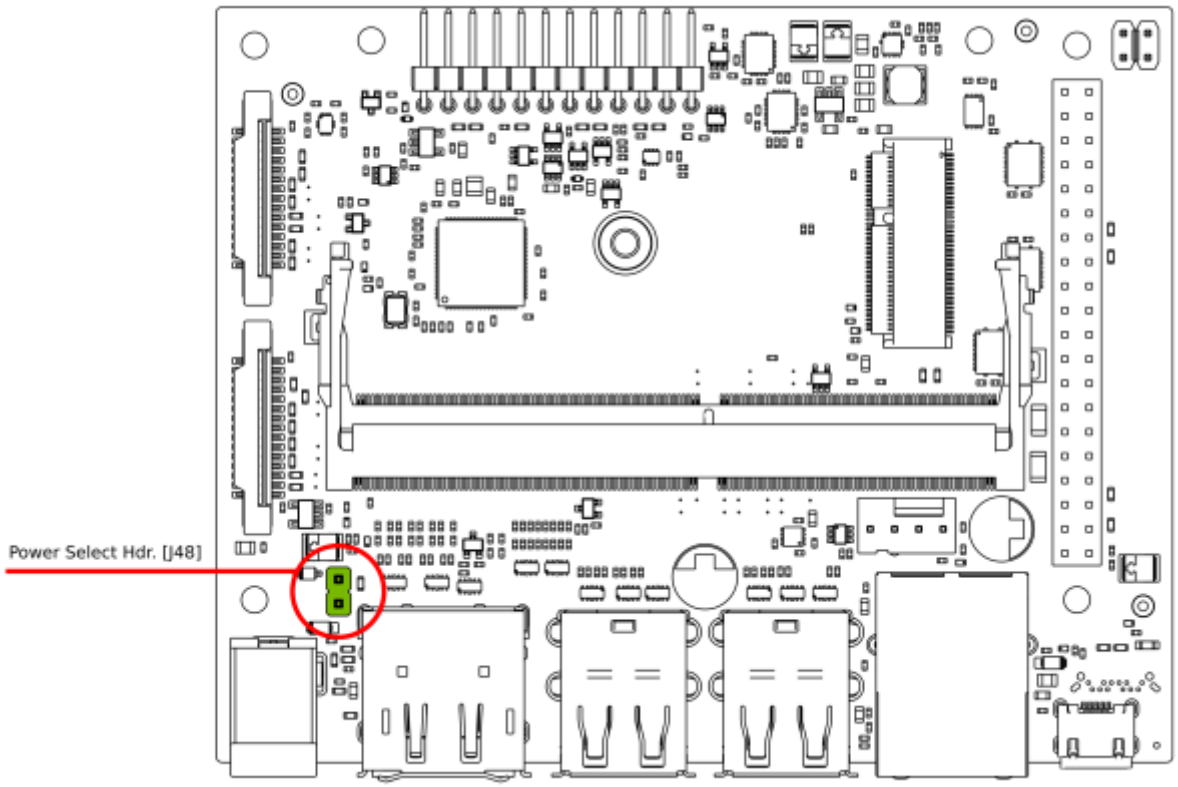
First Boot

There are two ways to interact with the developer kit:

1. With display, keyboard and mouse attached.
2. Via connection from another computer **headless mode**.

The display connected mode can be realized by taking the power supply from **micro-USD** port or **DC power supply**. In this case both initial modes (graphic and head-less) are configured with DC power supply.

To enable the power supply through the DC Barrel Power Jack it is necessary to place a jumper on the pins [J48].



Initial Setup with Display Attached

Requirements:

- External monitor
- Keyboard
- Mouse
- DC power supply

Insert the microSD card (*with system image already written to it*) into the slot on the underside of the Jetson Nano module. If you have not yet flashed the microSD you can follow this tutorial **microSD Card Setup**.

Connect the peripherals, mouse, keyboard, monitor and of course the DC power supply.

Press the **Power** button to start the Jetson.

When you boot the first time, the developer kit will take you through some initial setup, including:

- Review and accept NVIDIA Jetson software EULA
- Select system language, keyboard layout, and time zone
- Create username, password, and computer name
- Select APP partition size—it is recommended to use the max size suggested

---

Initial Setup Headless Mode

To complete setup when no display is attached to the developer kit, you'll need to connect the developer kit to another computer and then communicate with it via a terminal application (e.g.,

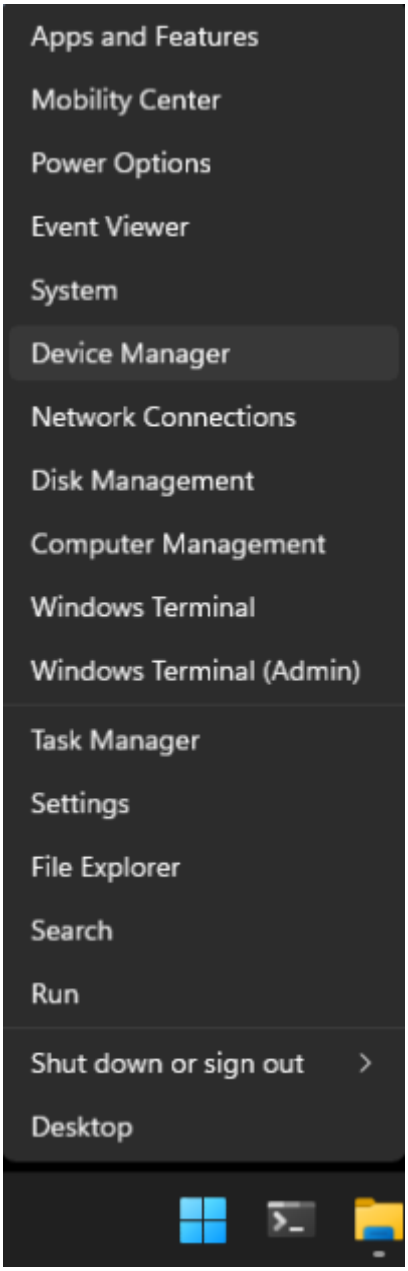
PuTTY) to handle the USB serial communication on that other computer.

Headless initial configuration requires the developer kit to be powered by a DC power supply with barrel jack connector, since the Micro-USB port is required to access the initial configuration prompts.

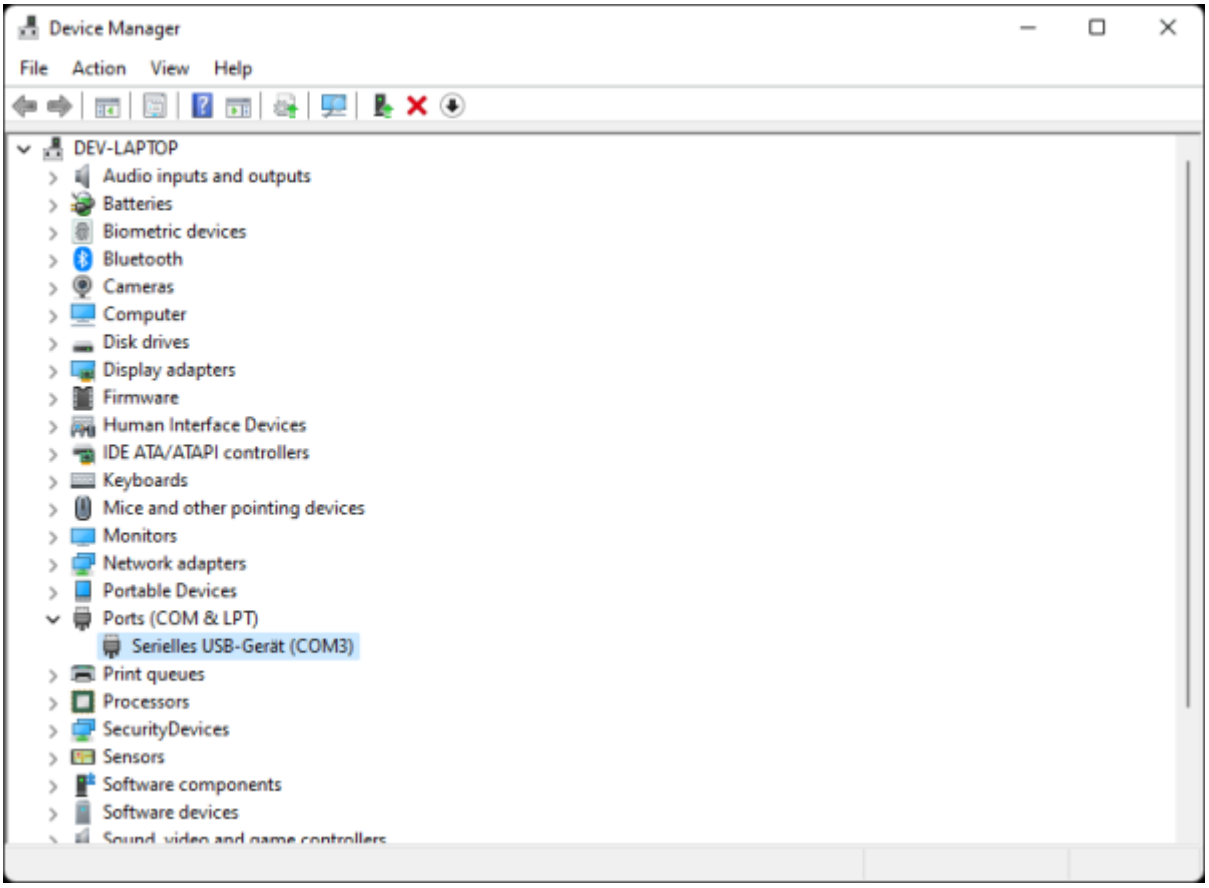
Connect your other computer to the developer kit’s Micro-USB port.

For Windows users

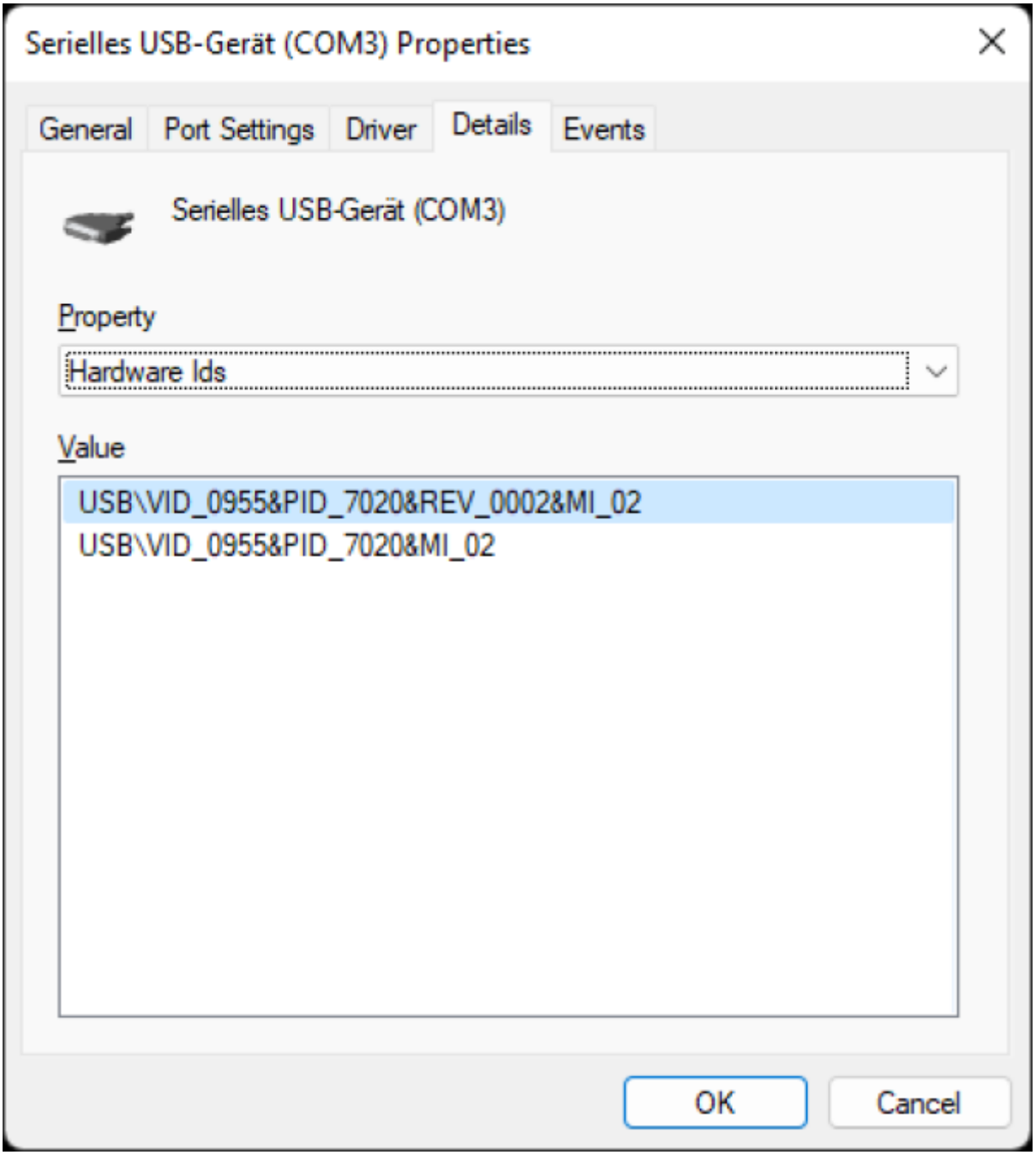
Right click the Windows Start icon and select “Device Manager.”



Open the **Ports (COM & LPT)** to find the COM port number for **USB Serial Device** (in this case *COM 3*)



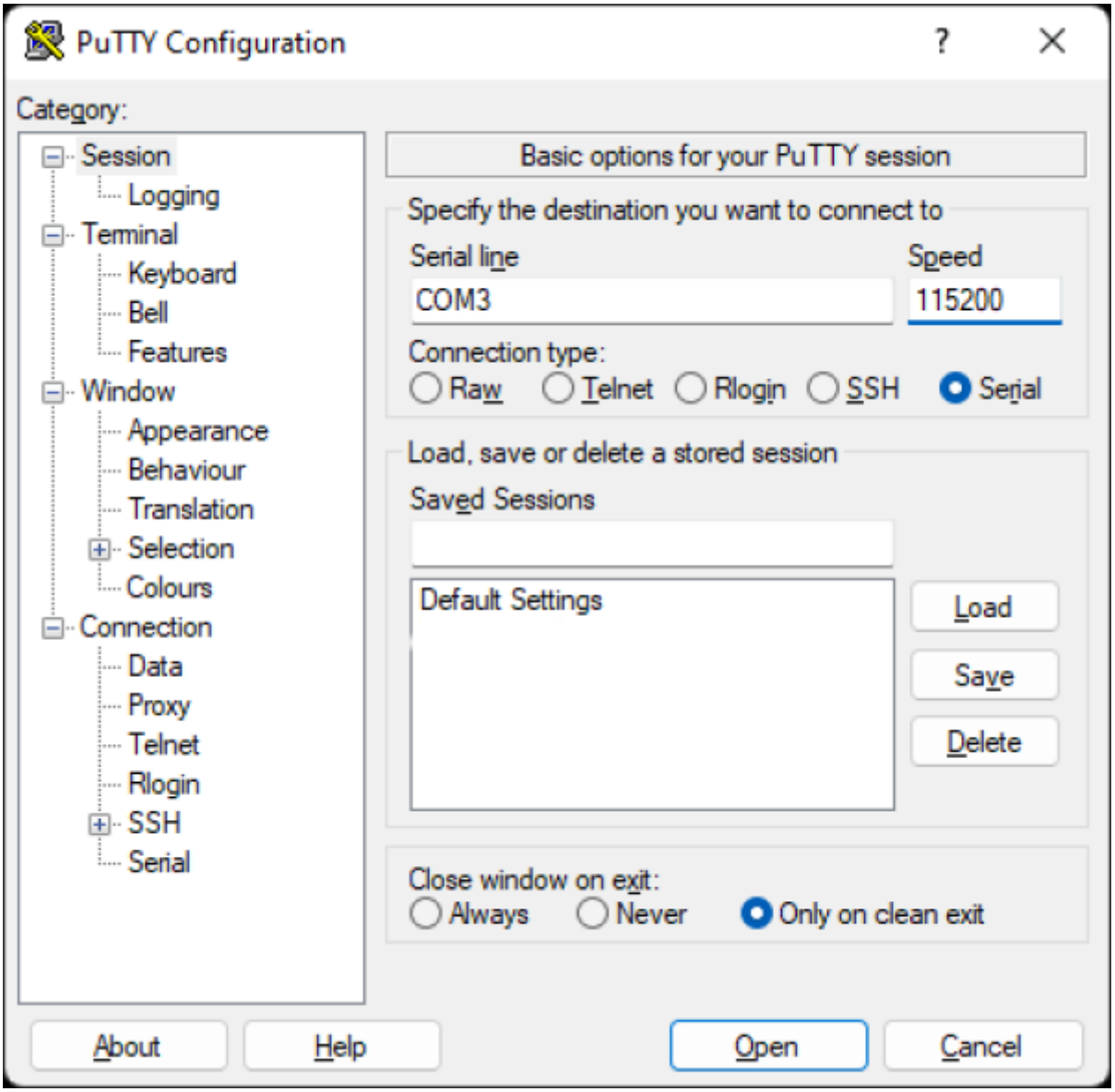
Double click each USB Serial Device entry so you can check its properties. Go to the **Details** tab, in property select **Hardware Ids**. If you see **VID 0955** and **PID 7020**, that USB Serial Device for your Jetson developer kit. Note the COM port name (COM3 in this example) for later use.



Open the COM port on PuTTY

PuTTY is one of the most widely used terminal applications for accessing serial consoles. You can use other terminal applications, but if you don’t have any on your Windows PC, you can download PuTTY from here.

Open the PuTTY application. When **Session** is selected in the left **Category** pane, input the COM port name for **Serial line** and **115200** for **Speed**.



Click **Open** to connect to the console.

For Linux users

Locate the tty device Before connecting to your Jetson developer kit for initial setup, check to see what Serial devices are already shown on your Linux computer.

```
$ dmesg | grep --color 'tty'
```

Connect your Linux computer to the developer kit's Micro-USB port and run the same command to find what's newly added.

```
$ dmesg | grep --color 'tty'
…
…
[xxxxxx.xxxxxx] cdc_acm 1-5:1.2: ttyACM0: USB ACM device
```

The new serial device is for your Jetson developer kit.

```
$ ls -l /dev/ttyACM0
crw-rw---- 1 root dialout 166, 0 Oct  2 02:45 /dev/ttyACM0
```

Screen command

Install the Screen program on your Linux computer if it is now already available. For example, use this command to install Screen if you are running Ubuntu.

```
$ sudo apt-get install -y screen
```

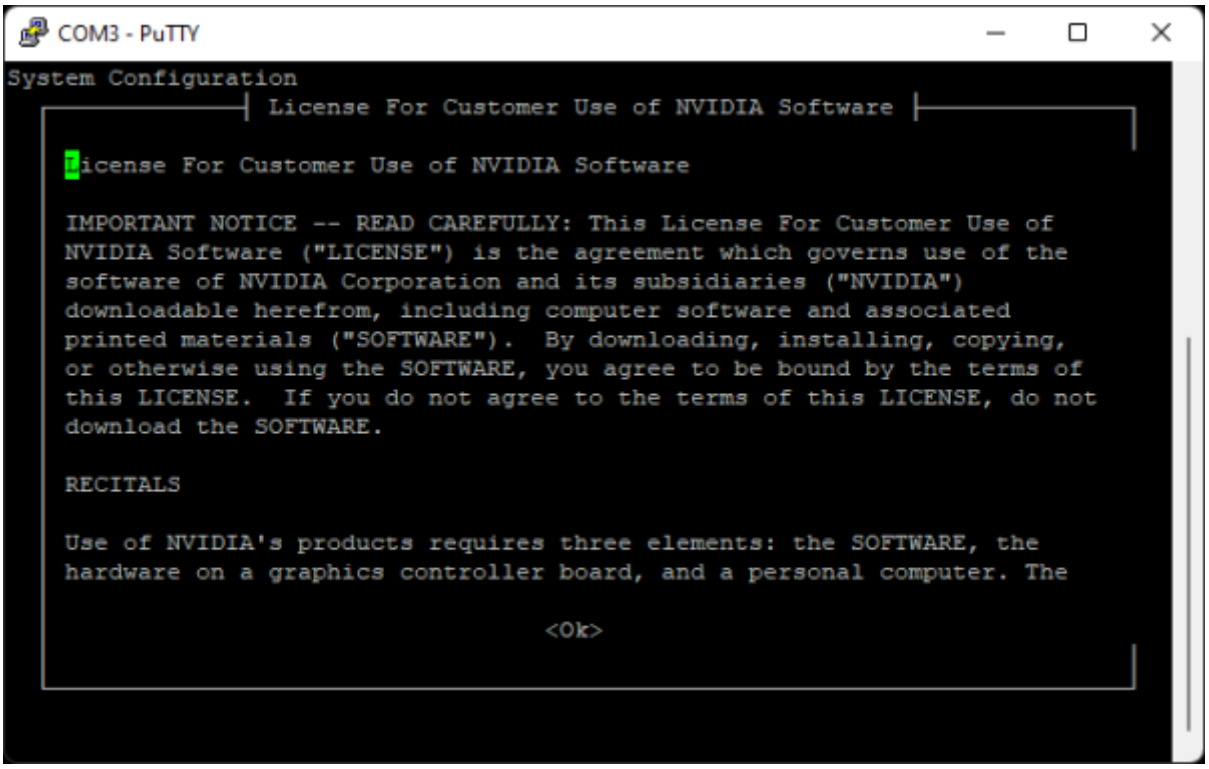
Use the device name discovered previously as a command line option for the `screen` command.

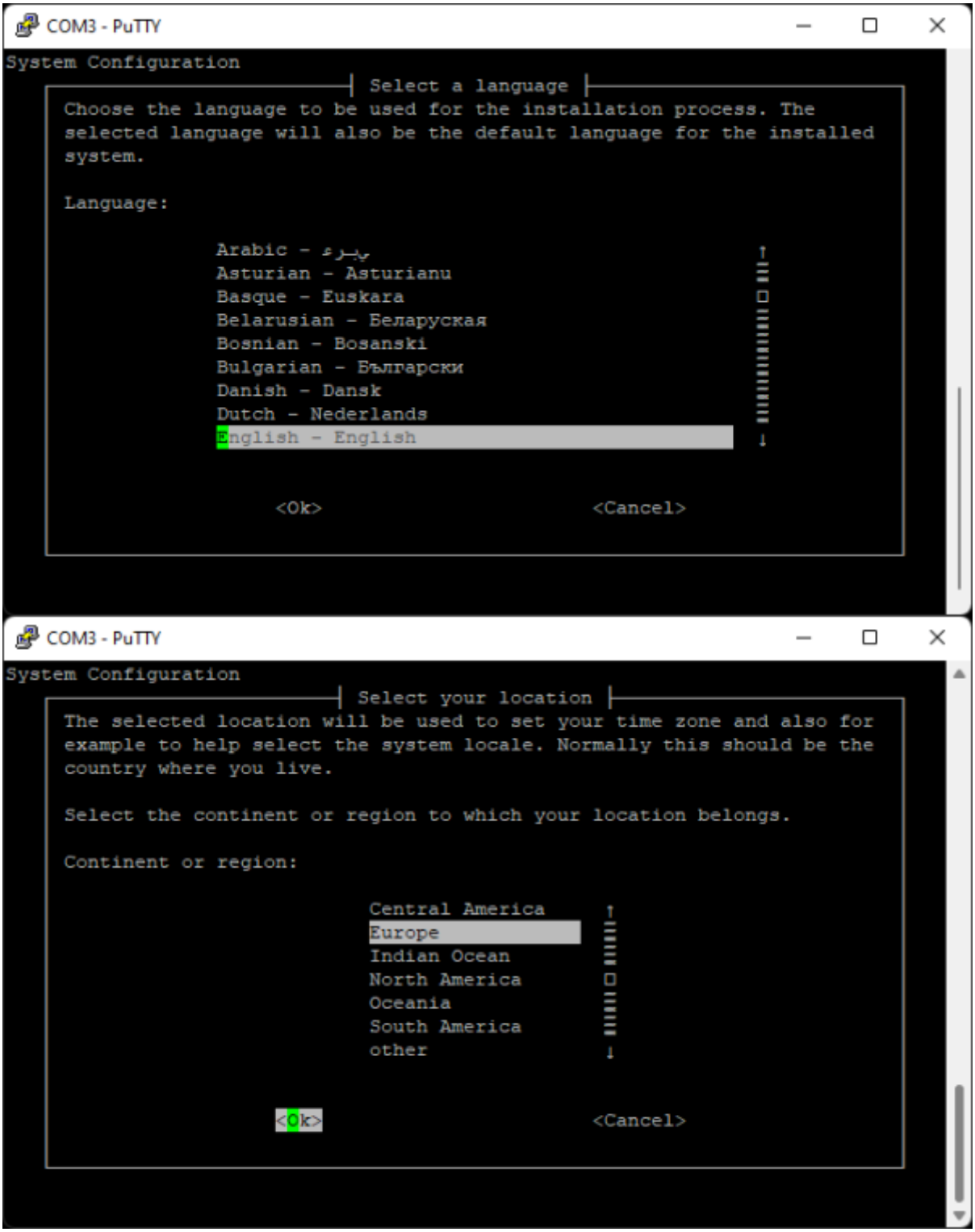
```
$ sudo screen /dev/ttyACM0 115200
```

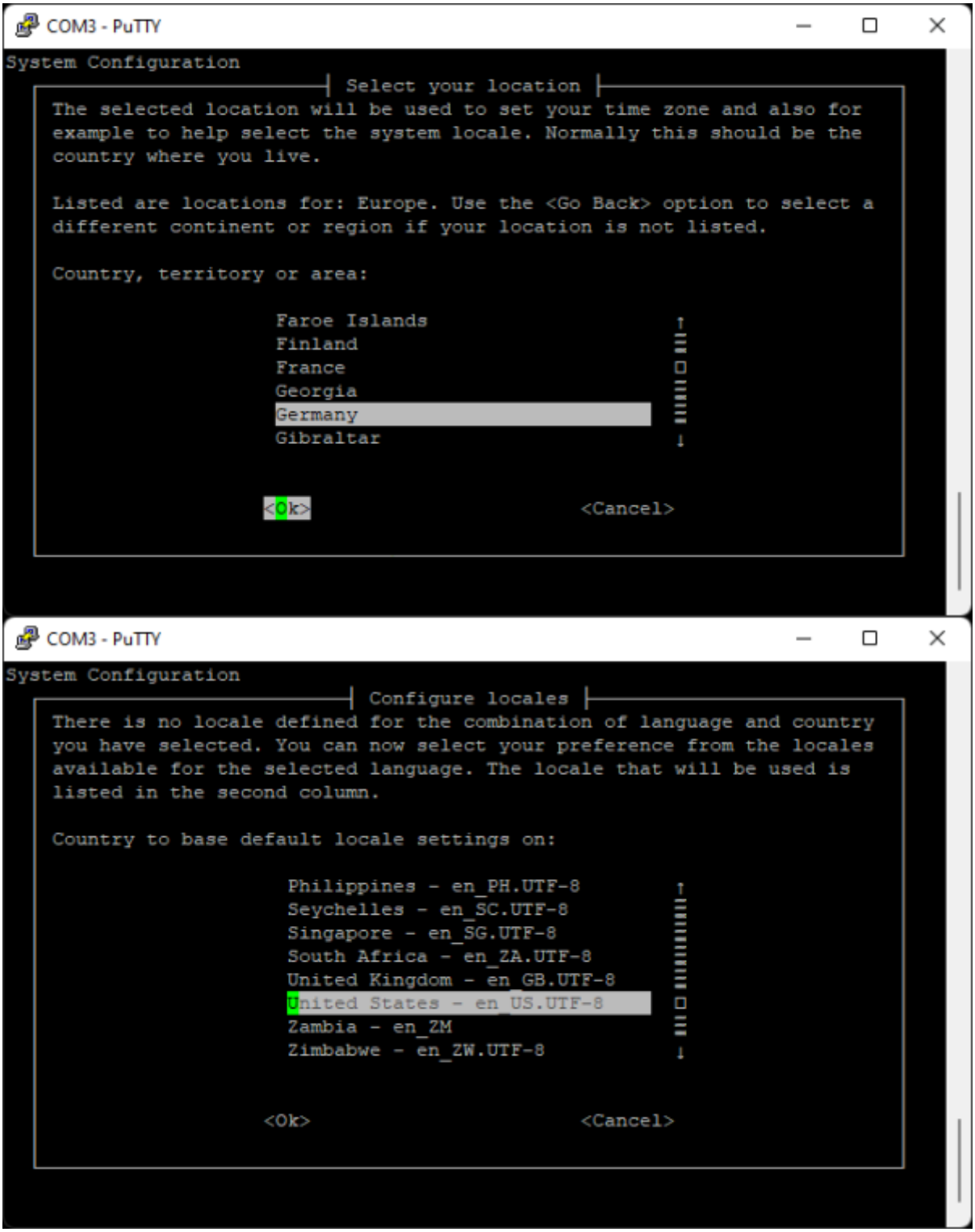
Terminate screen

To terminate your screen session, press C-a + k (Ctrl + a, then k), then press y on confirmation.

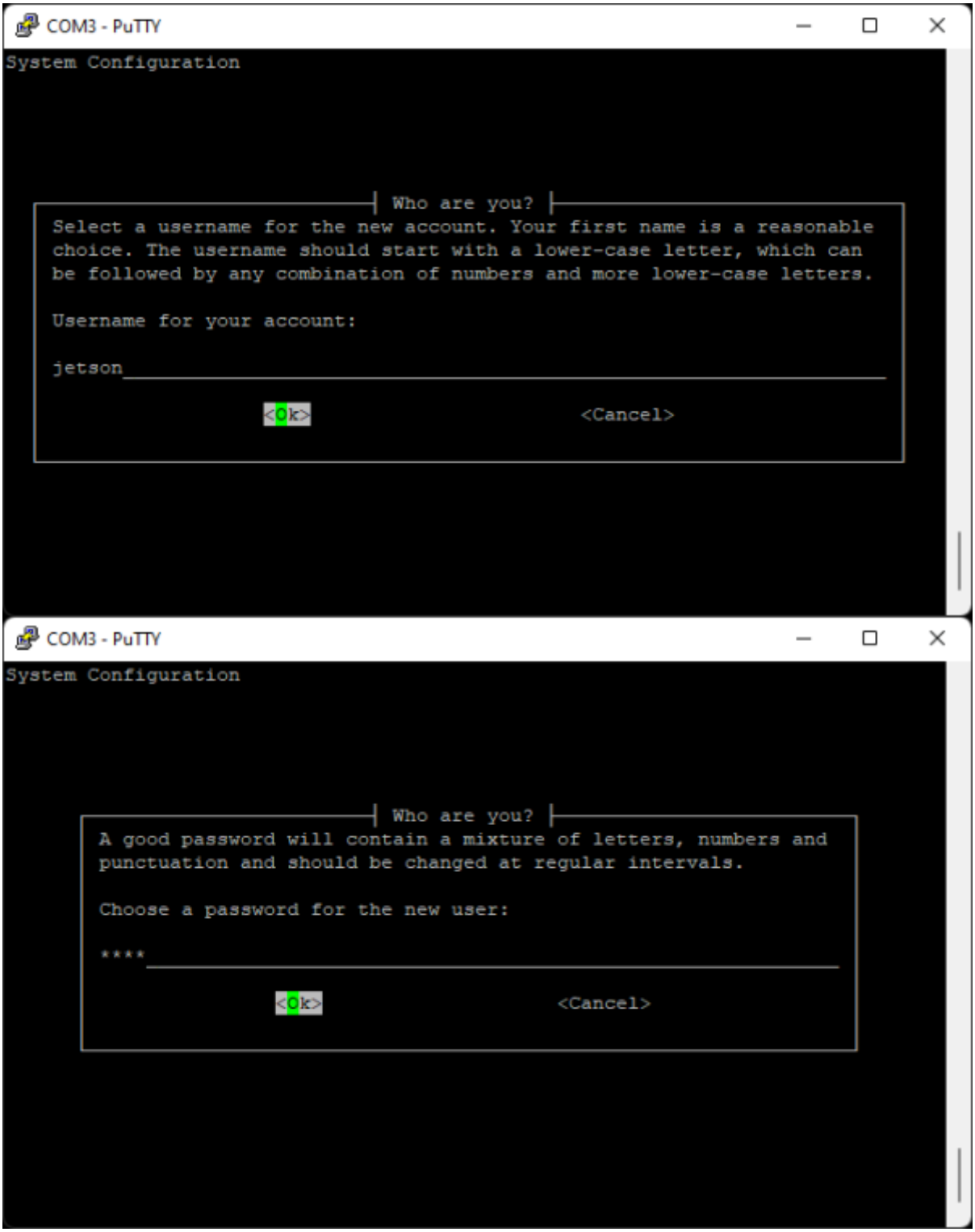
Headless First Boot Screenshots




COM3 - PuTTY
System Configuration
Select a language
Choose the language to be used for the installation process. The selected language will also be the default language for the installed system.
Language:
Arabic - بيرء
Asturian - Asturianu
Basque - Euskara
Belarusian - Беларуская
Bosnian - Bosanski
Bulgarian - Български
Danish - Dansk
Dutch - Nederlands
English - English
<Ok>
<Cancel>
COM3 - PuTTY
System Configuration
Select your location
The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.
Select the continent or region to which your location belongs.
Continent or region:
Central America
Europe
Indian Ocean
North America
Oceania
South America
other
<Ok>
<Cancel>

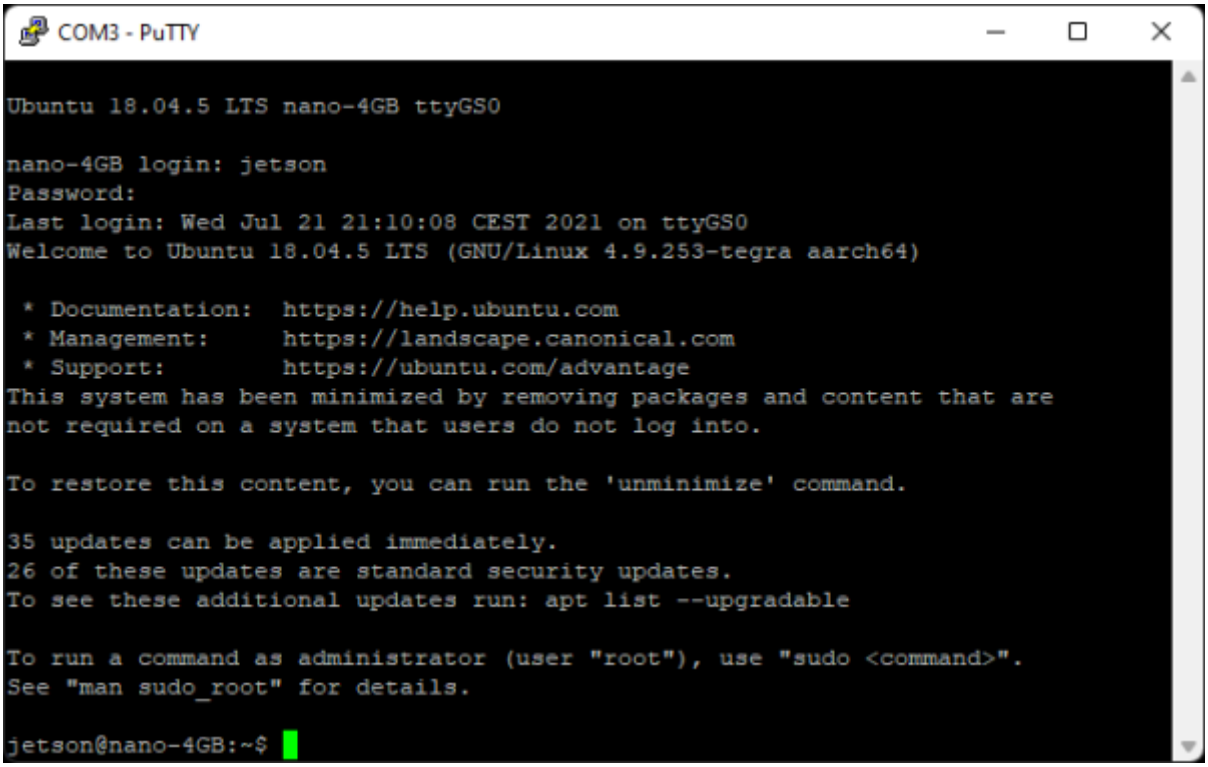

COM3 - PuTTY
System Configuration
Select your location
The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.
Listed are locations for: Europe. Use the <Go Back> option to select a different continent or region if your location is not listed.
Country, territory or area:
Faroe Islands
Finland
France
Georgia
Germany
Gibraltar
<Ok>
<Cancel>
COM3 - PuTTY
System Configuration
Configure locales
There is no locale defined for the combination of language and country you have selected. You can now select your preference from the locales available for the selected language. The locale that will be used is listed in the second column.
Country to base default locale settings on:
Philippines - en_PH.UTF-8
Seychelles - en_SC.UTF-8
Singapore - en_SG.UTF-8
South Africa - en_ZA.UTF-8
United Kingdom - en_GB.UTF-8
United States - en_US.UTF-8
Zambia - en_ZM
Zimbabwe - en_ZW.UTF-8
<Ok>
<Cancel>

COM3 - PuTTY
System Configuration
Where are you?
System clocks are generally set to Coordinated Universal Time (UTC).
The operating system uses your time zone to convert system time into
local time. This is recommended unless you also use another operating
system that expects the clock to be set to local time.
Is the system clock set to UTC?
<Yes>
<No>
COM3 - PuTTY
System Configuration
Who are you?
A user account will be created for you to use instead of the root
account for non-administrative activities.
Please enter the real name of this user. This information will be used
for instance as default origin for emails sent by this user as well as
any program which displays or uses the user's real name. Your full name
is a reasonable choice.
Full name for the new user:
Jetson Nano 4GB
<Ok>
<Cancel>


COM3 - PuTTY
System Configuration
Who are you?
Select a username for the new account. Your first name is a reasonable choice. The username should start with a lower-case letter, which can be followed by any combination of numbers and more lower-case letters.
Username for your account:
jetson
<Ok>
<Cancel>
COM3 - PuTTY
System Configuration
Who are you?
A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.
Choose a password for the new user:
****
<Ok>
<Cancel>

COM3 - PuTTY
System Configuration
APP Partition Size
Please enter desired size of APP partition in Megabytes (MB). Default value in input field is the maximum size that can be accepted. Enter 0 or leave blank to use the maximum size value.
60891
<Ok>
<Cancel>
COM3 - PuTTY
System Configuration
Network configuration
Your system has multiple network interfaces. Choose the one to use as the primary network interface during the installation. If possible, the first connected network interface found has been selected.
Primary network interface:
dummy0: Unknown interface
eth0: Ethernet
l4tbr0: Unknown interface
rndis0: Unknown interface
usb0: USB net
wlan0: Wireless ethernet (802.11x)
<Ok>
<Cancel>

COM3 - PuTTY
System Configuration
Network configuration
Please enter the hostname for this system.
The hostname is a single word that identifies your system to the network. If you don't know what your hostname should be, consult your network administrator. If you are setting up your own home network, you can make something up here.
Hostname:
nano-4GB
<Ok>
<Cancel>
COM3 - PuTTY
System Configuration
Select Nvpmodel Mode
If you are unsure which mode to select, keep the default setting. This setting can be changed at runtime using the nvpmodel GUI or nvpmodel command line utility. Refer to NVIDIA Jetson Linux Developer Guide for further information.
Select from one of the below nvpmodel modes:
MAXN
5W
<Ok>
<Cancel>



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