Android Phone Setup

ⓘ **Trying to install CommCare for Android?**

This page provides information on how to set up Android devices in preparation for using them with CommCare. If you want instructions on how to install and set up CommCare for Android please go to Install CommCare for Android Smartphones to get started.

ⓘ **Procure a Mobile Device Management Tool**

We strongly recommend you procure a mobile device management tool to manage your devices, the data used on the devices, the apps used, and the time spent on each app. Dimagi has an MDM solution you can consider called Focus that is tailor-made for international development projects with low-or-no connectivity. We have seen large i-NGO's use MDM solutions to secure their patient/user data, save money with restricted data usage and increase their frontline productivity.

- Device Specific Guides
- Getting Set Up
- Checklist
    - Date and Time Setup
    - Internet Connectivity
    - Setup Google Account
    - Install Applications from Play Store
    - User Friendly Settings
    - GPS And Camera Settings
    - Setup CommCare Application
    - First Time User Login
    - Setup Home Screen
- Additional Useful Apps
- Offline Android Apps Install

Device Specific Guides

These are some guides for specific devices:

1. Lava Iris 349
2. Samsung Galaxy Tab 2
3. Rooting Google Nexus 7 for SMS

Getting Set Up

1. Charge All Phones/Tablets
2. Label Phones/Tablets and Assign to Users
3. Install SIM Cards and SD Cards (if needed)
4. Verify SIM Card are activated and have balance for internet

Checklist

- Date and Time Setup Correctly
- Internet Connection (SIM Card and/or WiFi)
- Google Account on Phone
- Required Applications Installed from Market
- User Friendly Settings (Keyboard, Display Brightness, Screen Rotation, etc.)
- [Optional] GPS and Camera Settings
- CommCare Application Setup
- First Time User Login
- Home Screen Setup

Date and Time Setup

If your network operator does not automatically set the correct time and time zone, set them manually. Usually Android phones update their time as soon as they get a data connection.

1. Go to Applications then Settings
2. Choose Date and Time
3. Uncheck Automatic Date and Time
4. Uncheck Automatic Time Zone (if available)
5. Set the correct date and time
6. Set the correct time zone

Internet Connectivity

Cellphone Internet

1. *Automatic Configuration Settings*
   a. In some cases will start to receive configuration settings from the network.
   b. Pull down from top of screen to view notifications
   c. Select configuration settings and install all configuration settings received
   d. Open Mobile Network Page (Settings -> Wireless and Networks -> Mobile Networks OR Settings -> More.. -> Mobile networks)
   e. Choose Access Point Names
   f. Make sure that APN for your cellphone provider is listed. Press the circle until highlighted.
2. *Manual Configuration Settings*
   a. If automatic configuration settings are not received from network
   b. Open Mobile Network Page (Settings -> Wireless and Networks -> Mobile Networks OR Settings -> More.. -> Mobile networks)
   c. Choose Access Point Names
   d. Select the "Menu" button (depends on phone. Many will have a button to the left or right of the home button).
   e. Select New APN
   f. Enter the Name as Cellphone Internet:
   g. Enter APN settings for your network provider. A list of common networks and APNs is listed at the bottom of this page: GPRS Setup
   h. Press the back button
   i. Press the grey circle next to the Cellphone Internet to select it. Make sure that the circle is highlighted
3. Verify Network Connectivity
   a. Ensure that there is an G, E or H listed in the top-left corner of the phone, next to the phone bars indicating reception
   b. Use the browser to navigate to www.google.com

Setup WiFi (if needed)

1. Go to Settings -> Wireless and Network Settings -> Wi-Fi Settings OR Settings -> WiFi
2. Turn On WiFi
3. Select the desired Wi-Fi network and enter the Wi-Fi password
4. There should be a WiFi icon next to the phone bars
5. Use the browser to navigate to www.google.com to test network

Setup Google Account

You need a Google account to download applications from the Google Store for the phones. You can either create an individual account for each phone or create a single account for the project. To setup an account go to https://accounts.google.com/SignUp from your computer.

Individual accounts: You can create individual accounts for each phone in a sequential fashion (projectname0001@gmail.com, projectname0002@gmail.com, etc.).

   ○ **Pro(s):** You can use the Android Device Manager to track the devices and lock/wipe them if they get lost. The individual email addresses can also be added to the respective mobile users' profiles on HQ so it's easier to track. The best tool for tracking a phone's location is Google Maps' Location History.
   ○ **Risk(s):** In at least one case, a few days after starting the system, Gmail shut down these accounts because it suspected they weren't people's personal accounts, which violated its terms of use.

Single account for project: You can create a single project account such as projectname@gmail.com.

   ○ **Pro(s):** One fixed account to manage with one password can standardize setup of phones for new users without having to create additional accounts.
   ○ **Risk(s):** Having a single account for all phones can have a slew of unintended consequences - contacts, photos and settings will all get backed up to the same Google account. There are some pretty significant privacy concerns and the likelihood for serious HR problems. To minimize these potential issues, please make sure to follow the "uncheck the auto-sync option" in the steps below.

Once you have the account(s) per your requirements, follow the steps below.

1. Go the Add Account page (Settings -> Accounts and sync -> Add Account OR Settings -> Accounts Section -> Add Account)
2. Choose Google account and select that you have an existing account
3. Enter account information
4. If prompted, uncheck "Keep this device backed up with my Google Account"
5. if prompted, don't choose to setup the phone for Google +
6. If prompted, uncheck all the Sync options
7. *Optional:* to reduce bandwidth usage and stop multiple devices with the same account from sharing contacts/photos/other data between each other, choose the Account from Settings -> Accounts and Sync and uncheck all the sync options

Install Applications from Play Store

1. Open the Play Store from Applications. On older devices, it may be called Marketplace
2. Search for CommCare. Choose the CommCare and Install It. Make sure Auto-Update is checked.
3. Search for Amaze File Explorer and install it. This is useful if you are installing Multimedia on the phone.
4. *Optional:* Search for Barcode scanner and install one such as "Barcode Scanner" by ZXing Team. Note that Barcode / QR code scanning is a native feature of the Camera app on more recent versions of Android. You can easily check that by trying to scan a code using the Camera app.

5. *Optional*: If typing in a different language is required, you may want to install Google Input for your language. For example, Google Hindi Input is available.

User Friendly Settings

1. Remove all extra home screens: pinch screen and tap and hold the others to remove them
2. Remove all extra shortcuts except CommCare, Settings and Play Store - add the missing ones
3. Set wallpaper and lockscreen to a simple theme: tap and hold background
4. Update phone firmware: Settings -> About Phone -> Update Software -> click through confirmations
5. Update existing apps: Play Store -> Top Menu -> All Apps -> Update all
6. Create CommCare shortcut on lockscreen for easy access
7. Increase the Display Time Out
    a. Go to Settings -> Display
    b. Set screen timeout or sleep to 2 minutes
8. Turn Off Screen Auto-rotate
    a. Go to Settings -> Display
    b. Uncheck auto-rotate screen
9. Set the Display Brightness
    a. Go to Settings -> Display
    b. Set the Brightness to Auto if available (recommended for battery savings)
    c. If Auto is not available, set Brightness to medium level or high level depending on whether phone will be used outdoors
10. Disable notifications for extraneous apps:
    a. On older devices, go to Settings > Apps. Select the relevant apps, and for each one, disable the "Show notifications".
    b. On newer devices, go to Settings > Sounds and notifications. Select the relevant apps and enable "Block notifications".
11. *Optional:* Set Phone to Local Language.
    a. Go to Settings -> Locale and Text or Settings -> Language Input
    b. Change the Language to the local language
12. *Optional*: Setup the keyboard
    a. Go to Settings -> Locale and Text or Settings -> Language Input
    b. Check Google Input for your language if installed
    c. Change the Default Keyboard. On some devices choose Select Input Method. On others choose Default
    d. Select the default keyboard
13. *Optional:* Adjust text size
    a. Go to Settings -> Accessibility -> Font Size (or Settings -> Display -> Font Size
    b. Try different sizes and confirm with user (if present) when text is big enough to be read

GPS And Camera Settings

If you're using GPS or capturing images in CommCare there are some additional settings required.

1. Setup GPS
    a. Go to Settings -> Location and Security OR Settings -> Location Access
    b. Make sure Access to my Location is On (if setting is available)
    c. Check GPS satellites
    d. Check WiFi & mobile network location OR Use Wireless networks
2. Change Camera Settings to Smaller Images
    a. Go to Applications -> Camera
    b. Open Camera Settings
    c. Change Picture Size OR Resolution to the smallest size available

Setup CommCare Application

For more detailed instructions see Install CommCare for Android Smartphones

1. **Note**: If you have multimedia, download your multimedia zip file from CommCareHQ, plug in your phone to a computer and copy the zip file to the phone.
2. Open CommCare (Applications -> CommCare)
3. Choose the Enter URL option (recommended) or use the barcode scanner to scan the application QR code on CommCareHQ
4. Enter the App Code for your application (or scan the QR code)
5. Choose Begin Install
6. Phone will connect to the internet and download your application
7. If you have multimedia, you will prompted about missing multimedia. Press the Settings -> Install Multimedia
8. Choose the folder button and find the multimedia zip file you copied to the phone
9. Multimedia should validate correctly

First Time User Login

1. Open CommCare
2. With internet connectivity, log in as the mobile worker for that phone. This will ensure they can login without internet or network in the future.
3. If the application is using lookup tables, be sure to also press "Sync", the blue button on the app's home screen. This ensures that the lookup tables are downloaded to the phone for this specific user.

Setup Home Screen

1. Go to Applications
2. Press and Hold CommCare to create a shortcut on the homescreen

3. If phone has multiple home screens (swiping left and right on homescreen shows additional screens), repeat to create shortcut on every home screen.
    a. If it's not possible to remove the home screens (e.g. Android 4.2.2), install **Nova Launcher** and set it as primary launcher.
4. **Nova Launcher** is really useful for setting up multiple phones efficiently. You'll only have to setup one phone with your preferred settings, then save those settings within Nova Launcher, and then upload that file to other phones (remember to download Nova Launcher on every phone first). An example for setup instructions here.

Additional Useful Apps

There are many free Android applications that can be useful to the phone's users. Here are some favorites:

- **FocusMDM** - Focus is our in-house mobile device management tool which can be used to block apps, track time used on each app, remotely install and update apps, and lots more. Contact saggarwal@dimagi.com for more info, or see the Focus Confluence Page
- **App Lock** - app locks can be a good way to prevent use of specific applications. App Lock by Dmobile works particularly well (https://play.google.com/store/apps/details?id=com.domobile.applock&hl=en). Note that the app called "Smart App Protector" prompts the user to enter a passcode even when a background process is launched, which can be distracting.
- **Nova Launcher** - allows removing extra home screens if default Android launcher doesn't. https://play.google.com/store/apps/details?id=com.teslacoilsw.launcher&hl=en
- **Kid's Shell - safe launcher** - lock down the phone to only selected apps with simple home screen. https://play.google.com/store/apps/details?id=com.whisperarts.kidsshell
- **MobiLock Kiosk Lockdown** - put phone into kiosk mode, with limited access. https://play.google.com/store/apps/details?id=com.promobitech.mobilock&hl=en
- **SureLock Kiosk Lockdown** - same as MobiLock, untested. https://play.google.com/store/apps/details?id=com.gears42.surelock

	Select apps displayed on the Home Screen	Set Wallpaper	Hide home buttons	Block Marketplace	Start on device reboot	Apps schedule and timer	No Option Menu	Top Drawer Disabled	Unlock the app with long touch	Remotely Update Apps	Free?	If not free, how much?
Smart Lock	No	No	No	Yes	Yes	No	No	No	No	No	Yes	
Kids Place – Parental Control	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	
Kids Zone (HI Parental control)	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	
MM Guardian											No	1.99 USD / month
Famigo	Yes	Yes	No	Yes	Yes	Yes	No	No	No	No	No	0.99 USD
Funamo											No	19.99 USD
Screen Time											Free mium	
AppLock	No	No	No	Yes	Yes	No	No	No	No	No	Free mium	

Offline Android Apps Install

To accelerate the installation process and reduce the amount of bandwidth needed, android apps can be installed from the phone's file system rather than from the Play Store.

1. Get the APKs for the apps you want to install. Some options:
    a. http://downloader-apk.com/
    b. http://apps.evozi.com/
2. Connect phone to computer via USB and copy .apk files to the phone. For phones running Android 4.x, you may need to pull down the notifications to put the phone into "mass storage mode" before it shows up as an external hard drive. Also copy the .ccz file downloaded from the Deploy area of the app builder if you're doing an offline install of your CommCare app.
3. Allow installing apps from untrusted sources. On the phone, naviguate to Settings -> Security -> Untrusted Sources and enable.
4. Open the .apk files from the phone's file manager. This will install the app. If the phone doesn't have a file manager installed by default, you may need to install Amaze File Explorer from the Google Play Store first.