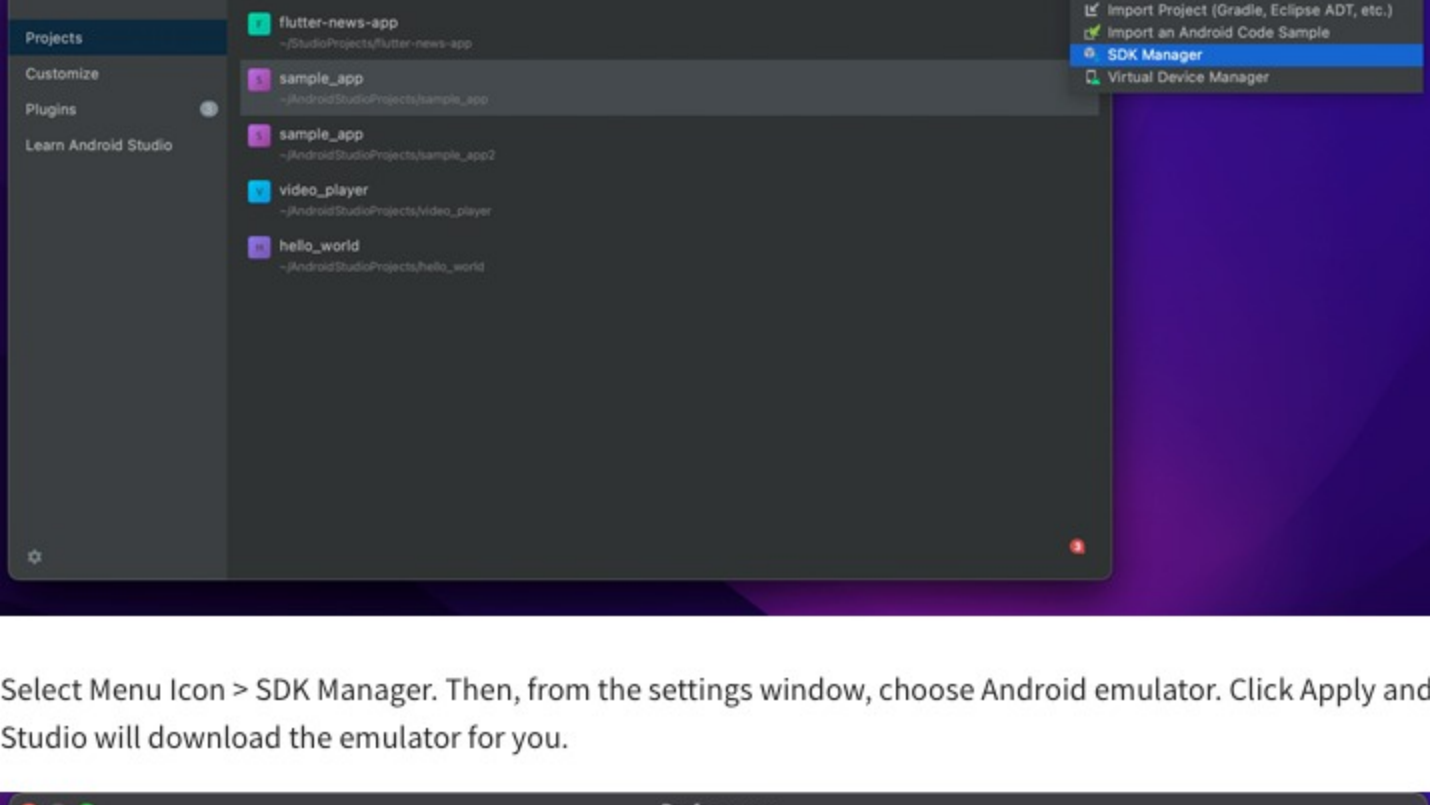


# Setting up emulator software

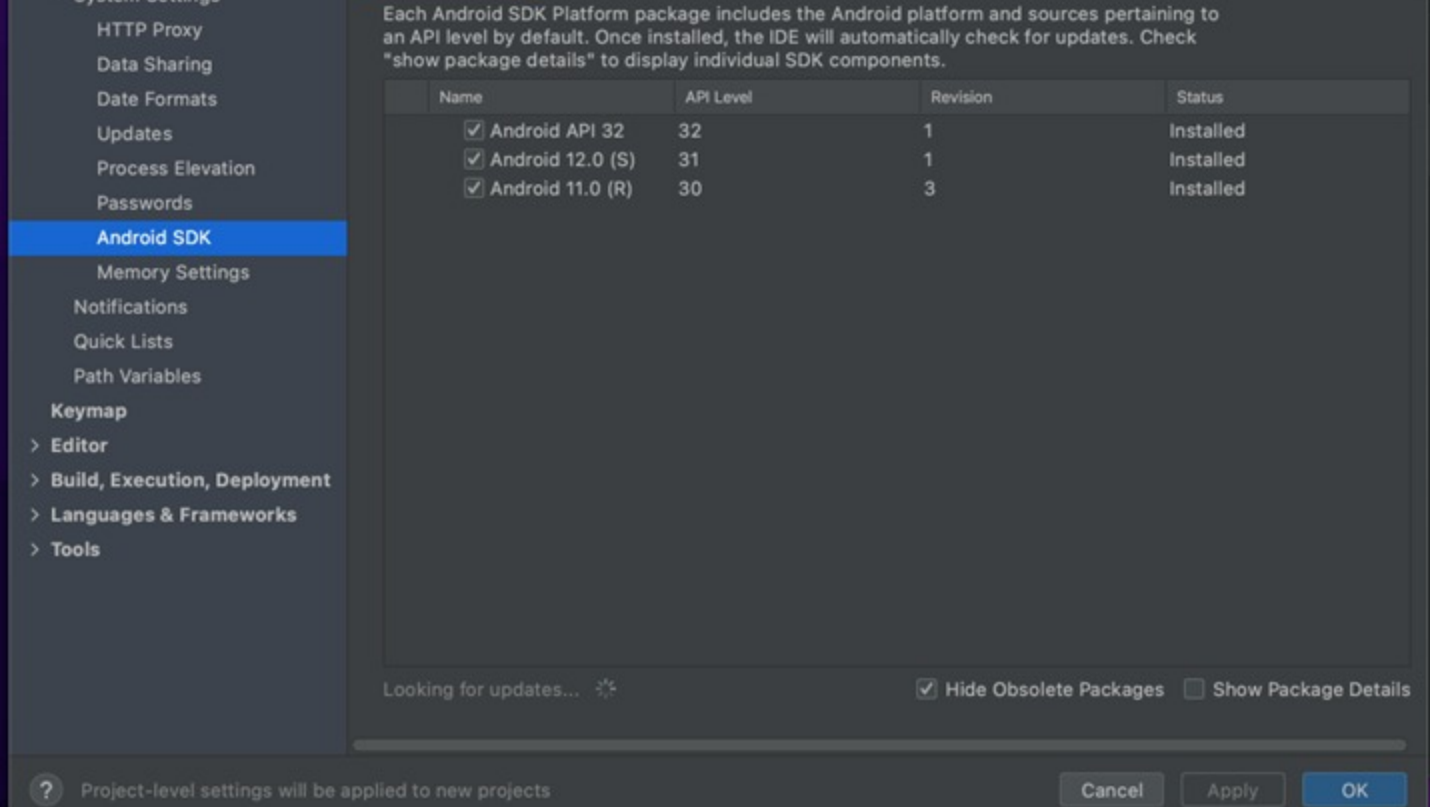
To use the Android emulator, you will need to download it first. This reading will guide you through setting up emulator software in Android Studio.

Although the set-up process has been captured with a Mac device, the same instructions apply to Windows users.

You can download the emulator from the SDK manager located in the top right corner of the Android Studio welcome screen.



Select Menu Icon > SDK Manager. Then, from the settings window, choose Android emulator. Click Apply and Android Studio will download the emulator for you.

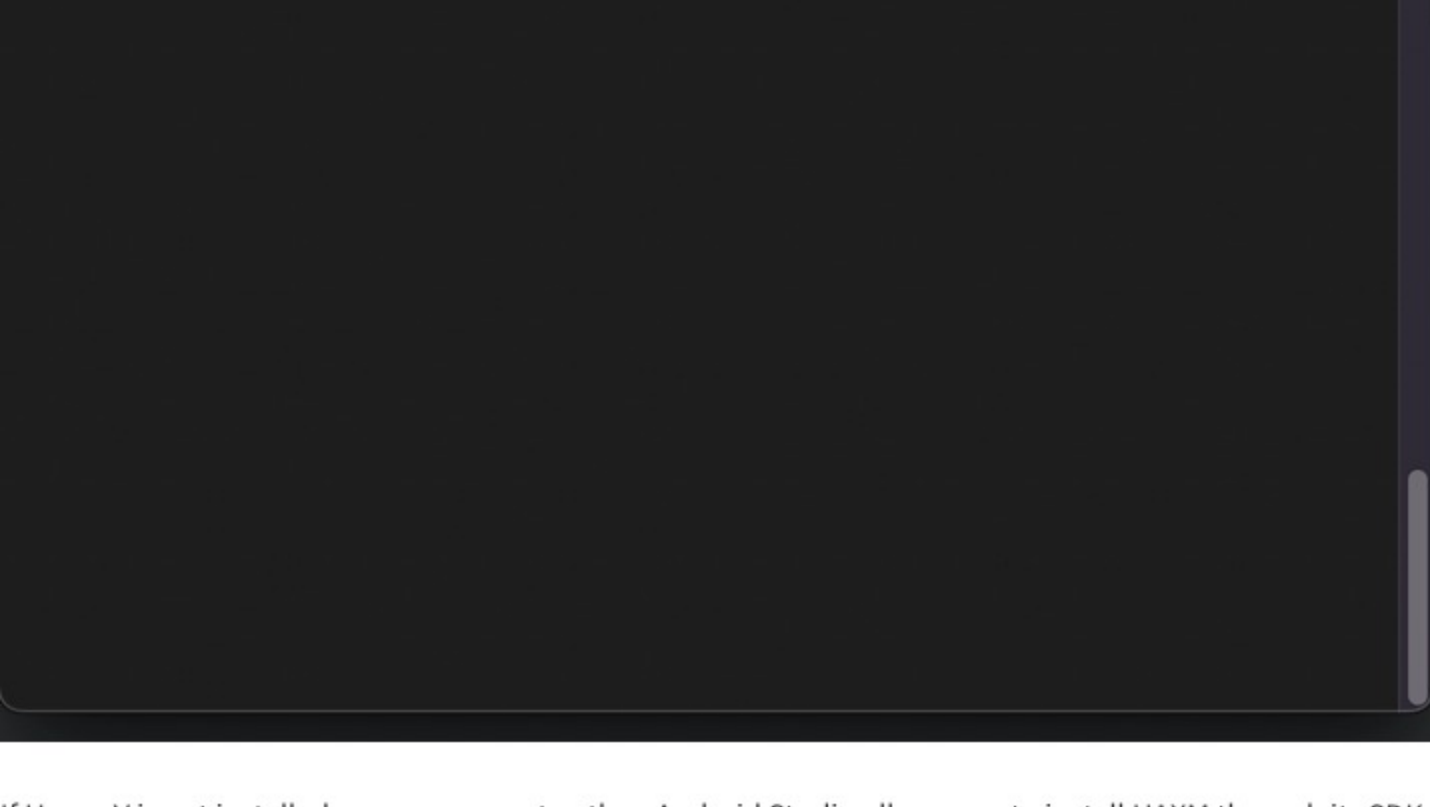


An Android emulator cannot run on your computer without a virtualization tool for hardware acceleration. Fortunately, Windows 10 comes preloaded with Hyper-V, which is one of the best virtualization tools in the market.

For Mac users, you can discover Hyper-V's status on your computer by running the following command on your terminal.

```
1 sysctl kern.hv_support
```

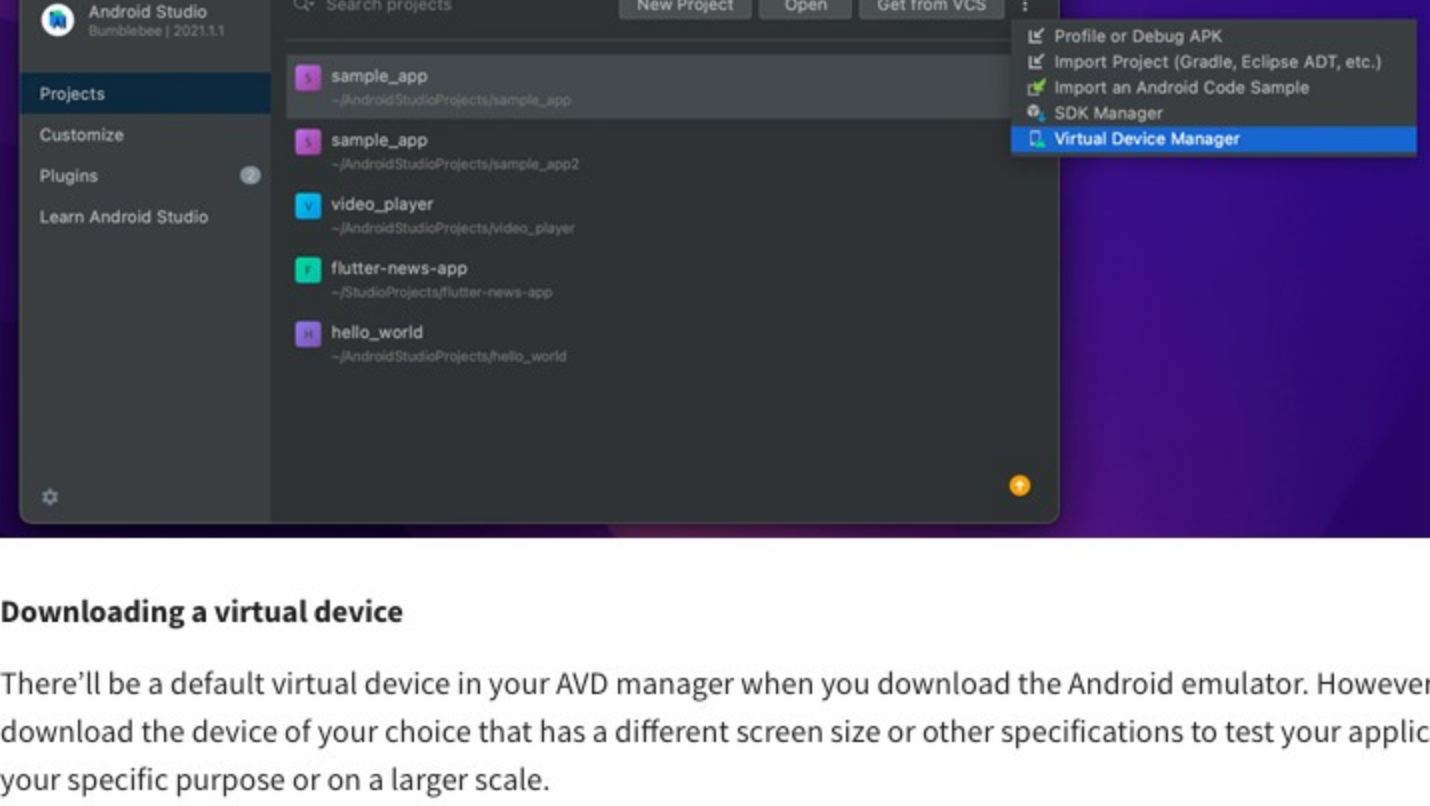
If your computer supports it, the command output will look as follows when turned on showing the kern.hv\_support value returning 1:



If Hyper-V is not installed on your computer, then Android Studio allows you to install HAXM through its SDK manager. HAXM is another hardware acceleration tool. HAXM is downloaded and installed through the same window you used to download the Android emulator.

Wait for the installations to complete, and then restart your computer and Android Studio.

Now, select Tools > AVD Manager (for Android Virtual Device) and explore the virtual devices.



## Downloading a virtual device

There'll be a default virtual device in your AVD manager when you download the Android emulator. However, you can download the device of your choice that has a different screen size or other specifications to test your application for your specific purpose or on a larger scale.

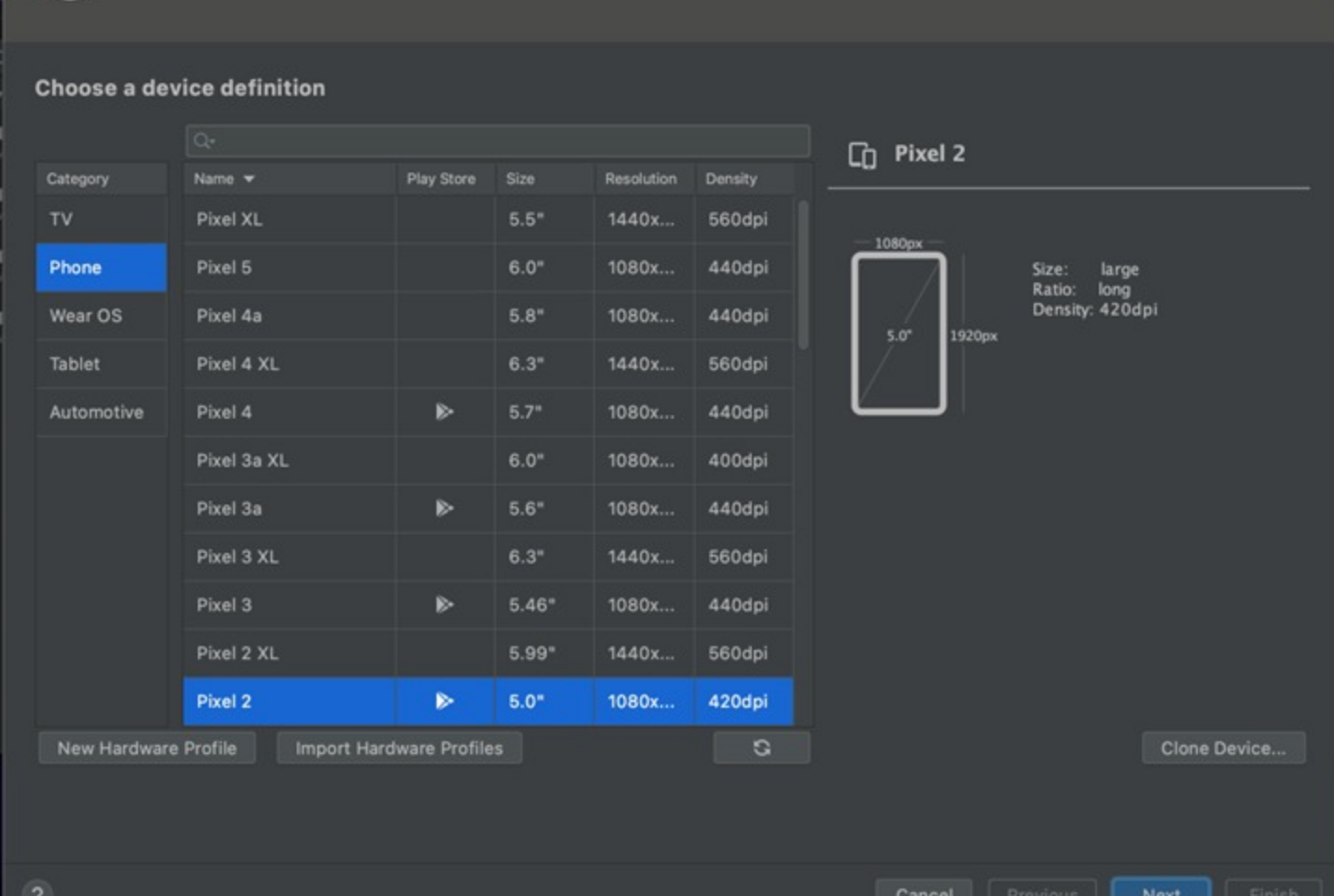
When you open the AVD manager, you can locate the button for creating a new virtual device at the top left corner.



Each virtual device comprises some hardware and software configurations. The system image of a virtual device represents its software components.

When you set out to create a new virtual device, you'll have to determine its hardware first. This is where you select settings like the screen size, screen resolution, screen pixel density and RAM. You can define the hardware from scratch or use the default hardware options offered by Android Studio.

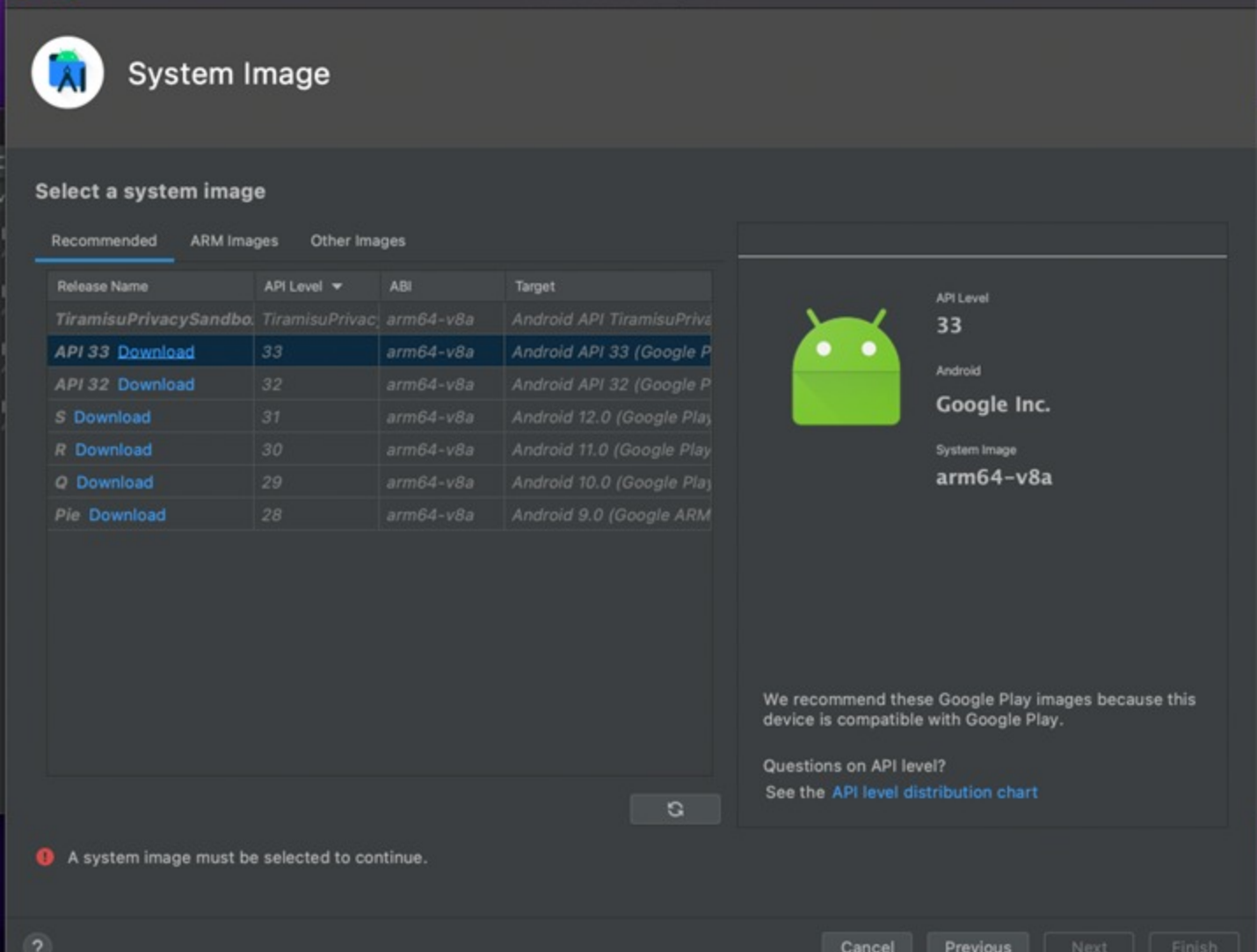
In the hardware selection menu, you'll also get to see a Play Store icon beside some of the hardware choices. The system image of these devices will have a Play Store integrated into their interfaces.



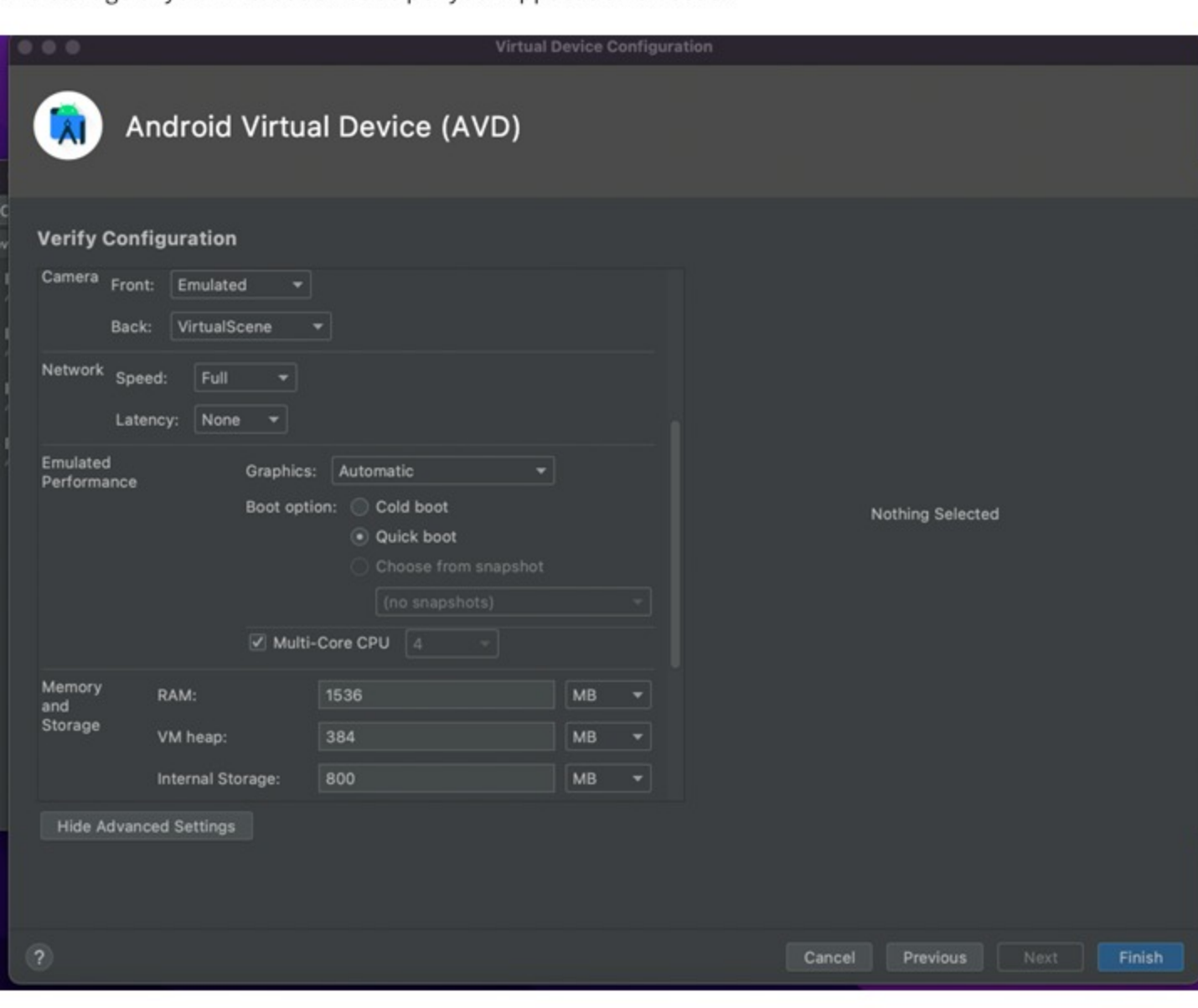
Once you're done selecting the hardware configurations, click next and you'll be taken to the system image menu.

A system image comprises the Android version, its API level and Application Binary Interface(ABI). ABI defines with great precision, how an application's machine code is supposed to interact with the computer.

These selections must be in accordance with your project.



Further customizations take place on the last screen for creating a new virtual device. At the bottom of the window, you'll find a button for the advanced settings. Here you can explore the camera settings, network settings, performance and storage of your virtual device as per your application's needs.



The performance section of the settings gives you three options:

- **Cold boot:** It will start your device as if you're turning it on for the first time.
- **Quick boot:** It will remember the last state of your device and the next time you run the Android emulator it will show you the same screen.
- **Snapshot:** This refers to the state of the Android emulator. You get to save the state yourself and it'll kick off from the same page the next time you run the emulator.

The memory and storage section of the settings gives you options to configure the device RAM, VM heap, internal storage and SD card.

Mark as completed