Chapter 10: Android Ap Installation

This sub-section details installation of Android Applications onto Smartphones.

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10.1 CLIENT APPLICATIONS

There are several applications that can be used for provisioning, configuration, and communication for mesh networks. There are:

- Two Windows applications (Client Control Mesh and Mesh Client) written by Cypress
- One iOS application written by Cypress
- One Android application written by Cypress
- 3rd party mesh applications such as the LedVance Sylvania Smart Home Android app

10.1-1 MESH LIGHTING APP (IOS)

Cypress' BLE Mesh App for iPhones is available on the Play Store – search for "Cypress Mesh App"

10.1-2 MESH LIGHTING APP (ANDROID)

The Cypress Android app is provided with the BTSDK.

Source code is available in the SDK for those who want an example to create their own custom Android mesh app.

> <Install Folder>\ModusToolbox_1.1\libraries\bt_20819A1-1.0\components\BT-SDK\common\apps\snip\mesh\peerapps\Android\src\MeshApp
>
> *Note: The default <Install Folder> is C:\Users\<user_name>*

The app communicates with the mesh network using the device's BLE capabilities. Since smartphones don't (yet) have mesh capability, the app uses GATT connections for provisioning and relies on the presence of a GATT proxy for mesh configuration and communication.

The app can create mesh networks, provision/configure devices and can control lighting devices. The installable file is located at:

> <Install Folder>\ModusToolbox_1.1\libraries\bt_20819A1-1.0\components\BT-SDK\common\apps\snip\mesh\peerapps\Android\src\bin\MeshLightingController.apk
>
> *Note: The "bt_...." directory under "libraries" may change. It has been "bt_sdk-1.1" and "bt_20819A1-1.0".*

Since the app is not (yet) in the Android Play Store, it is necessary to install it manually by dragging the .apk file onto the phone's filesystem and then executing it to install the app.

Connect the smartphone to a PC with a USB cable[1]

In a FileExplorer window on the PC, Identify the phone's filesystem.

Drop the MeshLightingController.apk into a directory on the phone's filesystem. It's recommended to place the .apk at the top to avoid file path errors. I've dropped it into the Download folder on one phone and a CypressMesh folder I created at the same level as the Download folder. Both worked fine.

> This PC\SAMSUNG-SM-G950U\Phone\CypressMesh\MeshLightingController.apk
>
> This PC\SAMSUNG-SM-G935V\Phone\Download\MeshLightingController.apk

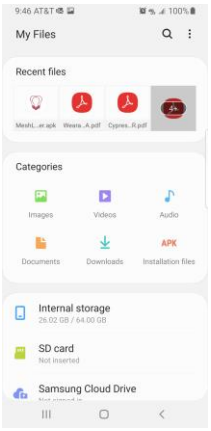
[1] https://www.wikihow.com/Connect-Android-Phone-to-Computer

Install the Mesh App by finding it in your phone's file system then selecting it.

You will need to allow installation of 3rd party applications for this to work.

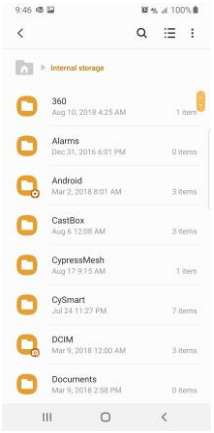
10.1-2A ANDROID APP INSTALLATION

1 - Find the File System on your phone. It might be "My Files"

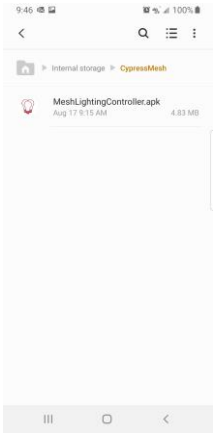


1 – Select Internal Storage.

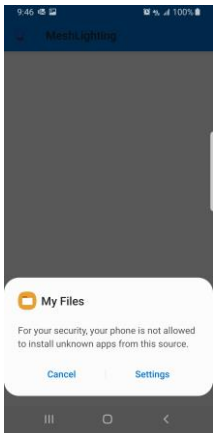
(or look in Recent Files)



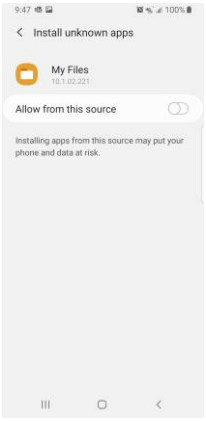
3 - Select the directory



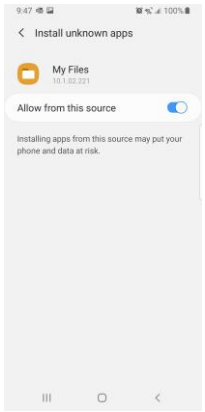
4 - Select the application



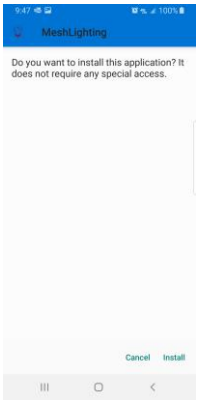
5 - Select "Settings" to allow installation



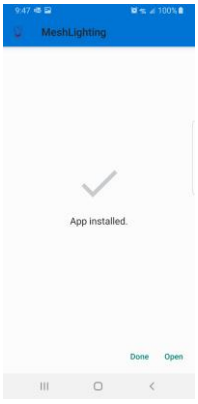
6 - Select the toggle to allow installation



7 - There should be some positive indication showing allowance

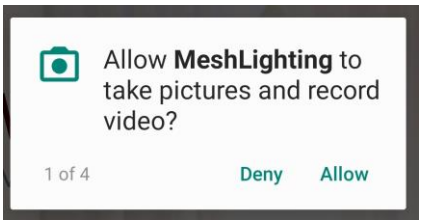


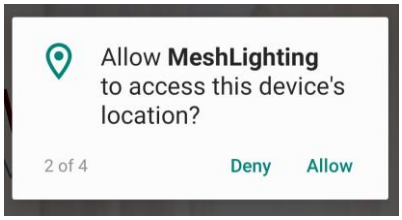
8 - Install the application

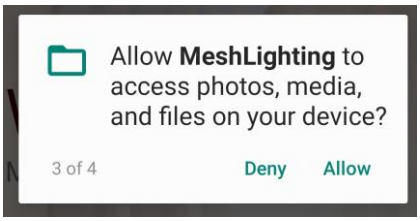


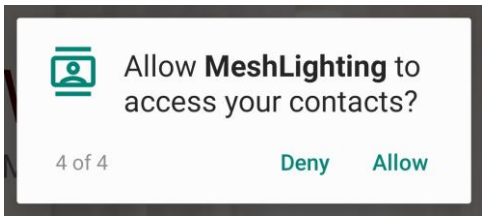
9 - There should be some positive indication when installation is complete

Allow the full access to enable all features.



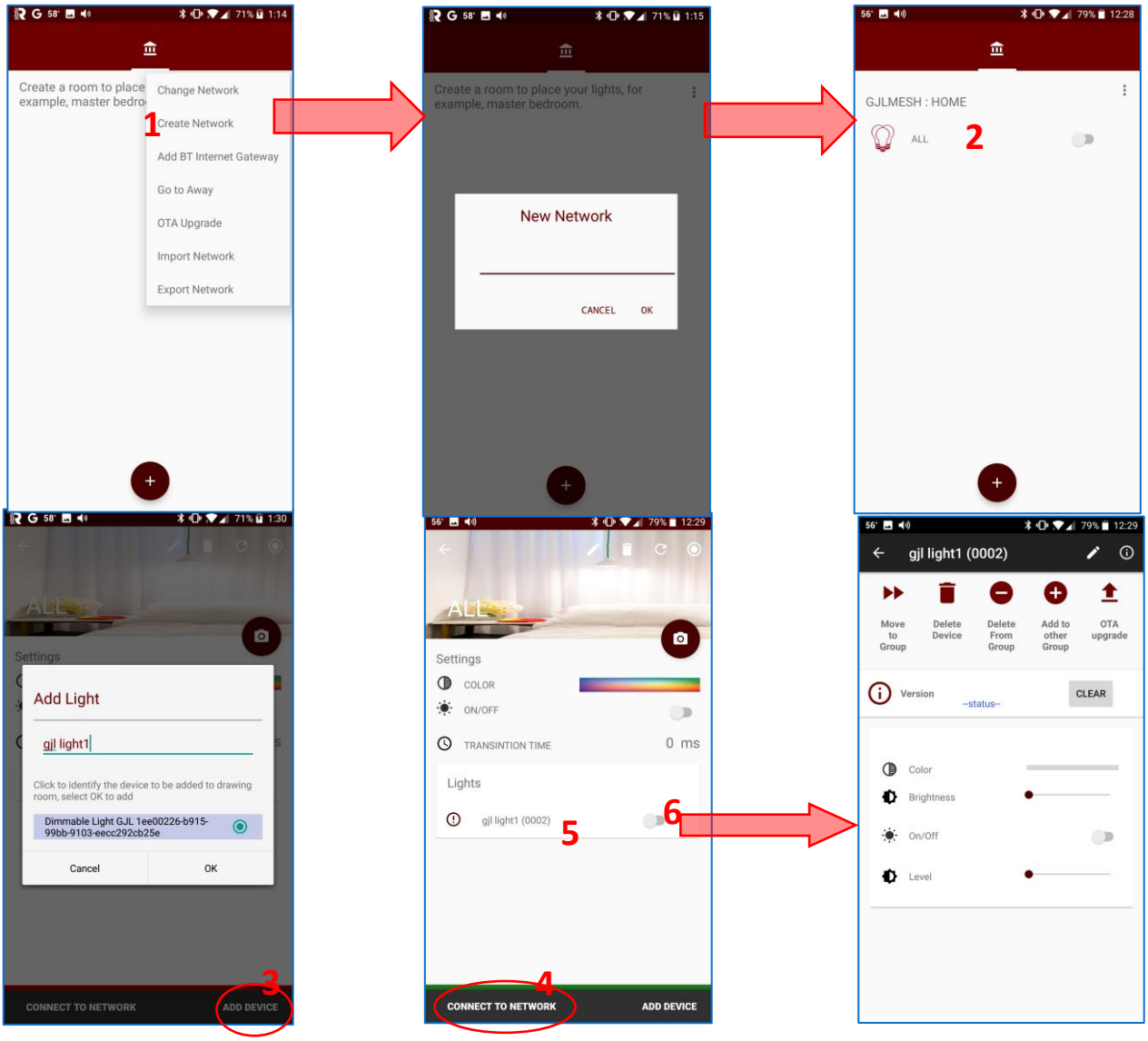


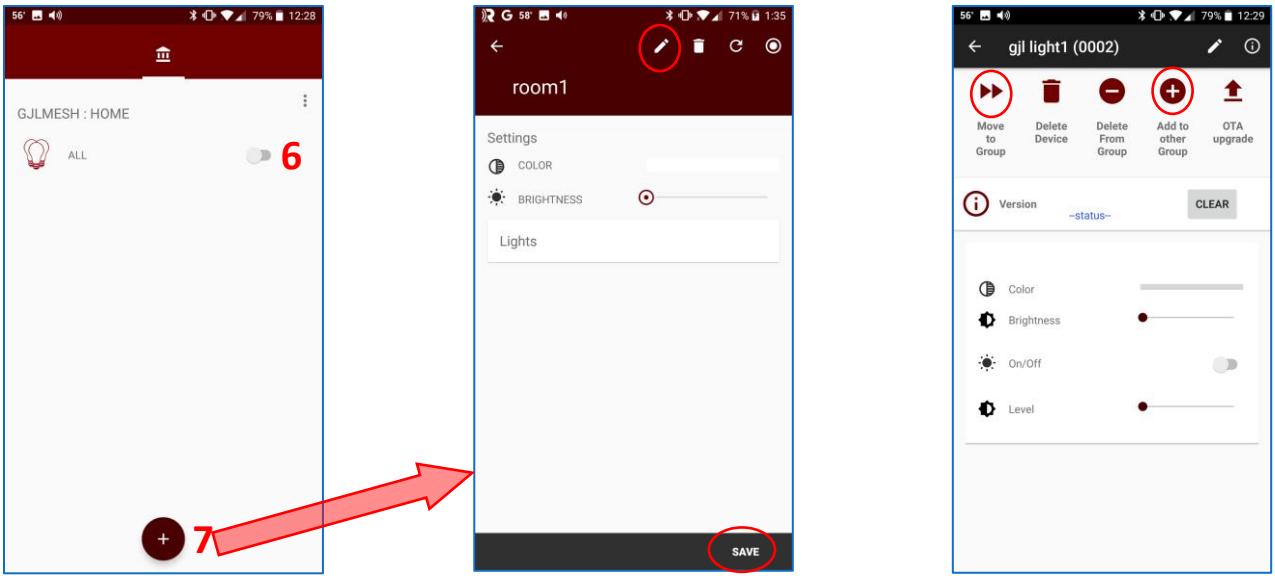




THE BASIC FLOW FOR USING THE APPLICATION IS:

1. Create a network
2. Select a group (ALL is created by default)
3. Add a device to the group
    a. This will take a few seconds. Wait until it completes before proceeding
4. Connect to the network if it doesn't happen automatically (bar will be green when connected)
5. Select the device
6. Control the device
    a. Note: you can control all devices simultaneously at the group level or individually at the device level
7. Optional: Add additional Groups (i.e. Rooms)
8. Optional: Move or Add devices to other Groups





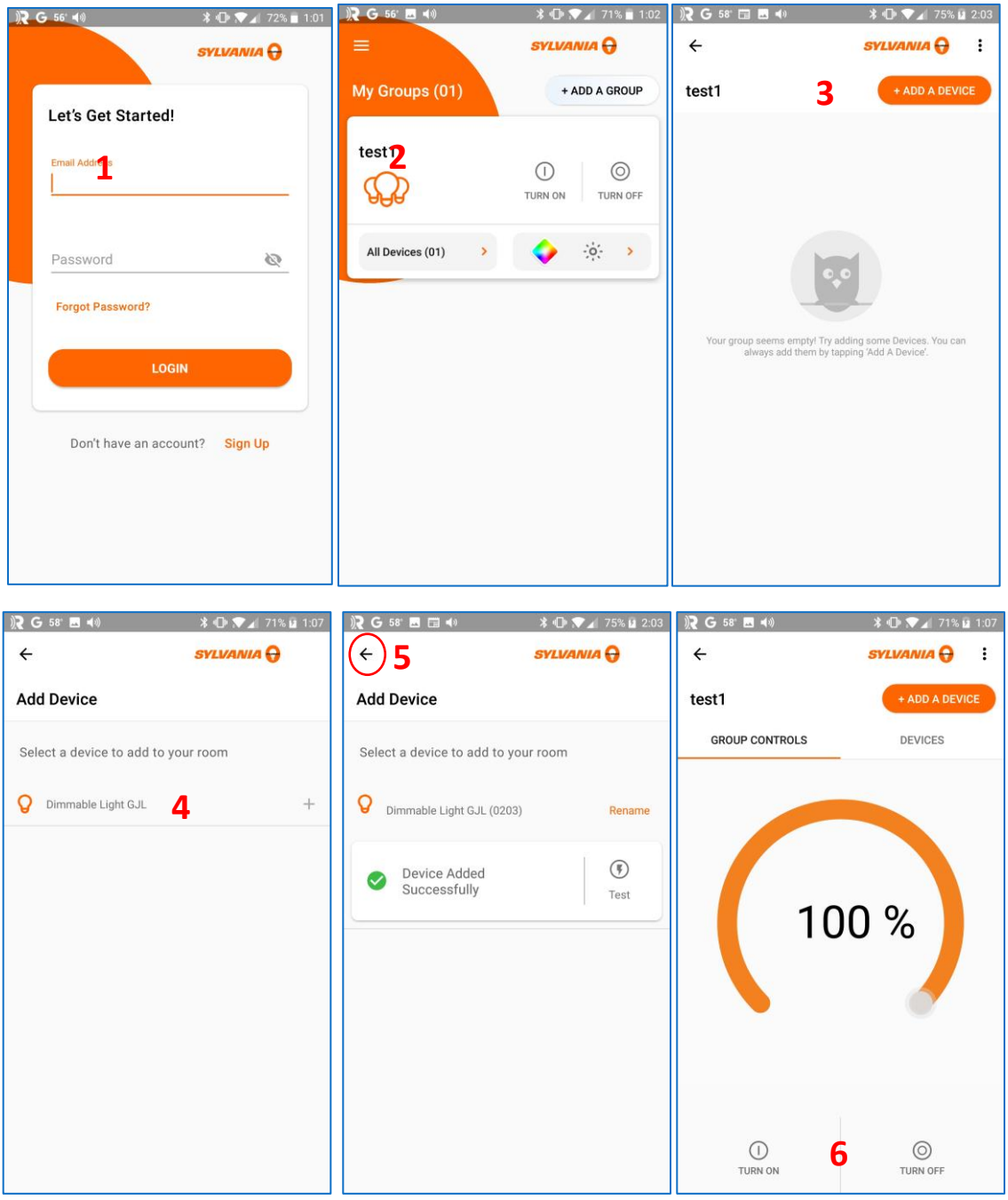
10.1-3 SYLVANIA SMART HOME APP BY LEDVANCE (ANDROID)

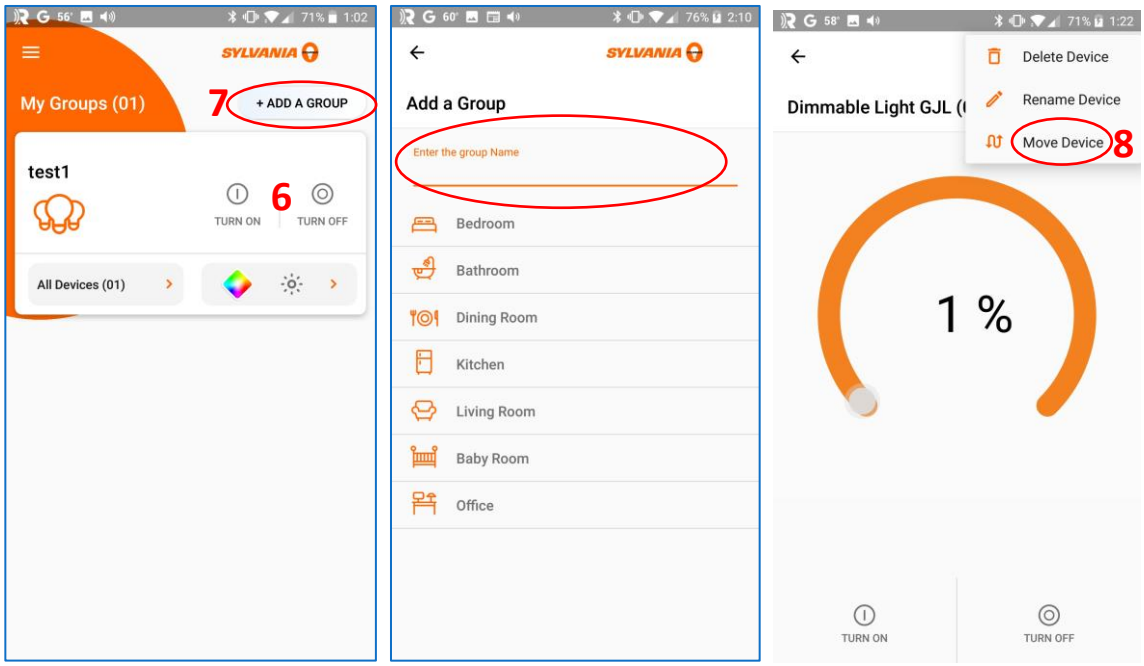
The Sylvania Smart Home application created by LedVance is available for Android from the Google Play Store. It can create mesh networks, provision devices and can control lighting devices. Note: there is a version of the app for iOS, but it is based on the Apple HomeKit solution, so it won't work with our starter applications.

The basic flow for using the application is:

1. Register for an account
2. Select the *test1* group
3. Click *ADD A DEVICE*
4. Select your device from the list
    a. This will take a few seconds. Wait until it completes before proceeding
5. Go back to the test 1 group page
6. Control the device
    a. Note: you can control all devices simultaneously at the group level or individually at the device level
7. Optional: Add additional Groups (i.e. Rooms) from the My Groups screen.
    a. You can choose from a predefined list of rooms or enter your own name.
8. Optional: Move devices to other Groups

Note: Do NOT use the dimmer controls in the app since it is not compatible with the demo firmware. If you try dimming from the Sylvania Smart Home app, you will need to factory reset and re-provision your kit to get it to control the LED again.


SYLVANIA
Let's Get Started!
Email Address
1
Password
Forgot Password?
LOGIN
Don't have an account? Sign Up
My Groups (01)
+ ADD A GROUP
test1
2
TURN ON
TURN OFF
All Devices (01)
test1
3
+ ADD A DEVICE
Your group seems empty! Try adding some Devices. You can always add them by tapping 'Add A Device'.
Add Device
Select a device to add to your room
Dimmable Light GJL
4
5
Dimmable Light GJL (0203)
Rename
Device Added Successfully
Test
GROUP CONTROLS
DEVICES
100 %
6


SYLVANIA
My Groups (01)
7
+ ADD A GROUP
test1
TURN ON
6
TURN OFF
All Devices (01)
SYLVANIA
Add a Group
Enter the group Name
Bedroom
Bathroom
Dining Room
Kitchen
Living Room
Baby Room
Office
Delete Device
Rename Device
Move Device
8
Dimmable Light GJL
1 %
TURN ON
TURN OFF