Using Microsoft Intune Mobile Device Management (MDM) in an Android phone

Table of Contents

1. General

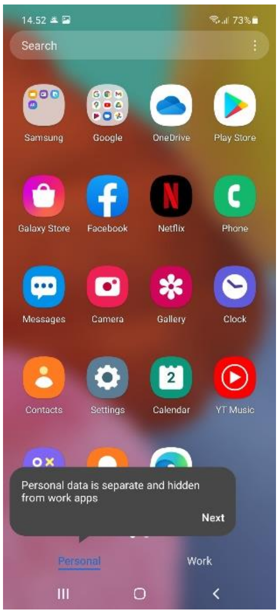
For the sake of simplicity, the MDM instructions only discuss phones, but the same system is also applied to Android tablets, and all Android instructions work in them as well. The deployment of MDM is advised in separate instructions that can be found below the page Mobile Device Management.

When the Intune MDM is deployed in an Android phone, it means more than just the installation of the management app. In addition, the Android operating system activates its in-built split to the personal profile and the work profile. Personal profile means the apps and the data you have currently in your phone. Work profile is a new compartment that will contain apps that you will start to use for work-related tasks. The profiles have separate apps, files and data. The profiles are almost like there would be two separate phones in one physical phone.

- You can install and use apps in the personal profile as you want. The only change is that in apps can be installed only from Play Store. Intune will not see or touch the personal profile at all. Please find more detailed info about the visibility in the instructions “Microsoft Intune MDM - General info” on the page Mobile Device Management.
- Intune manages only the work profile and will not touch anything in the personal profile. If needed, you can delete the work profile and the IT Helpdesk can delete it remotely if you

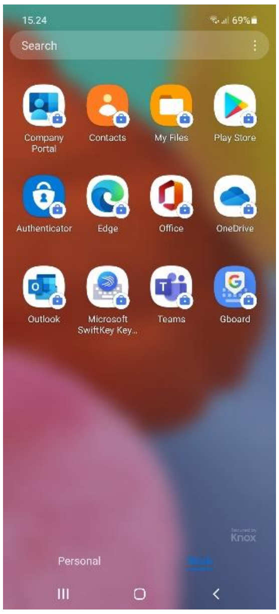
request so. The deletion of work profile does not cause any change whatsoever to your personal apps or data.

- Personal and work-related apps are displayed clearly in separate apps screens in your phone. However, the user interface to access the apps is quite different in different phones depending on the manufacturer of the phone and the Android version in the phone. That is why the usage cannot be advised in detail and all screen shots shown are only indicative. Please refer to the instructions for your phone.
- In a Samsung phone, you can open the apps screen by swiping up when in the home screen. You can switch between personal profile and work profile by tapping Personal and Work in the bottom of the screen. This is how the personal profile and work profile apps screens look like in a Samsung A51 phone:

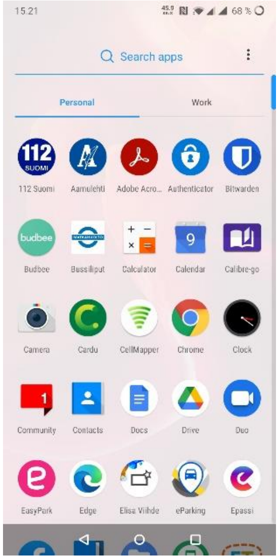


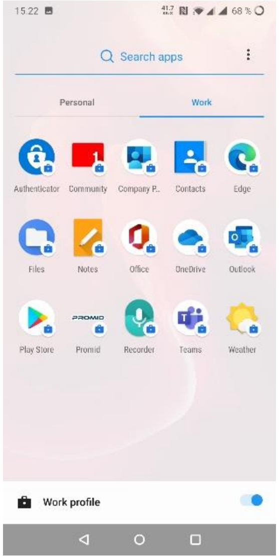
Personal data is separate and hidden from work apps

Next



This is how the apps screens look like in a OnePlus 6 phone:





Microsoft's documentation for users is available on the page Microsoft Intune user help.

2. Usage of the work profile and personal profile

The work profile and personal profile have separate apps, files and data. An app, for example Outlook, can be installed in both profiles – one copy of the app for personal use and one for work-related use. You will need to start the app in the correct profile. Start using the work apps for your work-related tasks. The apps installed in the work profile have a small briefcase in their icon. Work profile apps have the same image in the lower right-hand corner of the screen when the app is active.

2.1. Accounts

Sign in to your work apps as usual with your TUNI email address.

In addition to the TUNI account, you can also add your other email accounts into the Outlook app in work profile. That allows you to access all your emails in the same Outlook app and to see all your calendars in the same Outlook calendar view.

2.2. Sharing data between profiles

The phone keeps the data and files of personal profile and work profile separate for data security reasons. All data transfer between profiles takes place by sharing data or files from one app to another. It depends on the file type, which apps can receive the file in another profile. Here is a general guideline:

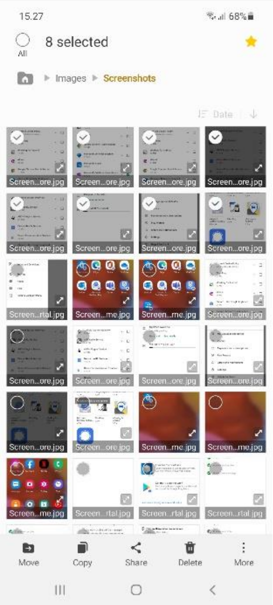
- In the work profile, open the file you want to transfer to the personal profile
- Tap the text or button Share
- Tap Personal
- At the bottom of the screen is a list of apps that can receive that type of file. Note that the list must be scrolled by swiping to the left, and that at the end of the list there is a button "More", which must be clicked to find more receiving apps. Tap the app you want.

The problem with this sharing of files to the other profile is that Samsung's "My files" cannot receive files. If you want to transfer a file to a personal profile, you can receive the file to your personal account in a cloud service app (for example Microsoft OneDrive or Google Drive), from which you can then use the file for the purpose you want.

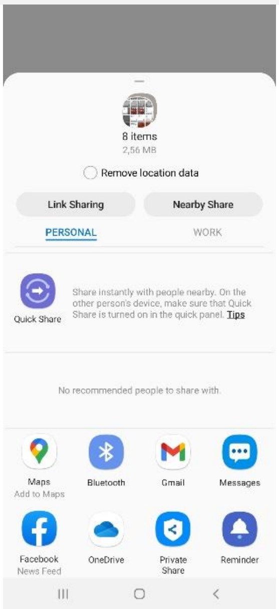
If it is not possible to share the file directly to the app you need, or if you do not want to use cloud services as an intermediate storage, you can install from the Play Store in your personal profile a file browser app that can receive files. Such an app is, for example, Total Commander. After you have installed it or a similar app, you can start the sharing according to the instructions described at the beginning of the chapter and select the file browser application as the recipient. Please note that Total Commander or any similar app is not supported by IT Helpdesk, and you have to learn how to use it yourself and solve any problems.

Please find below an example on how to share photos from the “My files” app of your personal profile to the same app in the work profile. This sharing operation works slightly differently in each app and phone, and thus accurate instructions are not possible.

In addition to this sharing, you can also transfer information between profiles by painting and copying information in one app and then pasting it into another app.



8 photos selected, tap Share.

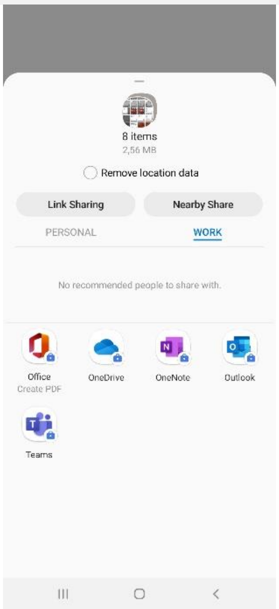


○ Remove location data

Share instantly with people nearby. On the other person's device, make sure that Quick Share is turned on in the quick panel. Tips

No recommended people to share with.

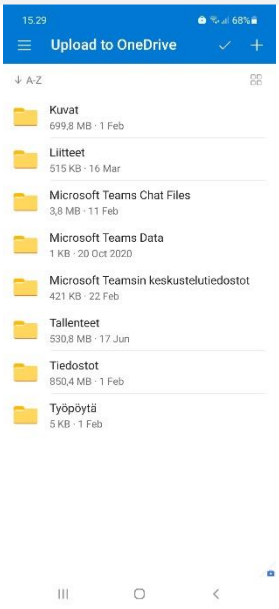
The apps in the personal profile available for receiving this type of data are displayed. Tap WORK.



○ Remove location data

No recommended people to share with.

The apps in the work profile available for receiving this type of data are displayed. Tap OneDrive.



Kuvat
699,8 MB · 1 Feb

Liitteet
515 KB · 16 Mar

Microsoft Teams Chat Files
3,8 MB · 11 Feb

Microsoft Teams Data
1 KB · 20 Oct 2020

Microsoft Teamsin keskustelutiedostot
421 KB · 22 Feb

Tallenteet
530,8 MB · 17 Jun

Tiedostot
850,4 MB · 1 Feb

Työpöytä
5 KB · 1 Feb

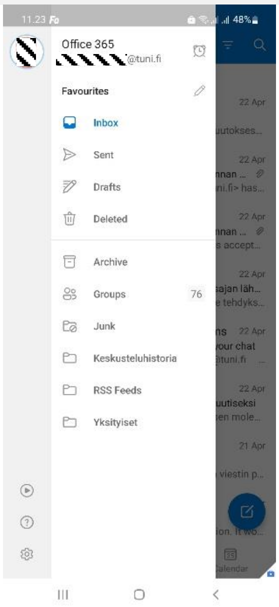
The OneDrive folders are displayed and you can upload your photos.

2.3. Opening a file

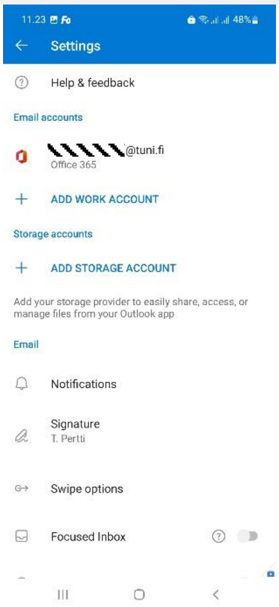
When you want to open a file in an app and you tap the file, you will be shown list of the apps that can be used to open that file. There seems to be a possibility to select apps also from the other profile, but that does not work. We do not expect to be able to fix this. Thus, when you want to open a file in an app and you tap the file, you can choose the app only within the same profile. If you want to transfer data to be processed in the other profile, you can use the sharing (see previous chapter).

2.4. Sharing contacts

Here's how to share your contact's work profile from Outlook to your personal profile's contact list.



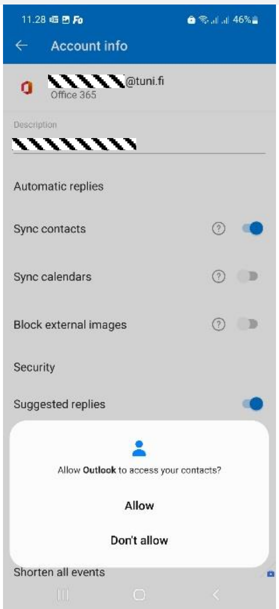
In the Outlook app in work profile, open the top-left menu and tap the wheel.



Add your storage provider to easily share, access, or manage files from your Outlook app

Signature: T. Pertti

Tap your account under the title Email accounts.



Sync contacts: on

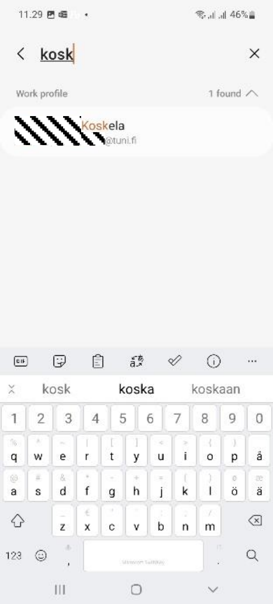
Sync calendars: off

Block external images: off

Suggested replies: on

Allow **Outlook** to access your contacts?

Switch on the setting Sync contacts and approve the access right by tapping Allow.



Searching in the Contacts app in the personal profile will now show contacts also from work profile. When you tap a work profile contact, it will be opened in the Contacts app of the work profile.

2.5. Sharing calendar

We recommend that you add your email accounts into the Outlook app in work profile, which allows you to see all your calendars in the same Outlook calendar view (see chapter 2.1).

The security policy of the Universities community is that the forwarding of Universities email to an external email service is prohibited. Similarly, sharing the Universities calendar to an external service is prohibited. Therefore, the work calendar can only be used in those mobile phones where MDM has been successfully deployed.

Sharing the calendar from work profile to personal profile is not allowed due to information security reasons. Thus, the work calendar can be used only in the Outlook in the work profile.

2.6. Internal profiles in browsers

Edge and Chrome browsers have internal profiles that you can use by signing in to the browser of the work profile with your TUNI account and the browser of your personal profile with your personal account. You will then use the personal profile browser for personal matters and the work profile browser for work-related matters. In other words, you should not change your profile in the browser but use a different browser instead. This allows for separate synchronisation of the browsers' data and the encryption of the work profile browser's data.

2.7. Microsoft Authenticator

The two-step verification app Microsoft Authenticator is defined to be installed in everybody's work profile so that it is readily available in a new phone.

If you have a fully working Authenticator in your personal profile, you can continue using it, and you do not have to do anything regarding the Authenticator in the work profile.

However, due to better information security, we recommend that you start using Authenticator in your work profile and stop using it in your personal profile. With these instructions, you can perform this switch.

- Check that Microsoft Authenticator has been installed in your work profile. If you cannot find the app, you can install it via Play Store in your work profile.
- First, disable the current copy of Authenticator. Start a VPN connection in your workstation and open your account's administration page with this link https://aka.ms/mfasetup. If you use Microsoft Authenticator as a verification method, one of the rows should include the text "Microsoft Authenticator" and the model of your phone. Click the link Remove at the far-right end of the row and click OK.
- You can now setup Authenticator in your work profile in the same way you started using Authenticator the first time when enabling two-factor authentication. Instructions for this can be found on the page Setting up multifactor authentication.
- You can now remove your TUNI.fi account from the Authenticator app in your personal profile. If you do not use the personal profile Authenticator for any other purposes, you can uninstall the app.

2.8. Tips for using the work profile

The work profile can be turned off which will stop all work apps. This feature is available in Samsung phones in the pop-up quick panel which can be opened by swiping down from the top of the screen, as well as through the Settings app. It's a good idea to turn off the work profile when you don't want to receive notifications about work, such as in the evenings and on weekends.

There are many ways to adjust the functioning of your work profile through the phone settings, in Samsung phones: Go to Settings, click Work profile. For example, you can set a separate PIN for a work profile by clicking "Use one lock" and then setting another PIN. In this case, the phone has the PIN you have previously set for the general locking of the phone and a new PIN for locking the work profile. A separate work profile PIN can be useful if you want to lend the phone to someone (for example to a child) for a short time and make sure they can't access your work apps.

3. Settings

3.1. Check the compliance with requirements

Intune MDM monitors that the phone fulfils the defined information security requirements. If a requirement is not met in a phone, the MDM prevents the access for an employee from this phone to the information systems used by the Universities community.

This is how you can check if your phone fulfils the requirements and what you should do to fix the possible issues.

- Launch the management app of Intune in the work profile. if you have deployed Intune on your existing phone, the management app is called Company Portal. If you have received a new work phone where the Intune deployment has started automatically, then the management app is called Intune.
- Tap the name of your phone (in the form own_name_AndroidForWork…)
- If it says under the name of your phone “Device settings meet policy requirements.”, everything is OK and you do not need to anything regarding this chapter (3) and you can skip to the next chapter.
- If it says under the name of your phone “You need to update settings on this device.”, you will have to something to fix the issues.
- Tap the text “You need to update settings on this device.”.
- Now you should see a list of issues that you will need to fix so make the phone fulfil the requirements. Under most of the issue descriptions there is text RESOLVE. Read the description of the issue carefully and tap RESOLVE and then you are directed to the appropriate setting. Repeat this checking process until there are no issues left.

At this moment, the following settings should be applied. The IT Services updates these requirements as needed. The current requirements may be tightened and there may be new requirements. All tips how to find the settings are for a Samsung phone.

- Screen timeout (Settings – Display - Screen timeout): 5 minutes or less
    - Note: Teams app prevents the display from getting locked during a meeting
- Screen lock type (Settings – Lock screen – Screen lock type): Set a PIN code with at least 6 digits (no consecutive or recurrent digits).
    - **Please memorize the new PIN very carefully! If you forget it, the phone has to be reset, in which case you will lose all data and files in the phone.**
    - You also can set up face and/or fingerprint unlocking in order to avoid needing to enter the PIN code. It is phone specific, whether the work profile uses the face and fingerprint data entered in the personal profile, or if you have to provide the face and fingerprint data again to the work profile (Settings - Work profile). Anyway, this will save you a lot of effort in the long run.
    - There is a small possibility for an error situation where the phone requires an 8-digit PIN to be set. If this happens to you, contact IT Helpdesk.
    - If you want, you can set a separate PIN for the work profile (in a Samsung phone: Settings - Work profile)
- No apps can be installed outside Play Store

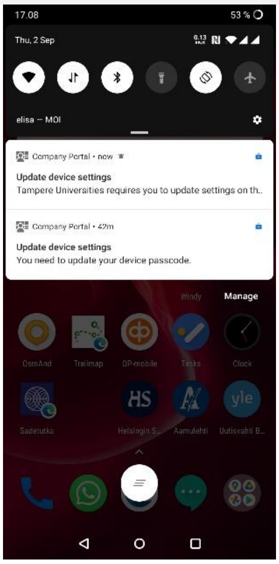
    - This is set automatically, and should not be a problem.
- Google Play Protect is enabled
    - This is set automatically, and should not be a problem.
- The version of the Android operating system must be 8.1 or higher (Settings – About phone - Software information)
    - If your phone does not fulfil this requirement, try to perform a software update in your phone (Settings - Software update - Download and install).
- The operating system of the phone must be original, that is, installed by the phone manufacturer. Thus, the phone cannot be rooted.
    - If your phone does not fulfil this requirement, you will have to install the original operating system in the phone. It that is not possible, the phone will have to renewed.
- The work profile must be successfully encrypted
    - This is set automatically, and should not be a problem.
    - However, phone specific issues may require extra effort as documented by Microsoft on the page https://docs.microsoft.com/en-us/mem/intune/user-help/encrypt-your-device-android. Please see below some instructions regarding Secure Start.

There are some issues listed by management app of Intune that cannot be corrected by tapping RESOLVE. For such issues, you need to find the correct setting in Settings yourself and go to fix it.

- In Samsung phones, the management app of Intune may claim “You must enable secure startup.” but tapping RESOLVE does not do anything. To correct this issue, follow these steps:
    - Launch the Settings app
    - Tap the picture of the looking glass and type “secure” in the search field
    - Tap “Secure Start” in the search results
    - Change that setting to “Require password when device turns on“ and tap OK. Then the phone requests the PIN as confirmation.
    - Turn your phone off and then on
    - Launch the management app of Intune, tap your phone name, tap “Check Device Settings”.

3.2. Notifications

If there is a need to change settings in the phone, management app of Intune will display several notifications about them soon after the deployment. All the settings will have to be set according to request. Below there are a few examples of the notifications and instructions how to proceed to settings.



Company Portal • now

Update device settings

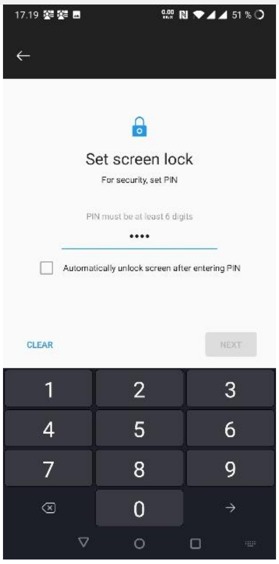
Tampere Universities requires you to update settings on th..

Company Portal • 42m

Update device settings

You need to update your device passcode.

Tap “Update device settings You need to update your device passcode”.



Set screen lock

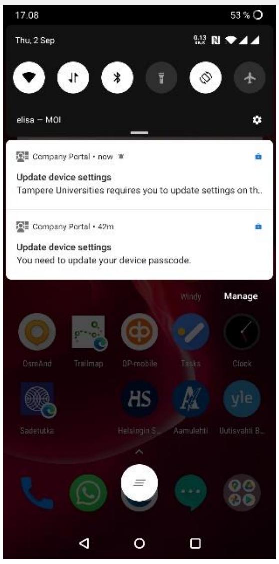
For security, set PIN

PIN must be at least 6 digits

••••

☐ Automatically unlock screen after entering PIN

Enter a PIN code that meets the requirements.



Company Portal • now

Update device settings

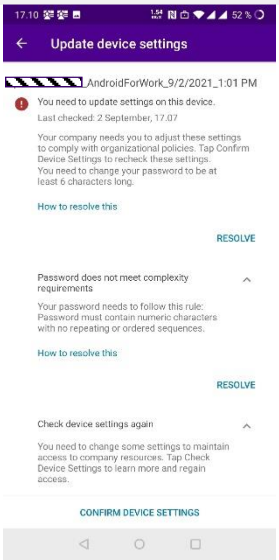
Tampere Universities requires you to update settings on th..

Company Portal • 42m

Update device settings

You need to update your device passcode.

If you tap instead the notification “Update device settings Tampere Universities requires you to update settings on th...”



Update device settings

[redacted]_AndroidForWork_9/2/2021_1:01 PM

You need to update settings on this device.

Last checked: 2 September, 17.07

Your company needs you to adjust these settings to comply with organizational policies. Tap Confirm Device Settings to recheck these settings. You need to change your password to be at least 6 characters long.

How to resolve this

RESOLVE

Password does not meet complexity requirements

Your password needs to follow this rule: Password must contain numeric characters with no repeating or ordered sequences.

How to resolve this

RESOLVE

Check device settings again

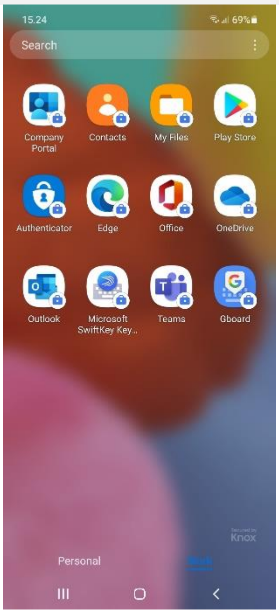
You need to change some settings to maintain access to company resources. Tap Check Device Settings to learn more and regain access.

CONFIRM DEVICE SETTINGS

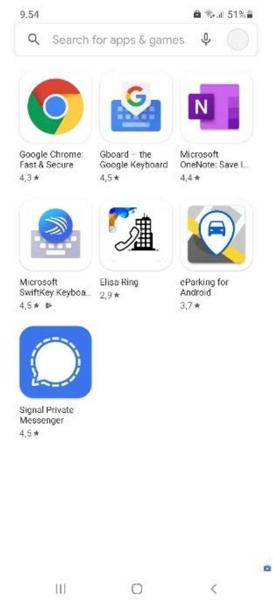
You will be provided with a list of required actions. Tap RESOLVE in order to set the PIN code.

4. Usage of mobile data

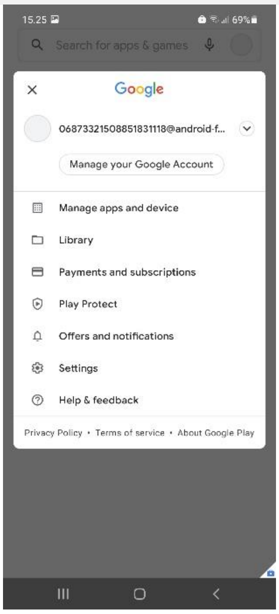
If you use Wi-Fi rarely or never and you use mobile data provided by your employer instead, apply the Play Store settings as instructed below to keep your work apps up to date outside Wi-Fi networks, i.e., with mobile data.



Launch Play Store in your work profile.



Tap the circle in the top right-hand corner.



Google

06873321508851831118@android-f...

Manage your Google Account

Manage apps and device

Library

Payments and subscriptions

Play Protect

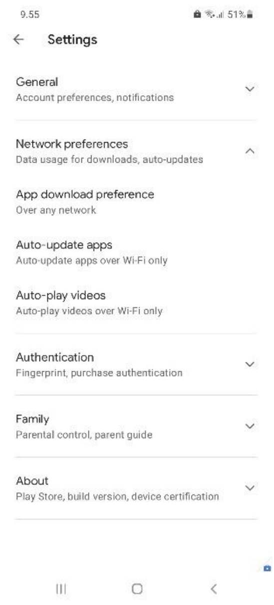
Offers and notifications

Settings

Help & feedback

Privacy Policy • Terms of service • About Google Play

Tap Settings.



Settings

General
Account preferences, notifications

Network preferences
Data usage for downloads, auto-updates

App download preference
Over any network

Auto-update apps
Auto-update apps over Wi-Fi only

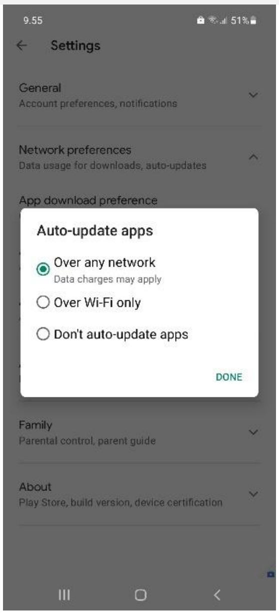
Auto-play videos
Auto-play videos over Wi-Fi only

Authentication
Fingerprint, purchase authentication

Family
Parental control, parent guide

About
Play Store, build version, device certification

Tap Network preferences and then Auto-update apps.



9.55
51%
Settings
General
Account preferences, notifications
Network preferences
Data usage for downloads, auto-updates
App download preference
Family
Parental control, parent guide
About
Play Store, build version, device certification
DONE

Auto-update apps

● Over any network
Data charges may apply

○ Over Wi-Fi only

○ Don't auto-update apps

Select Over any network and tap DONE.