



Nubo Client Version 3.2 Guidance Document

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Revision History

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1. Overview

This document serves as a guidance document for using and testing the Nubo Client Version 3.2 for Common Criteria.

1.1 Common Criteria Target of Evaluation (TOE) Description

The Common Criteria Target of Evaluation (TOE) is Nubo Client Version 3.2. The TOE is an application that runs on an Android 12 device. The main purpose of this app is to be a thin client of a virtual device that runs on a server. The thin client only displays what was generated in the remote server and does not run functionalities by itself, besides the registration, authentication, and client configuration screen.

The TOE has been Common Criteria evaluated, VID11380, against the *Protection Profile for Application Software*, Version 1.4, October 7, 2021, and the *Functional Package for Transport Layer Security (TLS)*, Version 1.1, March 1, 2019.

The TOE was tested and evaluated on the following platform:

- Galaxy S10 with Android 12.0, Linux kernel 4.14 with Qualcomm Snapdragon 855 processor, 64 bits.

Note:

- fingerprint authentication functionality has been excluded from the Common Criteria evaluation and
- the evaluated configuration only supports the default Nubo Management Server Host (<https://cc.nubo.co>).

2. Installation

2.1 Supported Phone

The TOE is supported on the following platform running Android 12:

Device Name	Chipset Vendor	SoC	Base Model Number	32 bits/64 bits
Galaxy S10	Qualcomm	Snapdragon 855	SM-G973	64 bits

2.2 Pre-Installation

To configure your phone for the Nubo application you need:

1. A phone identified above,
2. Android 12 operating system installed on your phone,
3. Internet access via WiFi or Mobile (cellular) service,
4. access to a Domain Name Server (DNS),
5. the URL of the Nubo Management Server Host (<https://cc.nubo.co>), and
6. the X.509 digital certificate trust chain for the Nubo Management Server Host loaded on your phone.

The phone must be downloaded and activated to complete installation and configuration of the device into the Common Criteria evaluated configuration.

2.2.1 WiFi or Cellular Access

The system requires WiFi or Cellular access to the Internet. This can be done by going to the settings app and looking for the Network & Internet option. Within that section, you should see both Wi-Fi and Mobile Networks. Access to the Internet will enable automatic access to a Domain Name Server and to the Nubo Management Server Host.

2.2.2 Nubo Manager Server Host URL

The TOE has the default URL of the Nubo Management Server Host hard coded in the build. Therefore, the user does not have to configure the URL.

The reference identifier for the TOE is the configured Nubo Management Server IP address/Host name. It is configured by default.

2.2.3 Nubo Manager Server Host Access

The digital certificate trust chain for the Nubo Management Server Host must be installed directly into your system's Android Trust Store. The TOE does not mediate the installation of the trust chain. The installation of the certificate is per the evaluated platform recommendations.

2.3 Downloading the TOE

You can download the TOE from the Google Play store on your device. You may also download and install Nubo to your mobile device from any online browser on your laptop or desktop via the Google Play web site.

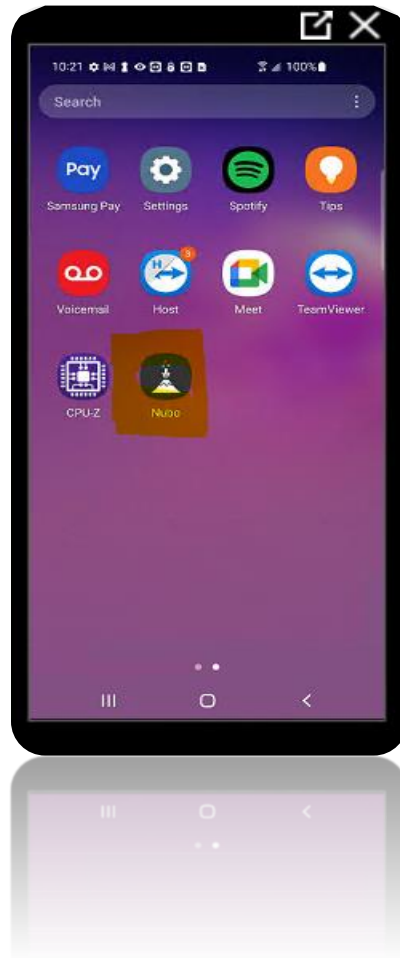
Ensure the download is labeled Nubo Version 3.2 which is the TOE. (Nubo Client is the only application offered by Nubo Software.)

2.4 Verifying Product Versioning

Once installed, the version of the TOE is verified using the following steps.

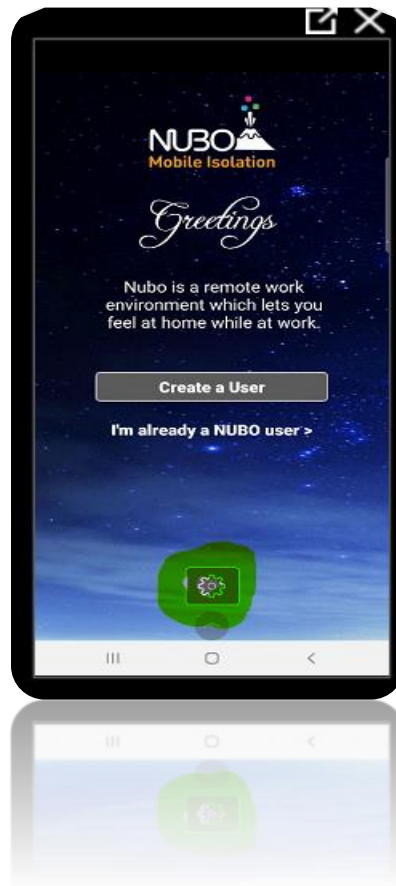
1. Open the Application by pressing on the Nubo icon.

Screen 1: Android Home Screen



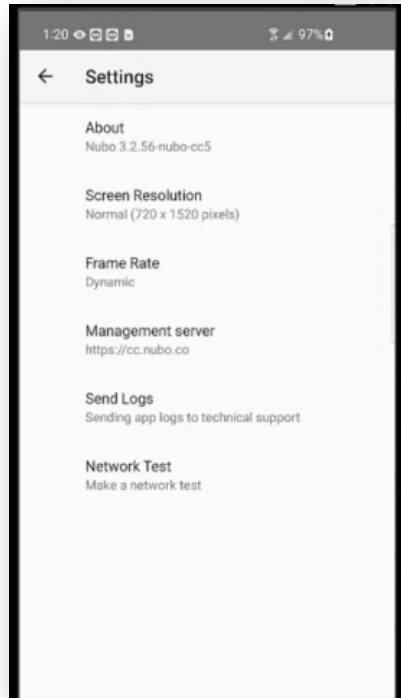
2. Click on settings to open the settings menu.

Screen 2: Nubo App Home Screen



3. The version of the TOE will be displayed under the **About** section.

Screen 3: Settings Screen



4. The following screen will be displayed when the **About** option is selected.

Screen 4: About Screen



3 Registration & Activation

3.1 Account Registration and Activation

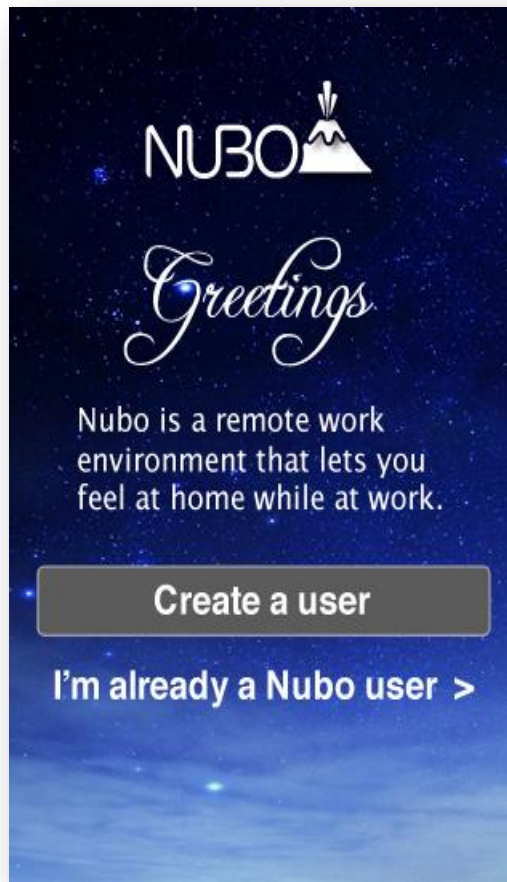
To configure the phone in the Common Criteria evaluated configuration, the phone must be registered and activated. Follow the following steps to configure the user creation data (user full name, user email address, and job title).

3.1.1 Identification

Please follow these steps to register your account and activate Nubo on your device.

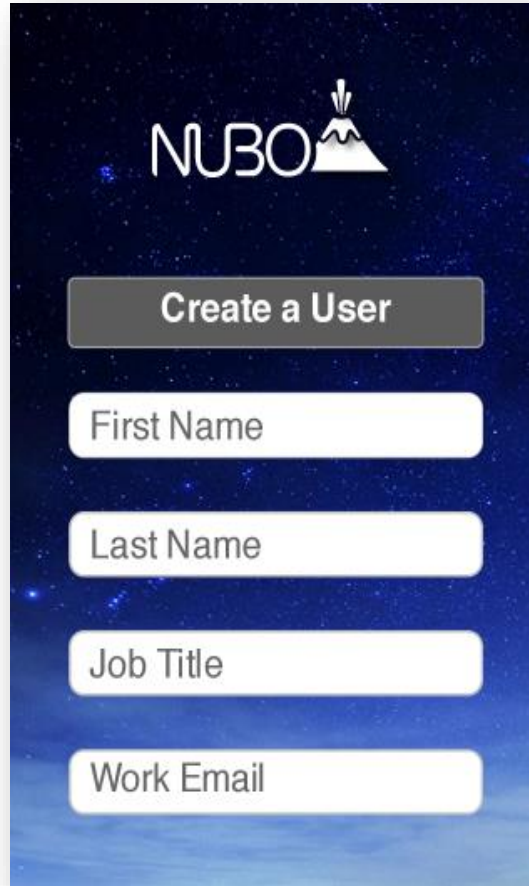
1. Launch the application by clicking the Nubo app icon. A welcome screen will appear asking you to create a user.

Screen 5: Welcome Screen



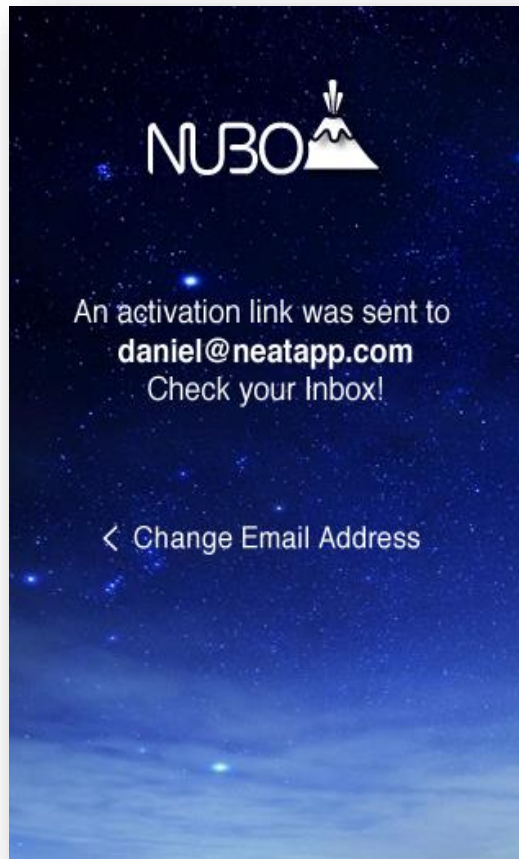
2. Tap the “Create a User” button. You will be taken to a registration screen.

Screen 6: Registration Screen



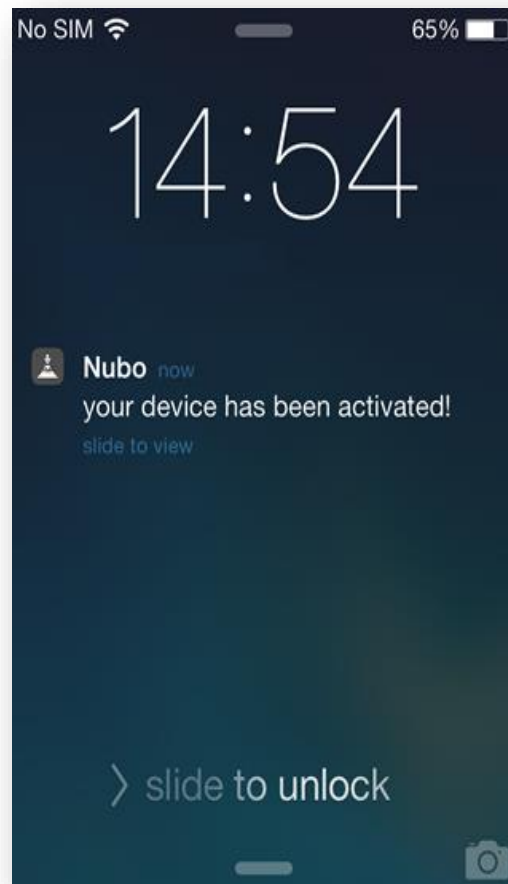
3. Enter the registration details on the form:
 - a. First Name
 - b. Last Name
 - c. Job Title
 - d. Work email address
4. Once you’ve filled out the form, tap the “Create a User” button.
5. The next screen will notify you that an activation link has been sent to your email address.

Screen 7: Activation Link Screen



6. Go to your inbox and open the email from Nubo Support about how to create a user. Tap the activation link provided. You will receive a notification on your device's home screen that your device has been activated.

Screen 8: Activation Confirmation Screen



Please Note: If you do not click on the activation link within 48 hours, it will expire. You will then need to open the Nubo app from your mobile device and create your user profile again.

7. Once your device is activated, you can now sign into Nubo for the first time.
8. You will now be asked to select your Nubo passcode. You will use this passcode from here on to log into the Nubo app. Enter your chosen passcode using the number pad. The passcode must be a minimum of 5 digits, and a maximum of 8 digits.
9. Re-enter your passcode to confirm. If you don't re-enter the same passcode twice, you will see a notification message saying that the passcode is incorrect.
10. Once you have successfully confirmed a valid passcode, you will be taken to the

Nubo launcher. This passcode is now your permanent login for Nubo.

3.2 **Administrative User**

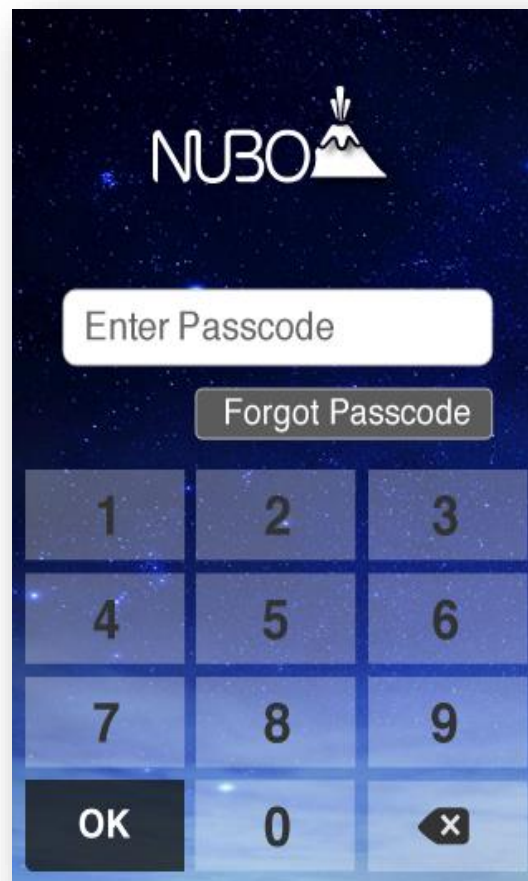
The TOE provides one role which is the user registered to the TOE. This user has Administrative privileges. The user permission is granted after successful registration of a user account. An activation link is provided after user registration.

4. Login & Password Reset

4.1 Logging In

To log in, enter your passcode in the Nubo Login screen.

Screen 9: Nubo Login Screen



If you enter the wrong passcode an error will appear.

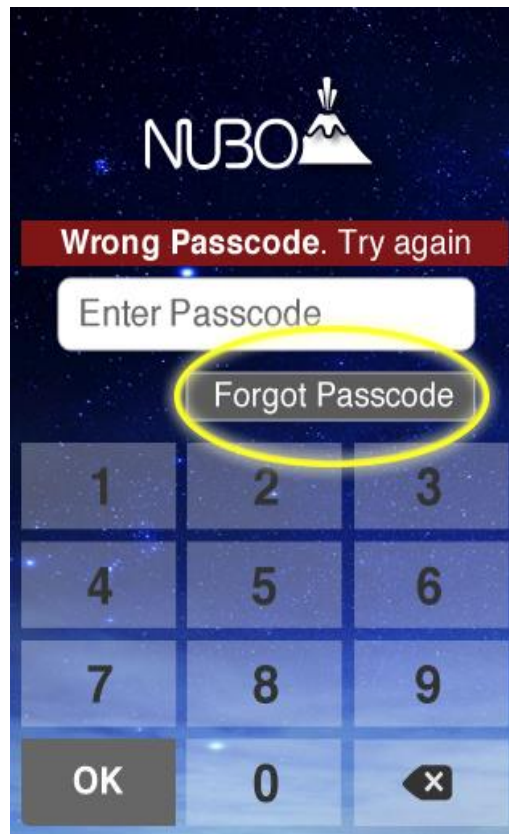
Screen 10: Wrong Password Screen



4.2 Password Reset

If you forget your passcode or wish to change it, Tap “Forgot Passcode” from the login screen as seen below:

Screen 11: Forgot Password Button



1. You will be asked to confirm that you wish to reset your passcode. Tap on “OK” to proceed or “Cancel” to go back to the login screen.
2. You will receive an email from Nubo Support with a link to reset your passcode.
3. Tap the link provided in the email.
4. A notification screen will pop up letting you know that your passcode has been reset.
5. Open your Nubo app. You will be asked to enter a new passcode. The passcode must be between 5 and 8 numbers long.
6. Re-enter your chosen passcode to confirm. You will now enter the Nubo workspace and can continue using the app.

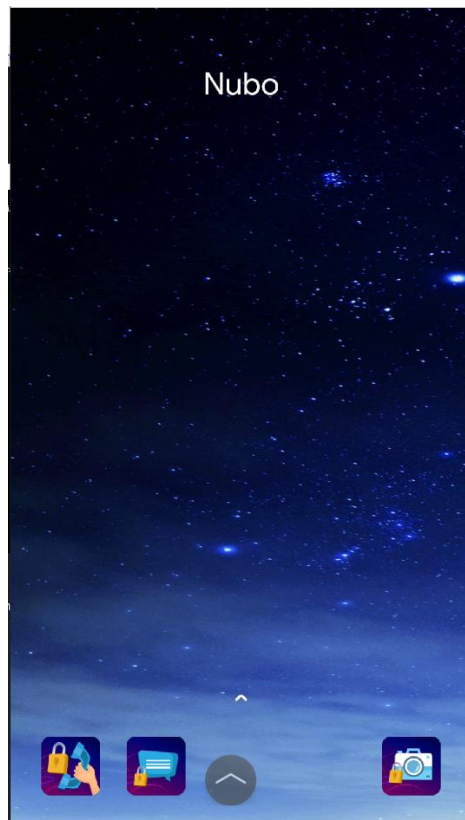
5. Nubo App Functions & Settings

5.1 Navigating in Nubo

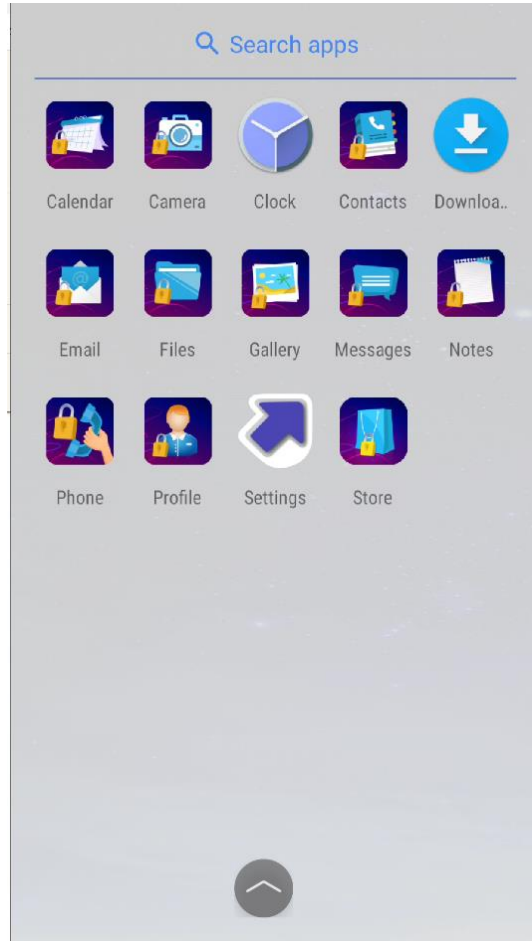
5.1.1 The Home Screen

You can see all installed applications by clicking on the white faced-up arrow, or by swiping up from the bottom of the screen.

Screen 12: Nubo Home Screen



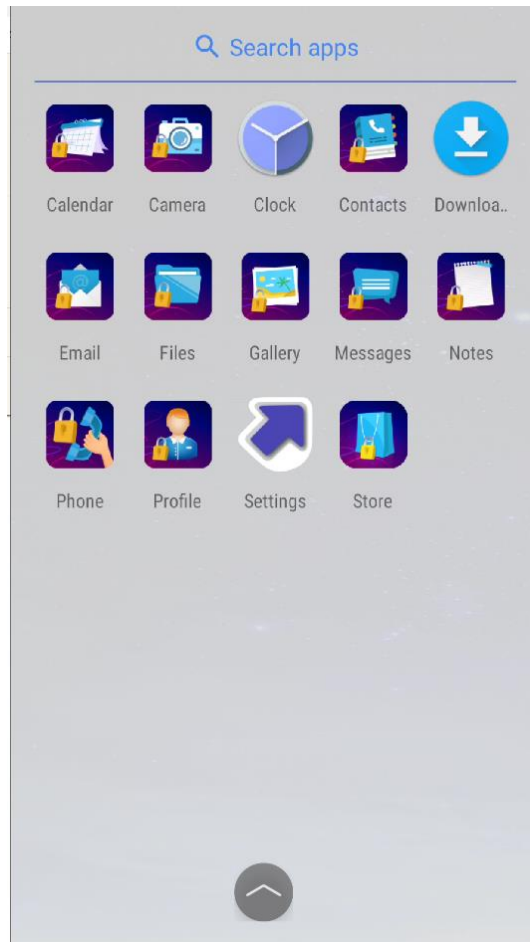
Screen 13: Nubo Apps Screen



5.1.2 Nubo Apps

The Nubo Apps screen is where you will find Nubo’s standard apps, including email, Calendar, People, Browser, Office Suite (Word, Excel, and PowerPoint), Messenger, Gallery, and File folders. Also, find here the white arrow and the Nubo Button.

Screen 14: Nubo Apps Screen



5.1.3 Moving Apps

You can arrange apps in your preferred order on any screen in the Nubo app. To move an app, tap and hold it, and drag it to your desired location. If you wish to move the app to another screen, tap and hold the app, and then drag it to your preferred screen. Release and drop it in your preferred location.

5.1.4 Nubo Button

You can additionally control the Nubo environment by pressing on the Nubo button located at the bottom of the home screen. The Nubo button contains a Nubo Home screen icon, a Switch App icon, and Settings icon. The Nubo button is movable.

Screen 15: Nubo Button



a. Nubo Home Icon

Whether you are working in an app or browsing on another screen, you can return to the home screen by simply tapping the Nubo logo located at the left side of the Nubo button menu.

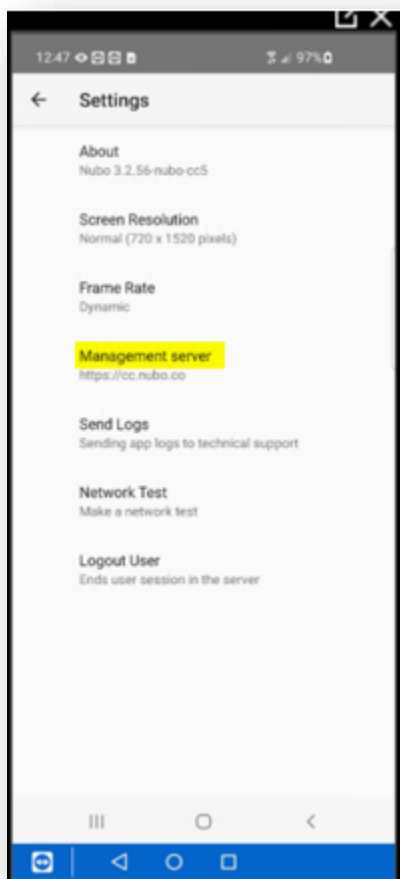
b. Switch App Icon

When you have a few apps open at the same time, you can switch to a specific app by clicking on the colored icon in the middle, and choosing the app you want to work with.

c. The Settings Icon

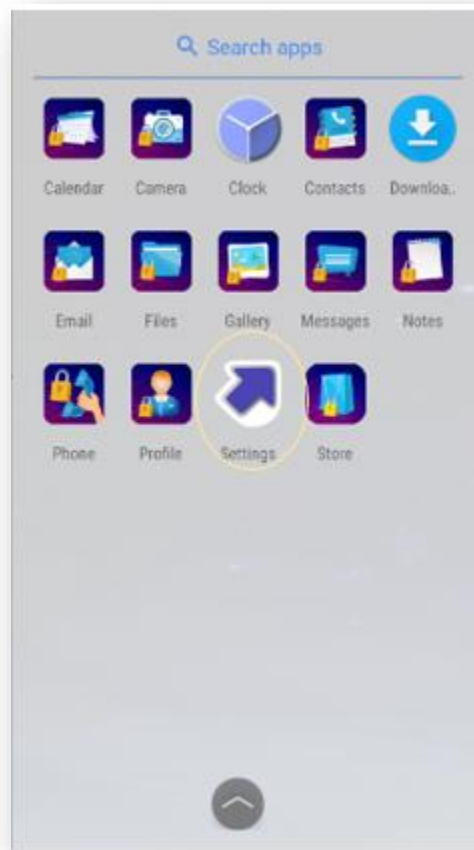
Clicking the cogwheel icon will open the Settings menu of the Nubo client. There you will be able to change the following: screen resolution, frame rate and management server URL. You will also be able to send logs to Nubo support and open the About screen.

Screen 16: Nubo Settings Screen



You can select and modify preferred settings within the “Settings” app. To do so, tap the Settings icon on the apps screen.

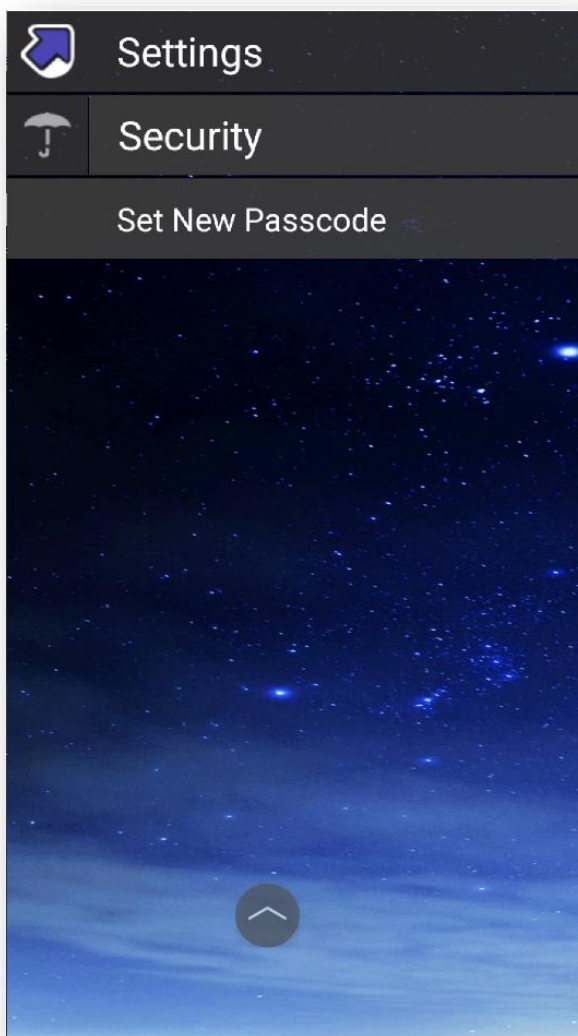
Screen 17: Nubo Internal Settings Icon



5.1.5 Setting New Password

From the security screen, you can set a new passcode.

Screen 18: Setting a New Password



1. Tap “Set New Passcode.”
2. Enter your new passcode using the number pad provided and tap OK. The passcode must contain a minimum of 5 digits, and a maximum of 8 digits.

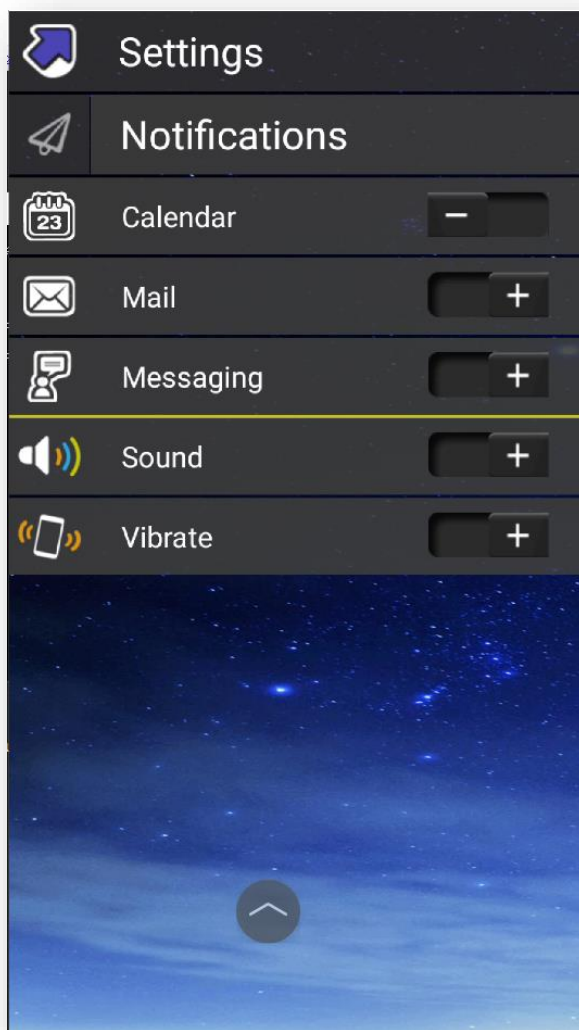
3. Re-enter the new passcode and tap OK to confirm.

5.1.6 Push Notifications

You can turn push notifications on or off for Nubo Apps like mail, calendar, and instant messages. To turn notification on or off:

1. Hold the on/off button and drag it to the left. The “+” sign will indicate that notifications are on.
2. Hold the on/off button and drag it to the right. The “-” sign will indicate that notifications are off.

Screen 19: Push Notification Settings



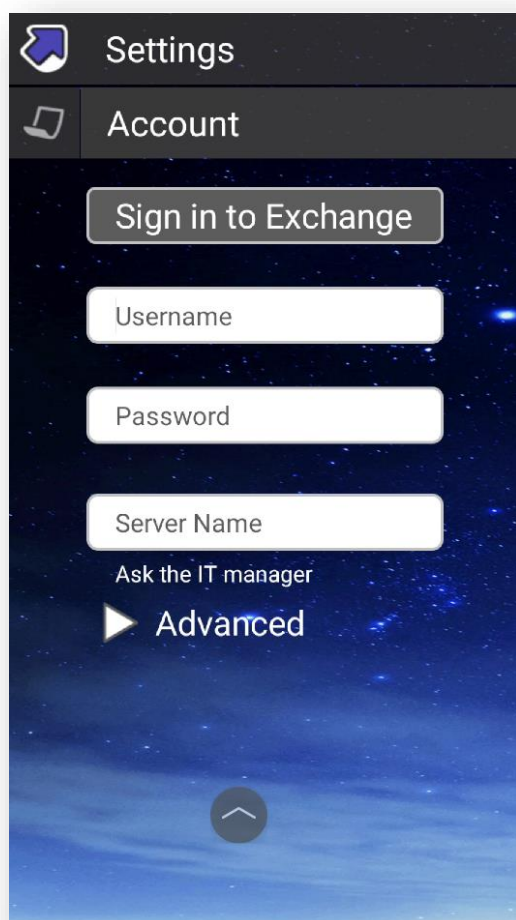
5.1.7 Exchange Account

To add your exchange email account:

1. Tap “Accounts” from the Settings screen.
2. Tap “Add Exchange Account”.
3. Complete the form with your username, password, and server name.

4. Tap the advanced option at the bottom of the screen if you wish to add more details such as the connection type and/or Port number.
5. Once you've entered all of your details, press the "Sign in to Exchange" button at the top of the form.
6. Your exchange account settings will sync with your Nubo email app. You can now log in to your email, using the email app in Nubo.

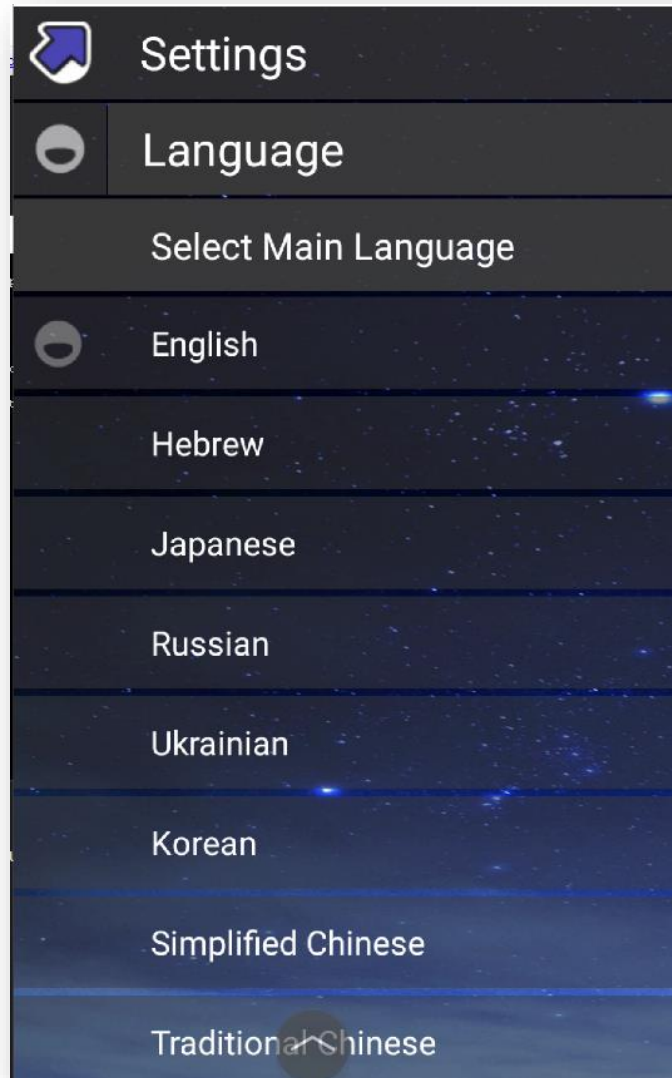
Screen 20: Exchange Account Details



5.1.8 Language

You can select your desired display language from the Language screen within Settings. Tap on your desired language from the list provided.

Screen 21: Select Main Language



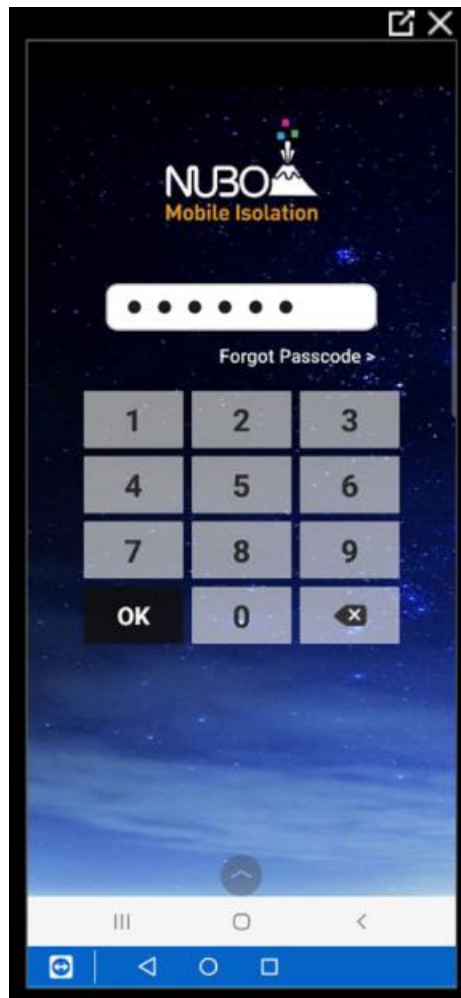
6. Secure Communications

6.1 Nubo Management Server Communications

The Nubo Software Thin Client supports secure communications with a remote Nubo Management Server. All communications between the Nubo Management Server and the TOE are secure via TLS. Configuration requires a single configuration. Please follow the following step to configure the target Nubo Management Server.

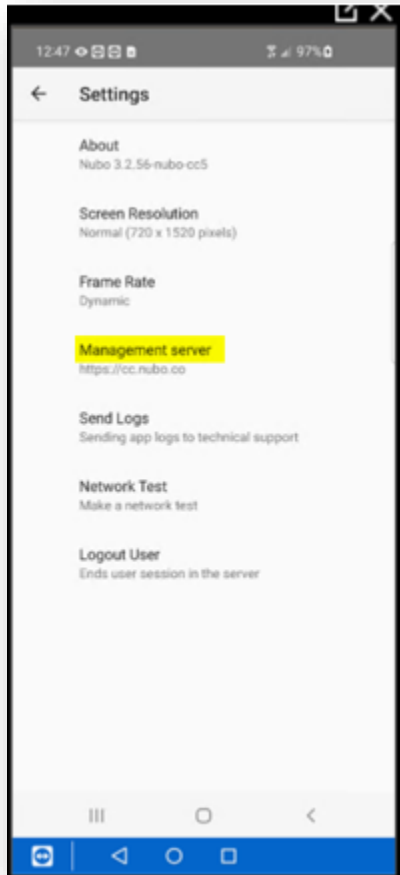
1. Access the Nubo Management Server configuration screen by clicking on the up arrow icon.

Screen 22: Login Screen



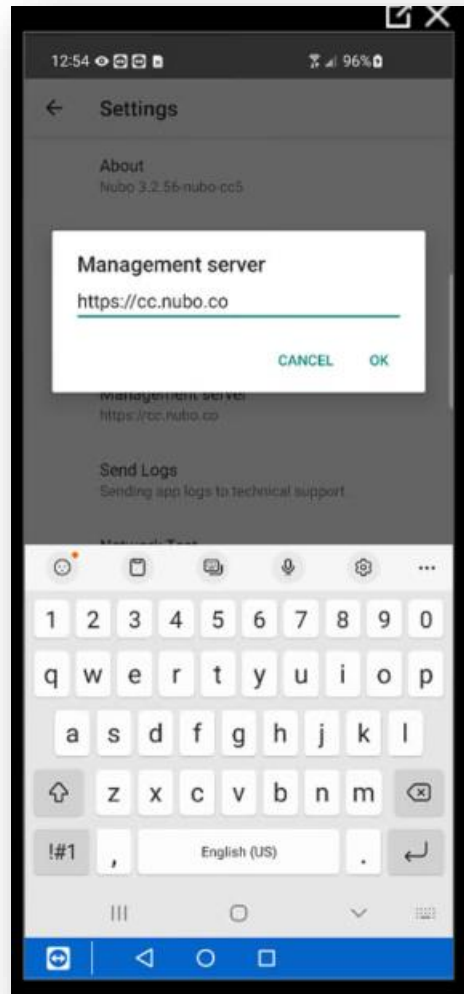
2. Click on Management server on the settings screen.

Screen 23: Management Server Navigation



3. Complete the management server IP address/host name.

Screen 24: Management Server Screen



6.2 Network Configuration

Aside from information identified in **Pre-Installation**, there are no additional configuration needed for TLS communication.

The TOE acts as a TLS Client communicating with the Nubo Management Server Host and a DNS. The following TLS ciphersuite is supported:

- TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 as defined in RFC 5289

Additionally, the following Elliptic Curve Extensions are supported,

- secp384r1

6.3 Digital Certificates

6.3.1 Nubo Management Server Host Certificate

The digital certificate trust chain for the Nubo Management Server must be installed directly into the Android Trust Store. The TOE does not mediate the installation of the trust chain. The installation of the certificate is per the evaluated platform recommendations.

The reference identifier for the TOE is the configured Nubo Management Server IP address/Host name. No additional configuration is required.

The Nubo Software Thin Client performs OCSP and CRL revocation checking on certificates that have listed distribution points. No additional configuration is required.

6.3.2 Revocation Checking

The Nubo Software Thin Client performs OCSP and CRL revocation checking on certificates that have listed distribution points. No additional configuration is required

7. Updating the TOE

7.1 Update

The application can be updated by the following steps:

1. Download the APK file from Google Play
2. Install the APK file on the Phone. This will update the application to the new version.
3. Go to settings on the phone and clear the application data cache.
4. Go to the application settings and enter the Nubo Management Server Host's url (<https://cc.nubo.co>).
5. Follow the registration and activation procedure from section 3 above to reactivate the application.

7.2 Update Verification

Installation, updates, and patches to the TOE are distributed by the Google Play store. Each release is packaged in APK format and signed with a Nubo Software certificate.

In each case, the platform checks and validates the signature of the package. In case the user downloads an APK not signed by Nubo, or if the signature validation fails, the platform will disallow the installation of the package.

8. TOE Access to Platform Resources

The TOE can access the following platform resources:

- network connectivity,
- camera,
- microphone,
- location services,
- Bluetooth

This access aims to support the user's access of applications in the Nubo client. No sensitive information repositories are accessed.

9. Nubo Contact and Support

For further information and support, please contact:

Email: support@nubosoftware.com

<https://nubosoftware.com/support>

