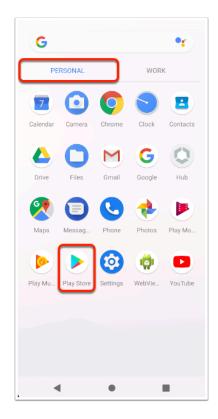
# Securing applications in the Android work profile

1 In this lab we are going to configure work profile settings for and android device, so we can secure the behaviour of corporate aplications an the interaction between these and personal apps.

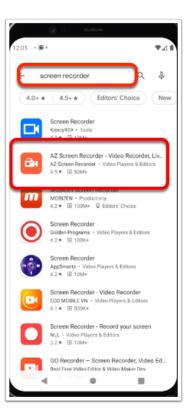
You'll be using the android device you already enrolled and used in previous labs.

# Part 1: Downloading necessary applications

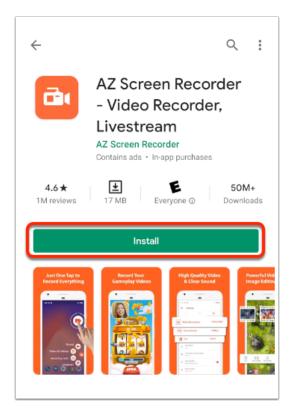
On this part we are going to download applications that will allow us to test the interaction between the personal and work profiles.



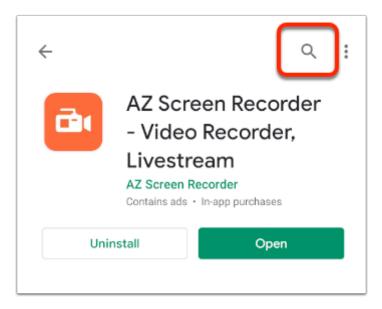
- 1. On your Android device
  - Select the **PERSONAL** profile
  - Select Play Store



- 2. To download a screen recorder app:
  - In the Search bar type screen recorder
  - tap on AZ Screen Recorder



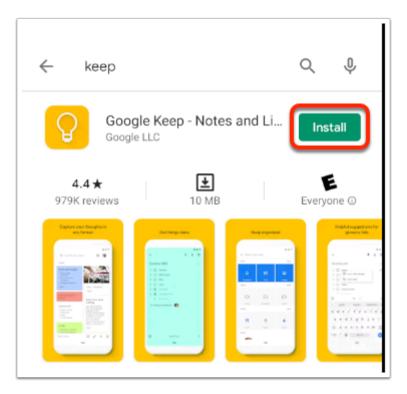
3. In the AZ Screen Recorder application window, Select Install



4. In your **Playstore** App, at the top of the application window, select the **Search** icon

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۹	keepass	Г
۹	keep screen on	⊼
۹	keepsafe	Г
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>	h	
v `p	$v^2 e^3 r^4 t^5 y^6 u^7 i^8 c^7$	° p°
а	sdfghjk 2	T
	zxcvbn é	

5. In the Search bar, type **keep** and select the **Blue Search** Icon in the bottom, right-corner



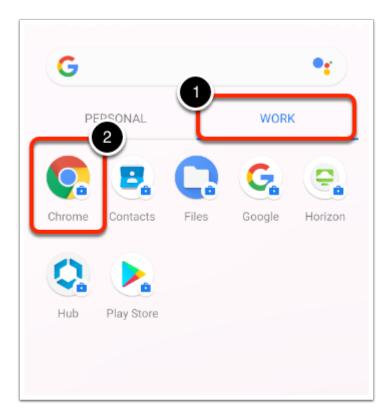
6. Next to **Google Keep**, select Install

← keep		(	Q. ∳
Goo Instal	gle Keep - Not	es and 💙	Open
<b>4.4★</b> 979K reviews	Every	e one ①	500M+ Downloads
<section-header></section-header>	CENTROPORTION CENTRO	An	
Google Keep – Not	es, Lists, and Remi	nders	

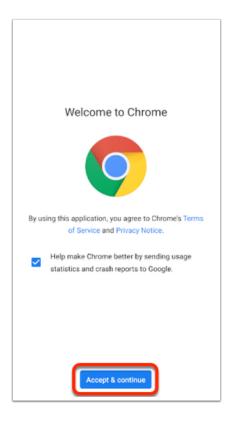
7. Once the download completes move on to the next part.

# Part 2: Testing initial copy and paste behaviour

In this part we are testing the default copy and paste behaviour between apps in the personal and work profiles, without any policies applied to them.



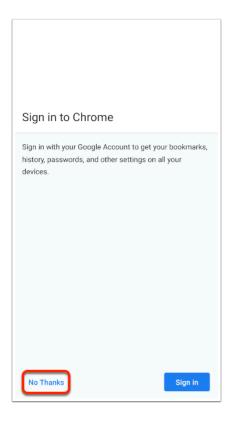
- 1. On your Android device
  - Revert back to your devices Application Menu.
  - Select your WORK Profile
  - In your **WORK** Profile, open the **Chrome** browser



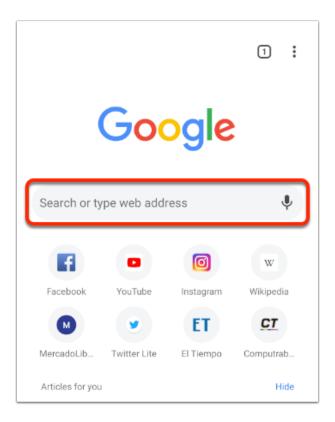
2. If prompted, in the **Welcome to Chrome** screen Select Accept & continue



- 3. If prompted, to Turn on Sync, select No thanks
  - If prompted, in the Lite mode window, Select Next



4. If prompted, in the **Sign in to Chrome** window, select **No Thanks** 

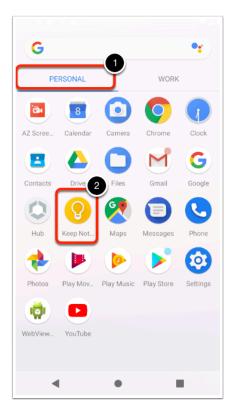


- 5. In the Chrome Browser,
  - In the **Search** area,
    - Enter a website , like https://en.m.wikipedia.org/



#### 6. In your Wikipedia page

- **Copy** a section of text , If you are using the emulator, double click on the text and move the selection indicators to include more.
- When you are complete, **Close** the Chrome window (Use the "Menu"button and swipe up on your chrome application)



- 7. Open your **Application** Menu,
  - Select the **Personal** apps
  - Select the **Google Keep** app.

12:01 • 🗃 •	
E Search your notes	
Q Notes you add appear	there
v 🖌 🌵 🖬	
<b>↓</b> •	

8. On the **Google Keep** app select the **Plus Sign** to add a new note.

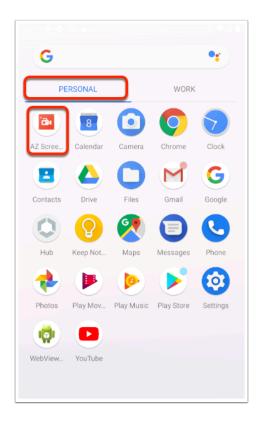


9. Tap and hold *within* the main text field and Select **Paste** 

4:58 🌣 🗘 📾	♥⊿∎
← ₽	÷
Title	
ary van Kleeck (1883–1972) was an American <u>social scientist</u> and <u>social femin</u> advocated for <u>scientific management</u> and <u>economy</u> .	
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	:
< Q 📴 GIF 🔄	••• •
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Your paste operation should have been successful, that means theres no limitation on copy and paste operations between personal and work profiles with the current settings in Workspace ONE UEM. You can now close this window.

## Part 3: Testing initial screen recording behaviour

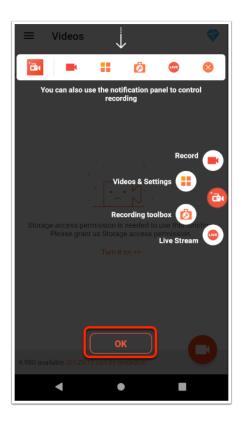


- 1. On your Android device
  - In the Application menu , select your PERSONAL profile
  - Open AZ Screen Recorder

Please turn on the Draw over other apps authorization to ensure the proper use of AZ Screen Recorder.
← Draw over other apps
AZ Screen Recorder  Permit drawing over other apps This permission allows an app to displement of other apps you're using and may interfere with your use of the interface in other applications, or change what you think you are seeing in other applications.
ALLOW
USE NOTIFICATION TO RECORD

- 2. On the Draw over other apps prompt select **ALLOW**, this will Permit drawing over other apps
  - Display over other apps 🛛 🔒 🚦 ← Bore Work Android Auto • AZ Screen Re 1 Digital Wellbeing ٠ Duo 0 Google G Google Play services Hub 0 •⊿∎ 12:01 · 🗃 • splay over other apps Q de. AZ Screen Recorder 2 5.8.4 Allow display over other apps app to display on top of othe ing. It may interfere with your os or change the way they see
- 3. In the **application permission** window:
  - Tap Az screen Recorder
  - Move the slider next to Allow display over other apps from NO to YES (blue)

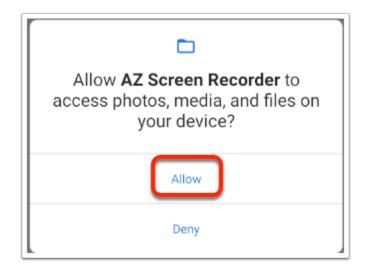
• Tap **back** twice to return to the application



4. Select OK to acknowledge the information window

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Storage access pe Please grar	rmission is needed to t us Storage access p Turn it on >>	ermission
3.30G available	(59:0	02 can be recorded)

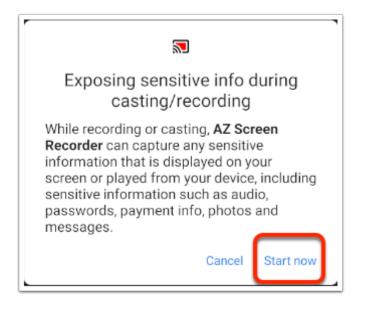
### 5. Select the camera icon to start recording



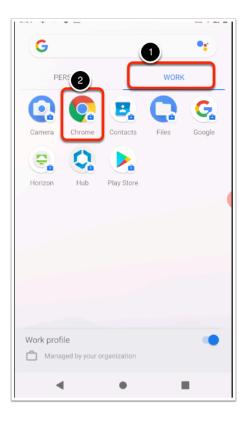
6. In the Allow AZ Screen Recorder window select Allow to grant device Access

G
Personal Work
Image: Stress         Calendar         Camera         Chrome         Circle
Ŷ
Allow <b>AZ Screen Recorder</b> to record audio?
While using the app
Only this time
Deny
Messages Phone Photos Play Store Settings
WebView YouTube YT Music

7. In the **Allow AZ Screen Recorder to record audio** window select **While using the app** to grant audio recording permission



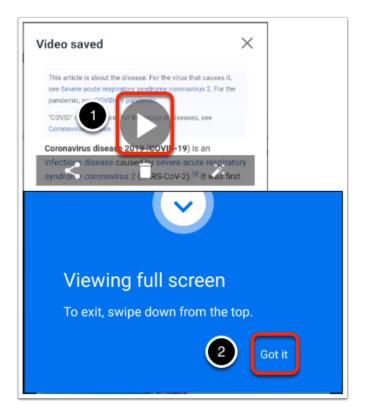
8. In the **Exposing sensitive info during casting/recording** window select **Start now** 



- 9. On your Android device
  - Switch to the Application Menu
  - Select your WORK profile
  - Open Chrome



- 10. In the Chrome browser
  - Navigate to a **different web page** so we can try to capture a couple of seconds of video
  - Open the AZ Recorder menu by pressing the round **red button** stick half-way out on the right side
  - Select the **stop button**



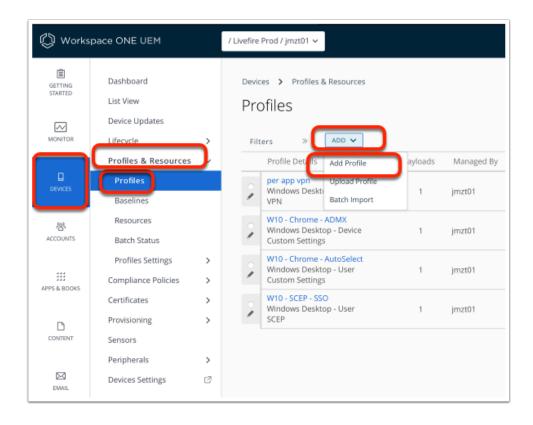
- 11. In the Video saved window
  - Select Play the resulting video
  - Tap **Got it** to continue watching the video in full screen
  - It should have captured what you did in your **WORK** profile Chrome application which means currently there is no limitation in the screen recording functionality and the capture of your corporate apps.

# Part 4: Creating a profile to protect the work apps

 We are now going to configure a device profile to control de interaction between apps in the work and personal profiles. This configuration is done on the Workspace One UEM console and you can do it from the browser on your own computer.

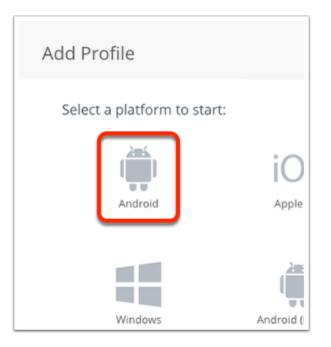
Workspace ONE <sup>®</sup> UEM
Username Grantfienderman@gmail.com
Remember
[
Log In
Log in as a different user Trouble logging in
Trouble togging in

- 1. From your browser,
  - Type https://cn-livefire.awmdm.com
  - Log in with the custom credentials you received in your email.



2. In the Workspace ONE UEM Console follow the follow steps to create a device profile:
On the left side Menu, select **Devices**

- Expand Profiles & Resources
- Select Profiles
- Under profiles select ADD
- In ADD dropdown select Add Profile



- 3. In the Add Profile window
  - Select Android

🖨 Add a New Android	Profile	
Find Payload	General	
Passcode	Name *	Android Restrictions 2
Chrome Browser Settings	Version	1
Restrictions	Description	
Exchange ActiveSync	Description	
Public App Auto Update	OEM Settings	ENABLE DISABLE
Credentials	Profile Scope	Production
Custom Messages		1 TOMPATION
Application Control	Assignment Type	Auto ~
Proxy Settings	Allow Removal	Always
System Updates	Allow Nethoral	
Wi-Fi	Managed By	xeniaforman 3
VPN		
Permissions	Smart Groups	2 All Devices (xeniaforman)
Single Ann Mode		Start typing to add a group

- 4. In the Add a New Android Profile window, General options
  - In the Name field, type Android Restrictions
  - In the "Managed By" field, ensure your Organizational Group is selected.

- In the Smart Groups field, select All Devices
- Scroll down to the end of the page

Find Payload			
General	OEM Settings	ENABLE DISABLE	
Passcode			
	Profile Scope	Production	
Chrome Browser Settings	Assignment Type	Auto	
Restrictions			
Exchange ActiveSync	Allow Removal	Always +	
Public App Auto Update	Managed By	Jesus_ZeroTrust	
Credentials			
Custom Messages	Smart Groups	All Devices (Jesus_ZeroTrust)	
Application Control		Start typing to add a group 🔍	
Proxy Settings	Exclusions	NO YES	
System Updates			
Wi-Fi		VIEW DEVICE ASSIGNMENT	
VPN			
Permissions	Additional Assignmen Criteria	t	
Single App Mode			
Launcher		Enable Scheduling and install only during selected time periods	
Enterprise Factory Reset Protection			
Custom Cottings			

## 5. Select VIEW DEVICE ASSIGNMENT

				Assignment Status All	* Filter Grid	¢
ssignment Status	Friendly Name	User	Platform/OS/Model	Phone Number	Organization Group	
S Added	Mark Android Android 12.0.0 RIAL	Mark	Android / Android 12.0.0 / Android	+15551234567	grantZTRNEL	
Added	Mark Android Android 12.0.0 RIAL	Mark	Android / Android 12.0.0 / Android	+15551234567	grantZTRNEL	
ems 1-2 of 2.						Page Size:

## 6. In the **VIEW DEVICE ASSIGNMENT** window

• Check the device list, and verify you enrolled android device is there

Select CANCEL

💭 Add a New Android Profile	
Find Payload	
General	
Passcode 1	
Chrome Browser Settings	
Restrictions	Passcode
Exchange ActiveSync	
Public App Auto Update	
Credentials	

- 7. In the Add a New Android Profile window
  - In the left pane select Passcode
  - Select **CONFIGURE** in the main pane.

💮 Android Restrictions		
Find Payload	Passcode	
General	Work Passcode	
Passcode		ork apps so employees don't have to enter complex passwords each time they unlock their dev
Chrome Browser Settings	Enable Work Passcode Policy	
Restrictions		
Exchange ActiveSync	Minimum Passcode Length *	6 v
Public App Auto Update	Passcode Content *	Any v ()
Credentials	Maximum Number of Failed	· · (i)
Custom Messages	Attempts	
Application Control	Maximum Passcode Age (days)	•
Proxy Settings	Passcode Change Alert	No Alert v
System Updates	Passcoue change Alerc	No Alert
Wi-Fi	Passcode History	•
VPN	Work Profile Lock Timeout	: (1)
Permissions	Range (in Minutes)	
Single App Mode	Passcode Required Range (in Minutes)	۵ ()
Workspace ONE Launcher	Allow One Lock	

- 8. On the **Passcode** settings:
  - Check the box next to Enable Work Passcode policy
  - Change the Minimum Passcode Length to 6

- Passcode Content dropdown menu select Any
- Uncheck the box next to Allow One Lock.
  - This will force the user to configure a different passcode for the work profile.

android restrictions Find Payload	
General Passcode	
Chrome Browser Settings Restrictions	Restrictions
Exchange ActiveSync Public App Auto Update	CONFIGURE 2
Credentials Custom Messages Application Control	
Proxy Settings	

- 9. In the **Add a New Android Profile** window:
- In the left hand menu, select **Restrictions**
- Select **CONFIGURE**
- Please take a moment to look at the available options while going through the steps in this guide.

Find Payload	Restrictions		
General Passcode Chrome Browser Settings	apply policies across the entire Corporate Owned Personally Er	to manage policies across work-only apps device. Configuration of both Work Profile abled devices.	
Restrictions	Device Functionality		
Exchange ActiveSync		Work Managed Device	Work Profile
Public App Auto Update	Allow Factory Reset		
Credentials	Allow screen capture		
Custom Messages	Allow adding Google accounts	0	
Application Control Proxy Settings	Allow removing the Android W account	fork 🔽	

#### 10. Under **Device functionality**,

- Uncheck the boxes next to Allow screen capture
  - Under both Work Managed Device and Work Profile

Custom Messages	Work and Personal			
Application Control		Work Managed Device	Work Profile	
Proxy Settings		work managed bevice		
System Updates	Allow Pasting clipboard between work and personal apps			
WI-FI				
VPN	Allow personal apps to share data with work apps		•	Android 9.0+
Permissions	Allow work apps to access documents from personal apps		2	
Single App Mode				
Workspace ONE Launcher	Allow personal apps to access documents from work apps			
Enterprise Factory Reset Protection			-	Θ
			SAVE AN	D PUBLISH CINCEL

- 11. Scroll down to the Work and Personal section:
  - Verify the box next to Allow pasting clipboard between work and personal apps is unchecked
  - Select SAVE AND PUBLISH

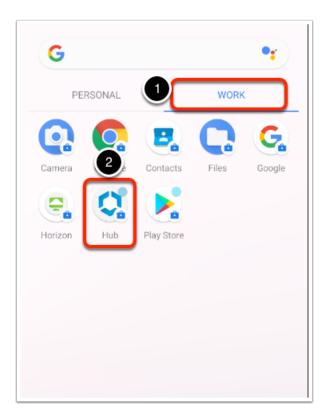
				Assignment Status All	* Filter Gr	id 🖒
Assignment Status	Friendly Name	User	Platform/OS/Model	Phone Number	Organization Group	
Added	Mark Android Android 12.0.0 RIAL	Mark	Android / Android 12.0.0 / Android	+15551234567	grantZTRNEL	
Added	Mark Android Android 12.0.0 RIAL	Mark	Android / Android 12.0.0 / Android	-15551234567	grantZTRNEL	

#### 12. In the **view assignment** window

- Select PUBLISH.
  - You can now close this browser window.
  - It can take up to 5 minutes for the policies to get to the device, so it's a good time for a brake.

## Part 5: Testing the passcode policy

The following steps will make sure your device has synced and your profile has been downloaded. If you get a prompt saying **"Your current passcode does not satisfy the requirement set by the organization"** move on to step 3

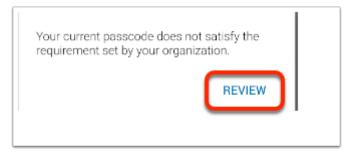


- 1. On your android device from your Application menu:
  - Select the WORK profile
  - Open the Intelligent hub

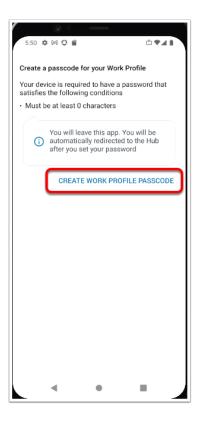


2. On your Android Device's intelligent hub

- Tap the "MD" icon on the top right (initials for Mark Debio)
- Under Accounts, select This Device
- In This Device, select **Sync device** 
  - This will ensure that your profile is synced and will trigger the policies in the next step



- 3. When prompted
  - In the "Your current passcode does not satisfy the requirement set by your organization" message
    - Select REVIEW



- 4. In the Create a passcode for your Work Profile window
  - Select CREATE WORK PROFILE PASSCODE

5.51 🌣 M O 🖬 🛛 🗣 🛦 🗎
÷
Choose a lock for
work apps
With Pixel Imprint, you can unlock your phone using your fingerprint. For security, this option requires a backup screen lock.
Pixel Imprint + Pattern
III Pixel Imprint + PIN
Pixel Imprint + Password
Continue without Pixel Imprint
0
Hub recommends a new screen lock
< • •

- 5. On the **Choose screen lock** window,
  - Select Continue without Pixel imprint

÷	Choose screen lock	۹
	Pattern	
0	PIN	
	Password	
<u>(</u> )	Hub recommends a new screen lock	

- 6. In the **Choose screen lock** window
  - Select PIN

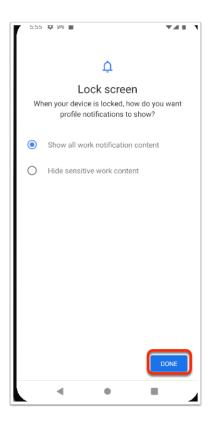
5.53 ¢ M 🗘 🖬		***			
<u>8</u>					
Set a work PIN For added security, set a PIN to unlock the device					
	•••••				
CLEAR		NEXT			
1	<b>2</b> ABC	3 DEF			
<b>4</b> GHI	5 JKL	6 MNO			
7 PQRS	<b>8</b> TUV	9 wxyz			
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- 7. In the Set a work PIN window
  - Type **111111** for the device PIN
  - Select NEXT

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	Re-ente	🗗 er your wo	ork PIN
_	_ (		)
CLEAR	2		CONFIRM
	1	<b>2</b> ABC	3 DEF
	4 сні	5 JKL	6 MNO
	7 PORS	<b>8</b> TUV	9 wxyz
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		•	

- 8. On the **Re-enter** screen
  - Type **111111** for the device PIN

Select CONFIRM



- 9. On the **Lock screen** window
  - Select DONE

5:55	¢ M 🕯	₿₹◢▮
÷	This Device	
	Google sdk_gphone64_x86_64 • Enrolled • Compliant • Connectivity Normal Work Profile Last sees: 11/23/21 5:49 PM	
Enrolin	nent	
Compli	iance	
Networ	rk	
Profiles	S	
Messa	ges	
Prefere	ences	
Sync d	levice	
	sends latest device information and pdates from IT administrator	d receives
	•	•

### 10. In the **This Device** window

Observe that your device shows up as Enrolled and Compliant

6:29 🛍 •		₹⊿∎
G	1	•
PERSONAL	WORK	
App Cata Camera	Contacts	Files
Google Horizon	Hub Play Store	
Work profile	ganization	•
4	• •	

- 11. On your Android Device
  - Switch to the Applications menu
  - Select your **WORK** profile
  - Open Chrome
    - Note. If you have difficulty getting this to work.
      - On your laptop / Desktop.
        - Go to Android Studio.
        - Select your device and Cold Boot the device
      - The go back to your WORK profile
      - Open Chrome



- 12. On the Re-enter your PIN
  - Enter 111111
  - Select Enter

# Part 6: Testing application behaviour

In this part we will check the behaviour of the applications after the policy is applied.



- 1. On the corporate Chrome browser
  - Select and Copy text from any website you left open on the previous step
  - After copying, **close** the browser

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AZ Scree	Calendar	Camera	Chrome	Clock
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Contacts	Drive	Duo	2 <sup>les</sup>	Gmail
G	٢			
Google	Hub	Keep Not	Maps	Messages
	٠			
Phone	Photos	Play Mov	Play Music	Play Store
0				
Settings	YouTube			
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stul				

- 2. From your Application menu,
  - Select your **PERSONAL** profile

Select Google Keep

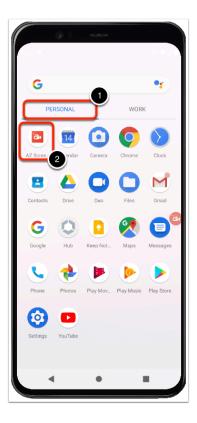


3. In Google Keep, Tap on the **Plus Sign** to create a new document

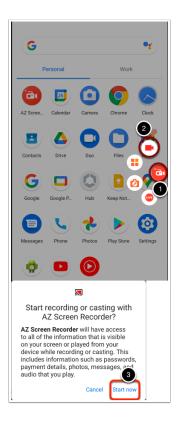
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<ul> <li>✓ ▷ □ □ F Ê ♀ … ↓</li> <li>Q<sup>1</sup> W<sup>2</sup> E<sup>3</sup> R<sup>4</sup> T<sup>5</sup> Y<sup>6</sup> U<sup>7</sup> I<sup>8</sup> O<sup>9</sup> P<sup>6</sup></li> <li>A S D F G H J K L</li> <li>✓ Z X C V B N M </li> </ul>	Title								
<ul> <li>✓ ▷ □ □ F Ê ♀ … ↓</li> <li>Q<sup>1</sup> W<sup>2</sup> E<sup>3</sup> R<sup>4</sup> T<sup>5</sup> Y<sup>6</sup> U<sup>7</sup> I<sup>8</sup> O<sup>9</sup> P<sup>6</sup></li> <li>A S D F G H J K L</li> <li>✓ Z X C V B N M </li> </ul>									
<ul> <li>✓ ▷ □ □ F Ê ♀ … ↓</li> <li>Q<sup>1</sup> W<sup>2</sup> E<sup>3</sup> R<sup>4</sup> T<sup>5</sup> Y<sup>6</sup> U<sup>7</sup> I<sup>8</sup> O<sup>9</sup> P<sup>6</sup></li> <li>A S D F G H J K L</li> <li>✓ Z X C V B N M </li> </ul>									
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	?123	,	☺						→

- 4. In Google Keep
  - Tap and hold on the text field to *attempt* to **Paste** from the context menu.

• The operation should fail due to the policy applied earlier

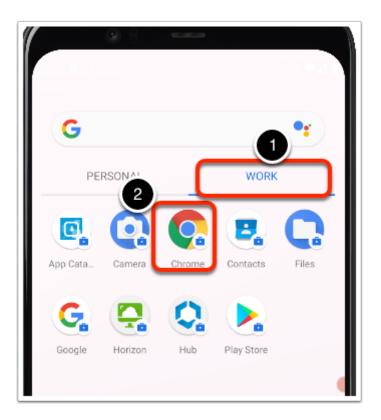


5. In your application menu, In the PERSONAL profile, Open the AZ Screen recorder

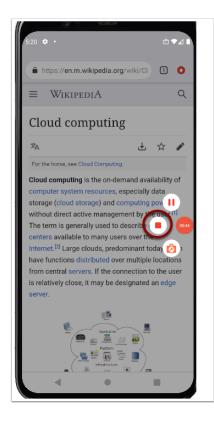


- 6. To start a recording:
  - Select the AZ icon sticking out of the right side
  - Select the Camera icon to start recording

• When prompted tap **Start now** 

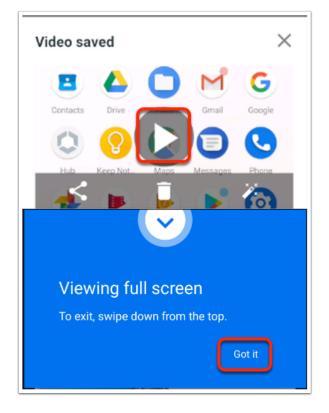


- 7. On your Applications menu,
  - Select the **WORK** profile
  - Open Chrome



8. In your Chrome browser

- Load a page, to test to see if the Screen Recorder controls continue to record
- stop the recording by taping the **Stop** icon on the AZ Recorder app menu



- 9. On your Android Device
  - Play the recording, and if prompted tap **Got it** in the "**Viewing full Screen**" prompt
  - It should show a black screen when you open Chrome, this means the policy is blocking the recording of the screen.
  - 1 These results mean we succesfully controlled interaction between personal and work profiles, in a real scenario this would help organizations prevent data leaks from the use of personal devices.