INSTALLATION

Now we're going to show you how to use the MosaicOS operating system, covering its key functionalities. Protecting our data and the information about us is becoming increasingly vital year after year, which is why MosaicOS is designed to ensure we can maintain a significantly higher level of security, and to protect our data and use various applications much more effectively, with as few compromises as possible compared to using today's smartphones.

The biggest difference compared to traditional phones is in installation and migration, as more settings are required here due to data protection, however, daily usage closely resembles that of devices you're accustomed to. MosaicOS is based on the Graphene OS operating system, which only works on Pixel phones. The MosaicOS team has developed a user-friendly and secure operating system, leveraging the publicly available code of Graphene OS.

Prior to installation, ensure you back up all essential data from your old phone; multiple methods are available for this purpose. For phones running the iOS operating system, it is possible to save data into their proprietary cloud service, whereas for Android devices, this functionality is enabled via a Google account. But if you prefer to accomplish all of this with a slightly higher degree of security, avoiding any third-party involvement, then you have the option to manually transfer all the required information onto a computer, then to the MosaicOS device. For everyone, different data is important, but mobile phone users agree on one thing, importing the contacts is absolutely essential when you are moving your data over. So we'll give you a quick tip on this now.

Open the **Contacts** app on your Android phone and look for the menu button, usually three dots or three lines in the top right or left corner, or the sorting option, which can differ based on the Android version and manufacturer. On this particular model, search for the 'edit and manage' option, which facilitates both import and export functions. So, **export to a file**. Upon exporting the phone, the system generates the contacts.vcf file, meticulously containing all of your contact information. Save this file to your internal storage or SD card. After this, all you have to do is copy this file to your computer using a USB cable, and we'll return to the continuation after installing MosaicOS. This is a bit more cumbersome on an iOS device because it doesn't offer a built-in option to directly export **Contacts** to a vcf file without the cloud. However, if you install a contact management app, such as the free **My Contacts Backup** app or the **Backup My Contacts** app, these applications enable exporting your contacts into VCF format. By following the app's instructions, you can create a contacts.vcf file containing all your contacts. From the app, you can send on email this file to yourself, making it easy to download onto your computer, thereby circumventing the need for cloud-based storage. Essentially, there's no need to open this VCF file on your computer at all. Once MosaicOS is installed, we will immediately copy it over to the phone, but the installation comes first.

Ensure the Pixel phone is powered off. During the installation process, you'll use the three physical buttons on the phone's side, specifically the top power button and the two volume buttons located beneath it. A working USB data cable and an internet connection are necessary for the installation process.

Navigate to the **mosaicos.io** website and proceed with the installation. Initially, the system will display all the Pixel models that are compatible with the MosaicOS. Then, you simply tap on the start button. Currently, the installation method is a **Clean installation,** alternatively, the **Update**

option is available when upgrading from a previous version of MosaicOS. Should you have utilized a Pixel phone thus far and wish to change the current operating system to MosaicOS, ensure that you back up all your data before proceeding with the installation, because everything will be lost. If you have a brand new Pixel phone, you don't need to worry about this. Proceeding with a clean install, the system will prompt a question: '**Lock bootloader after installation**' is advised, so we will tick this option. The bootloader is essentially responsible for initiating the operating system load and verifying the system's boot sequence. If the bootloader is locked, no modifications can be made to the device. Installing MosaicOS is possible with an unlocked bootloader, and we will recommend relocking the bootloader after installation, for increased system security. So, you check the box and click the **Next** button.

Before connecting, the phone needs to be started normally, with Android for a single setting. It's possible that a new device is completely discharged. It's recommended to charge it to at least 60 percent before starting the installation process. I am currently setting the language to English and we will always click the **Skip** button. The only exception is the internet connection, which is necessary. We don't need to focus on the initial steps; there's just one setting you need to adjust on the phone. This is because it's not enabled by default to allow you to unlock the bootloader. You must enable OEM unlocking in the developer settings for this. The OEM unlock option within the developer settings instructs the phone to permit the unlocking of the bootloader at a subsequent time. **Settings,** then scrolling down to **About phone**. Then I'll scroll down again, and the developer options can be accessed by pressing the **Build number** multiple times. We tap on it until the system says **You are now a developer.** After this, we return to the **Settings**, **System**, **Developer options**, **Enable OEM unlock**. Confirm the prompt that appears. When you're done, you can power off the phone. After installing MosaicOS, you can decide whether to leave this feature enabled or disable it. Each choice presents its own set of pros and cons. Should you permit OEM unlocking to remain enabled, thereby facilitating bootloader unlocking, then in the overwhelming majority of instances, a device experiencing a software malfunction can indeed be rectified, but a security gap appears. Should you disable the OEM unlocking feature, which consequently prevents bootloader unlocking, your device will become secure, rendering your data inaccessible to unauthorized individuals. However, this way, a potential software error cannot be fixed, and it's possible the phone will become unusable.

The installation of MosaicOS starts here. We recommend using Chrome or some Chromium-based browser. The OEM unlock has already been done on the four points shown on the computer, so the phone starts from a powered-off state, **Next**, simultaneously press and hold the power button and the volume down button until a red triangle with an exclamation mark appears. At this point, we are in fastboot mode, which allows the installation of the new system. In this mode, we connect the device to the computer. After the computer detects the device, we select the recognized phone in the pop-up window and click the **Connect** option. If the computer does not detect the phone, it's worth checking if the drivers for the device are installed. A pop-up window on the computer interface will assist with this process if no phone is recognized. The subsequent window allows us to proceed with unlocking the bootloader. The system issues another warning: all data on the Pixel phone will be deleted. Proceed with **Unlock** on the computer, then on the phone, use the volume up and down buttons to select the '**Unlock bootloader**' option. Confirm with the power button, then wait for the download.

Occasionally, the download and installation process halts unexpectedly. The error is not on our interface; in such cases, the computer doesn't detect the device again due to the phone restarting multiple times. Should you observe a lack of activity for approximately twenty to thirty seconds, with the progress bar for the installation remaining static, then proceed to disconnect the device, then reconnect the USB cable to the phone. Installation will continue.

In the next window, we select the latest available version of MosaicOS, then '**Install**'. During this process, the phone will restart several times. It's possible that the computer might again fail to detect the device after the phone restarts multiple times. In such cases, simply unplug and then reconnect the USB cable to the phone again. The installation will then resume. Once more, the pink line remains stationary, necessitating the reconnection of the phone. This issue, however, might not happen during every download. Once the download is complete, proceed by clicking the **Lock** button on your computer, and then on your phone, select '**Lock the Bootloader**'. If the process halts again, reconnect the USB cable to the phone.

After a successful installation, upon powering on, a warning will always appear stating that the factory operating system is not running on the phone; this can be ignored. After the installation, the phone restarts automatically anyway. After Google, MosaicOS follows, which is completely natural. We have arrived at the home screen; the USB cable will no longer be needed from now on. First, set the language. **Next.** A warning appears stating that this is only a beta version; by waiting for the countdown here, we can proceed. We connect to Wi-Fi. **Next.** You can set the date and time here. **Next.** Then we can enable the use of location data, access to network location, and Wi-Fi access for applications. This doesn't have much significance yet, because later you will be able to grant or revoke permissions for each application individually. After this, we can set a PIN code and then a fingerprint to unlock the phone. I will skip this now for the sake of speed, but we definitely recommend setting up both, as this also serves security. On MosaicOS, our fingerprint is stored in an enhanced manner, and it is physically unable to leave the device's hardware-secured secure element, which is also referred to as a safe. When an application sends a request for the fingerprint, that request is then routed into this secure vault where the verification process takes place, and the result is returned to the application. This provides an extra layer of security compared to conventional operating systems. We will skip restoring applications and data for now; the system suggests two applications: one is a keyboard, the other is a calendar. Both options are secure and open-source, however, the decision to automatically download them rests with you. After this, some phone specifics follow, such as how to return to the home screen, how to go back, or open applications. Then it asks to disable OEM unlocking. If the OEM unlock is disabled, then in case of a more serious software problem, only a professional service center can repair the device. while if it's enabled, the device can potentially be recovered using a computer or laptop. But if the OEM unlocking feature is turned on, then it is possible for anyone to unlock the bootloader through the previously demonstrated methods. This way, our data cannot be stolen or read, but it can be destroyed, since everything is deleted when the bootloader is opened. You decide which option to select, then click **'Start'.** And we have reached the home screen.

First, activate the SIM card after installation. With the phone switched off, you insert the traditional card into the designated slot on the side of the phone using the SIM ejector tool and then by entering your PIN code, the SIM card will be activated. If it cannot be activated, try **Settings, System, Reset Options.** You can **Reset mobile network settings,** and also **Reset Bluetooth and Wi-Fi** options underneath**.** In the case of an E-SIM, a QR code is required, which you need to

obtain from your service provider. After obtaining it, navigate to the **Settings** menu, You have the option to activate **E-SIM support** within the **Network and Internet** section**.** At this time, a window pops up stating that the device must be restarted to enable the setting. You have two options for scanning the QR code. On one hand, there's an option among the quick tiles, and on the other hand, the phone's camera application includes a QR code scanner. Therefore, you locate the camera application, then choose the **QR SCAN** option located at the bottom. You scan the code that you received from the service provider, and then the E-SIM will activate.

After this, we can put the VCF file made from the contact list onto the phone. Once connected to the computer, we will copy the file from your phone into the downloads folder, and then opening it will complete the import process. Saved contacts go to the address book automatically.

Relocating your data is undeniably more of a hassle compared to transferring it to an Android or iOS device, because here, permissions must be configured for every single application. We seemingly set these permissions when using traditional phones as well. But we only think so. On one hand, the traditional operating system can override this, and on the other hand, MosaicOS offers many more configuration options. We will continue about this in the upcoming videos.