

# **ATAK QUICK START GUIDE**

## **Installation, Loading Data and TAK Server Connection**

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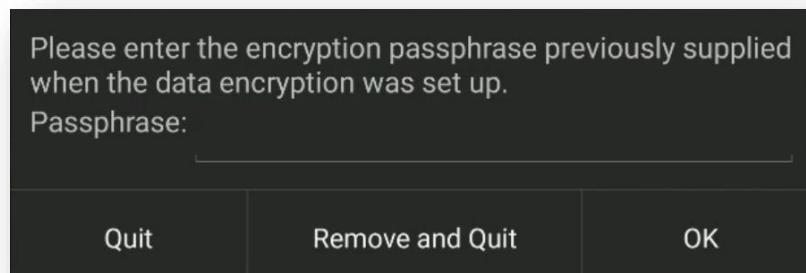
## 1 INSTALLING ATAK AND RELATED PLUG-INS

The Team Awareness Kit for Android (ATAK) application, auxiliary/plug-in applications, and supporting documentation are available for download at TAK.gov. Download the .apk installer(s) to the Windows device, transfer them via USB cable to an Android device and launch the installer.

### 1.1 Launching the Installer

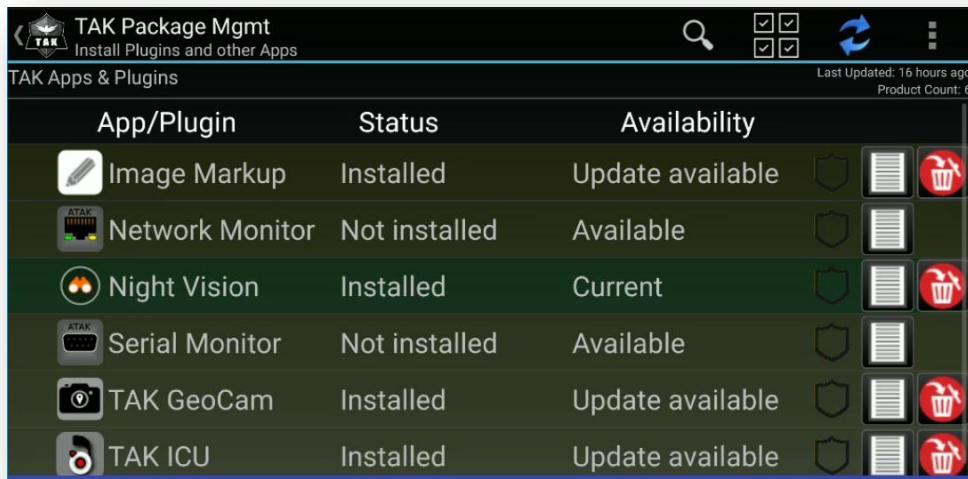
Use the Android file manager to locate the folder containing the ATAK apk. Select the ATAK apk and respond to installation prompts. Once ATAK has been installed, select the apk for any desired plug-ins to initiate the installation. ATAK requires that the release numbers of any plug-ins match the release number of ATAK.

When ATAK is launched for the first time, a passphrase prompt (shown in Figure 1) may appear if it detects encrypted data from a previous ATAK installation. To continue using this data with the new ATAK installation, enter the passphrase and select OK. Otherwise, select Remove and Quit to discard the old data, and then relaunch ATAK. To quit ATAK while leaving the existing data intact, select Quit. Note that the prompt will reappear on next launch unless the encrypted data is removed, or the correct passphrase is supplied.



**Figure 1 – Enter Encryption Passphrase**

Installed plug-ins and bundled support applications, shown in Figure 2, must be loaded into ATAK via TAK Package Mgmt. Once ATAK is launched, select Additional Tools (3 lines) > View all tools & plug-ins > Settings > TAK Package Mgmt. Installed plug-ins and bundled support applications that match the current release will appear in the list with an availability status of *Current*. The user can use the Search (magnifying glass icon) to filter the current view. Tap on the plug-in or bundled support application name to initiate loading or installation.



**Figure 2 – Installing ATAK Bundled Support Apps**

## 2 LOADING DATA INTO ATAK

### 2.1 Loading via Direct Folder Placement

ATAK imagery, overlay and DTED files that are placed directly into the appropriate “atak” folder structure locations are loaded into ATAK at launch. The “atak” folder is created when ATAK is launched for the first time. Table 1 provides placement information by file type, including for plug-ins.

**Table 1 - Manual File Placement Within “atak” Folder and Import Manager Techniques**

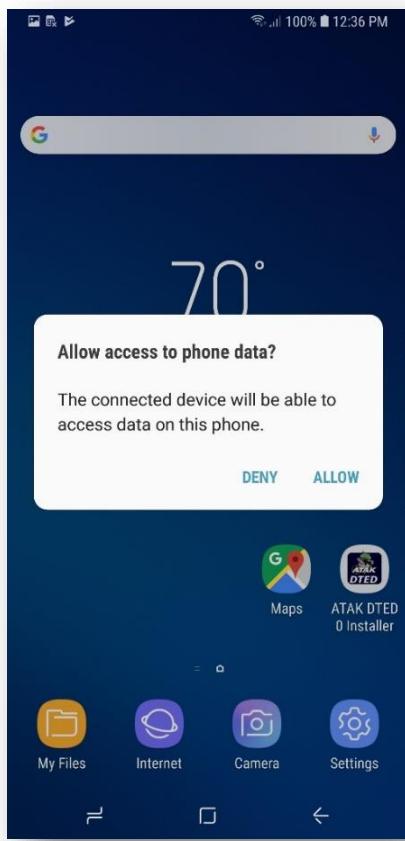
File type	Where to place within atak folder	Where to find within ATAK app	Import Manager		
			Folder	File	Zip
DTED	atak/DTED				X
XML	atak/imagery	Maps & Favorites > MOBILE (Online)		X	X
SQLite	atak/imagery	Maps & Favorites > MOBILE (Local)		X	X
MBTiles	atak/imagery	Maps & Favorites > MOBILE (Local)		X	X
GeoPackage (imagery)	atak/imagery	Maps & Favorites > IMAGERY and Maps & Favorites > MOBILE and Overlay Manager > Geopackage		X	X
CADRG	atak/imagery	Maps & Favorites > IMAGERY	X		X
CIB	atak/imagery	Maps & Favorites > IMAGERY	X		X
ECRG	atak/imagery	Maps & Favorites > IMAGERY	X		X
GeoTiff	atak/imagery	Maps & Favorites > IMAGERY		X	X
GeoJPEG2000	atak/imagery	Maps & Favorites > IMAGERY		X	
GNC	atak/imagery	Maps & Favorites > IMAGERY	X		X

File type	Where to place within atak folder	Where to find within ATAK app	Import Manager		
			Folder	File	Zip
JPEG2000	atak/imagery	Maps & Favorites > IMAGERY		X	X
KMZ w/imagery	atak/imagery atak/grg	Maps & Favorites > IMAGERY Overlay Manager > GRG*		X	X*
MrSid	atak/imagery	Maps & Favorites > IMAGERY		X	X
NITF	atak/imagery	Maps & Favorites > IMAGERY		X	X
PFI	atak/imagery	Maps & Favorites > IMAGERY		X	X
PFPS	atak/imagery	Maps & Favorites > IMAGERY		X	X
PRI	atak/imagery	Maps & Favorites > IMAGERY		X	X
RPF	atak/imagery	Maps & Favorites > IMAGERY	X		X
GRG	atak/grg	Overlays > GRG		X	X
DRW	atak/overlays	Overlays > File Overlays > DRW		X	X
GPX	atak/overlays	Overlays > File Overlays > GPX		X	X
KML	atak/overlays	Overlays > File Overlays > KML		X	X
KMZ	atak/overlays	Overlays > File Overlays > KML Overlay Manager > GRG*		X	X*
LPT	atak/overlays	Overlays > File Overlays > LPT		X	X
Shape	atak/overlays	Overlays > File Overlays > SHAPEFILE		X	X
OBJ (3D Models)	atak/overlays	Overlays > 3D Models		X	X
Plug-ins	atak/tools/<plug-in> or atak/<plug-in>	Varies depending on the plug-in		X	X

**Note:** Files that are added to ATAK via Import Manager or created by ATAK will not always appear in the “atak” folder locations as described above. Different subfolders and virtual links are sometimes used by ATAK.

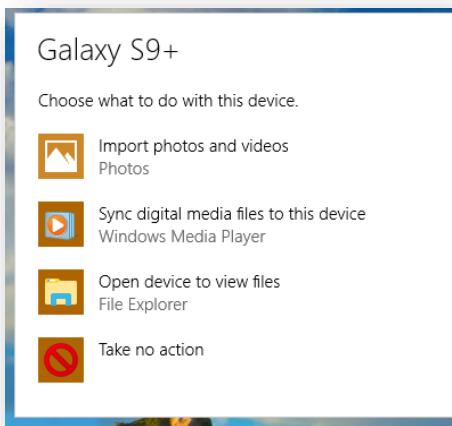
Follow these steps to load via direct folder placement:

1. If ATAK has been installed but never run, launch ATAK.
2. If ATAK is currently running, select Additional Tools (3 lines) > View all tools & plug-ins > Quit.
3. Connect the Android device to the Windows device via a USB cable and allow data access if prompted, as shown in Figure 3.



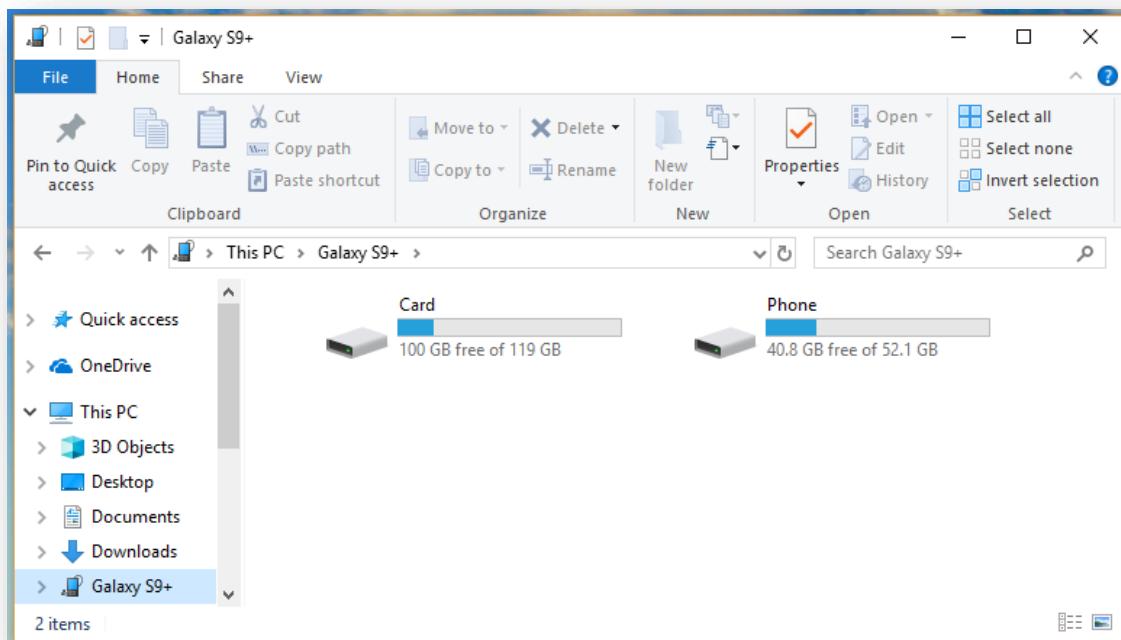
**Figure 3 – Allow Access to Device Data**

4. If the Auto Play window appears on the Windows device, choose to open device to view files as depicted in Figure 4.



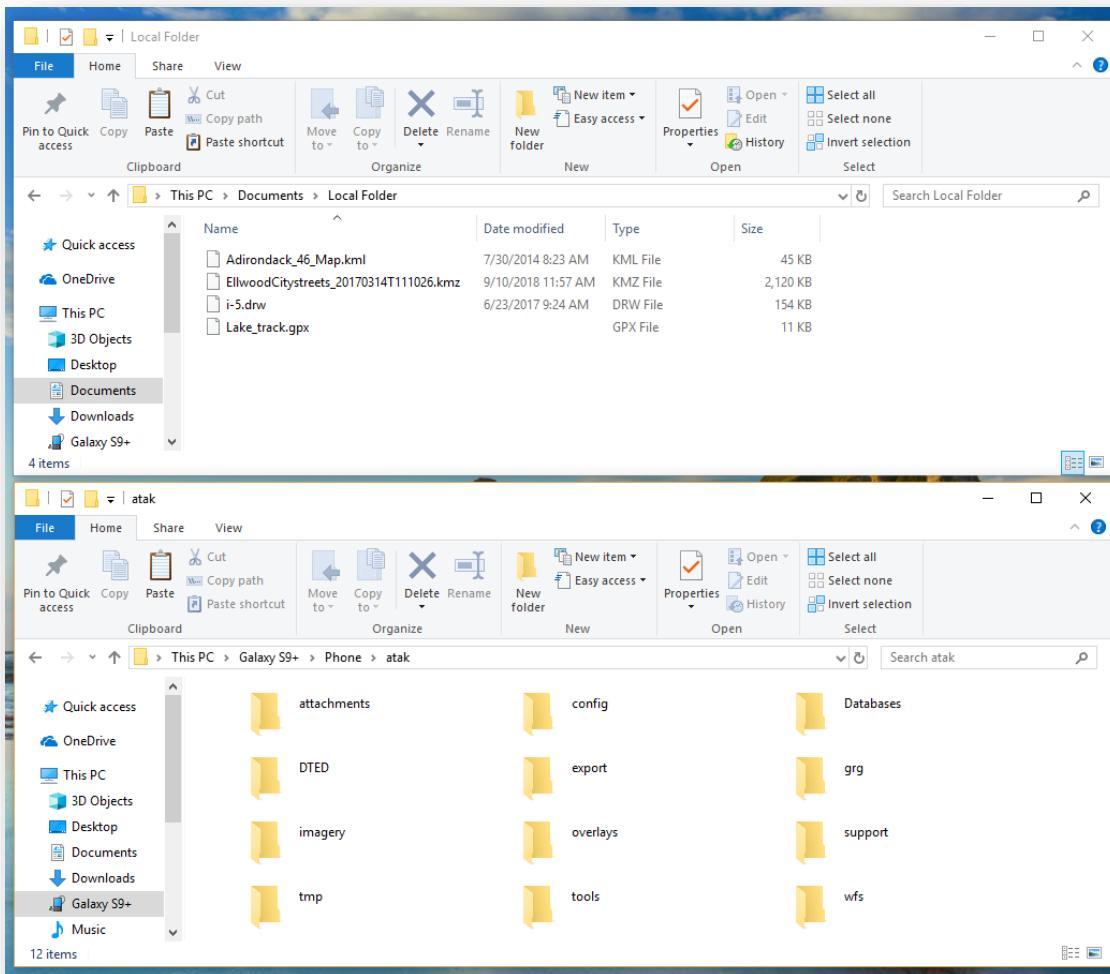
**Figure 4 – Open Device to View Files**

5. If Auto Play does not appear, activate File Manager, shown in Figure 5, and select the Android device from the “Computer” section.



**Figure 5 – Selecting an Android Galaxy S9 Phone**

6. Depending on device type, the Android internal storage may be called “internal storage” or “phone.” Select the device’s internal storage option to view contents.
7. Open an additional Windows file manager window (shown in Figure 6) where the desired files are located. Drag and drop to copy those files into the desired atak subfolder on the Android device per the Table 1 reference.

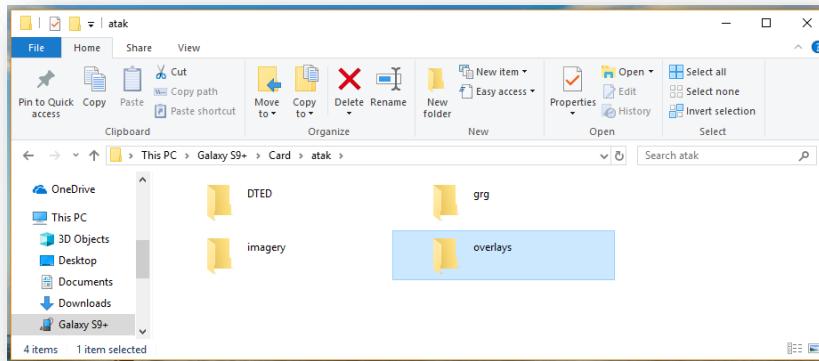


**Figure 6 – Copy Files from Windows into ATAK Folder Structure**

**Note:** If the atak folder is not available, transfer the data from the PC to the device's local storage, then into ATAK using the Import Manager (as provided in Section 2.2).

8. Relaunch ATAK - files will now be available.

A duplicate atak folder structure can be created on an external SD card. ATAK will use files placed within this folder in addition to those in the original atak folder on the phone. The SD card file structure can be created on a Windows or Android device and placed into any ATAK device for instant data access. The most commonly used subfolders include: DTED, GRG, Imagery and Overlays as depicted in Figure 7.



**Figure 7 – Example of Duplicate atak Folder on External SD Card**

## 2.2 Loading via ATAK Import Manager

Imagery, overlay, GRG and other data stored locally on an Android device can be imported into ATAK using the Import Manager. See Section 2.1, Steps 1-8 for information on connecting Windows and ATAK devices and using drag and drop to transfer files. For loading via the ATAK Import Manager, the desired files can be stored in any Android local directory. Reference Table 1 for information on preferred import techniques. If there is an “X” in the Folder column, select the folder containing all component files as the target when navigating Import Manager. For an “X” in the File column, the appropriate target is an individual file. For an “X” in the Zip column, the appropriate target is a ZIP file. Multiple “X” for a file type offer the user a choice of technique. All file types except Shapefiles and OBJ files that have support for individual file imports can be imported by selecting the folder containing those files as the target.

1. Launch ATAK on the Android device.
2. Select Additional Tools (3 lines) > View all tools & plug-ins > Import > Local SD to install from device internal storage or the removable SD card.
3. The naming convention of the Android file system can be confusing. The file navigation window has shortcut buttons in the upper left to the device internal storage (named SD card) and the removable SD card (named storage). See Figure 8 below.



**Figure 8 – Shortcut Buttons to Internal and External Storage**

4. Navigate to the folder, file or ZIP containing the import target.
5. Select Files for Import > OK.
6. If prompted, select desired import method. Files will now be available in ATAK.
  - Overlay files such as DRW, GPX, KML, KMZ, LPT and Shapefiles can be found in the Overlays > File Overlays listing.
  - Imagery files including CADRG, CIB, ECRG, GeoTiff, GeoJPEG2000, GNC, JPEG2000, MrSid, NTIF, PFI, PFPS, PRI, RPF and KMZ with imagery can be found in Maps > IMAGERY tab.
  - Mobile files including XML, SQLite and Geopackage imagery files can be found in Maps > MOBILE tab.
  - GRG files that are imported with the GRG File Import Method will be found in Overlays > GRG. GRGs imported with the Data Layer Import Method will be found in the Maps > IMAGERY tab.

## 2.3 Loading Elevation Data (DTED) into ATAK

ATAK will, by default, download/stream DTED0 elevation data if the device was not provisioned with elevation data. To disable the default preference, uncheck Stream Elevation Data in Settings > Tool Preferences > Elevation Overlays Preferences. Note: Elevation data will stream when the map scale level is around 500km.

ATAK uses Digital Terrain Elevation Data (DTED) files to provide elevation information. Other elevation data can also be used in ATAK, but this guide will only be covering DTED. Dependent on mission necessity, users may be provided with highly detailed DTED for a specific region. If streaming is not available and the user is not provided with other DTED data, low level (Level 0) DTED is available for general use at TAK.gov. Follow these steps to download and import DTED data into ATAK:

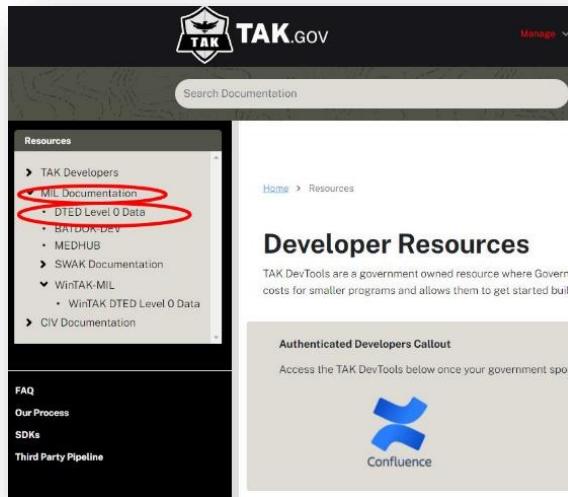
**Note:** If mission specific DTED files have been provided, the first four steps should be skipped.

1. Login to TAK.gov.
2. Select the Resources tab (as depicted in Figure 9), then select Available Resources.



**Figure 9 – TAK.gov Download Options**

3. Select MIL Documentation - DTED Level 0 Data as shown in Figure 10.



**Figure 10 – Selecting DTED Level 0**

4. When the download is complete, dtedlevel0.zip will appear in the Windows Downloads directory.
5. ATAK Import Manager requires that DTED data is in zipped folders. If the user has been provided a DTED data folder that is not zipped, follow these steps to zip the folder:
  - a. In a file explorer window, navigate to the location of the DTED data folder and long press\right click the name.

- b. From the context menu, select Send to > Compressed (zipped) folder as shown in Figure 11.

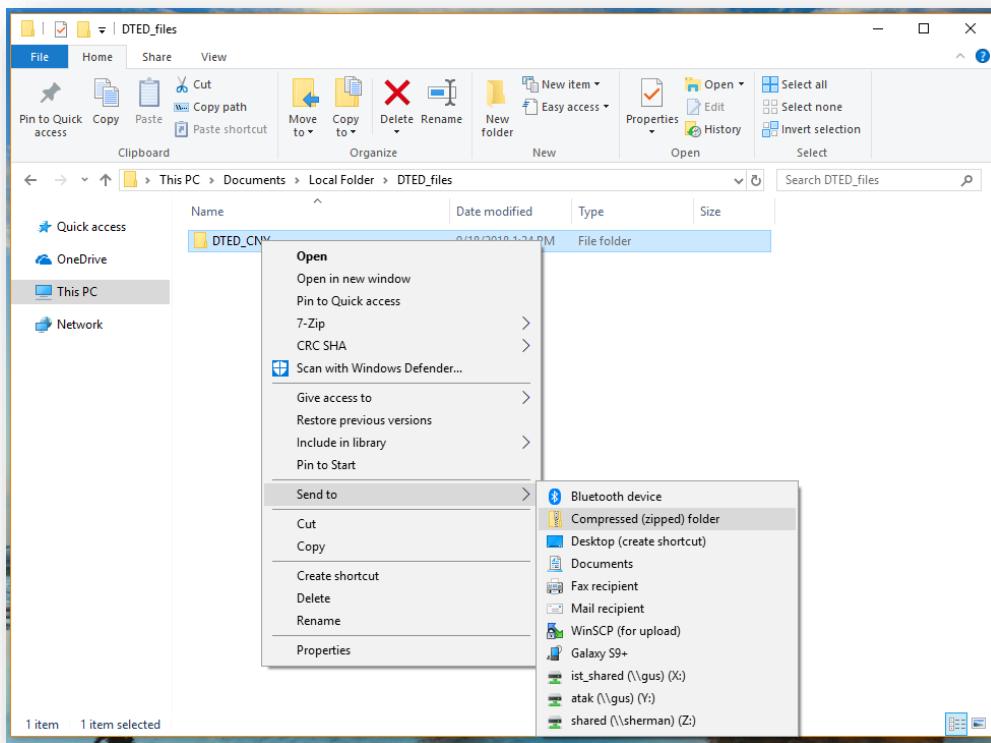


Figure 11 – Compressed Folder Selection

- c. The zipped DTED folder will appear in the list, as shown in Figure 12.

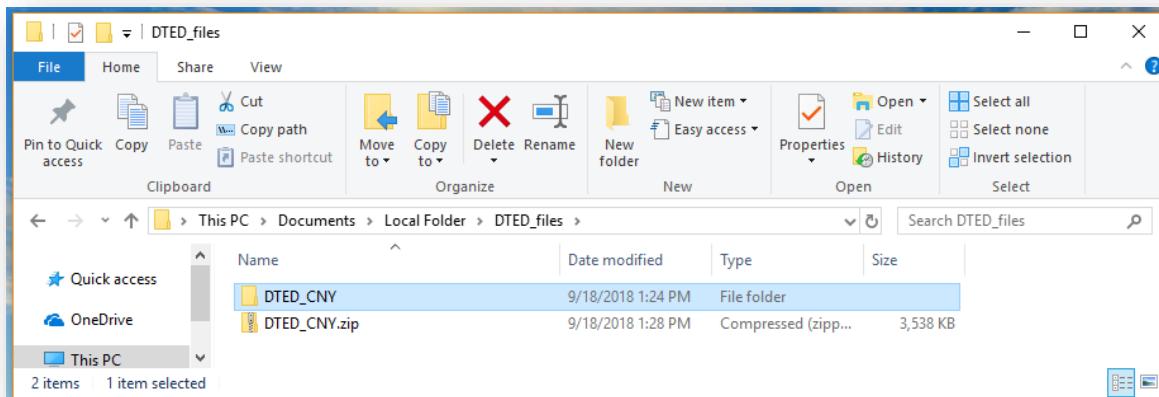
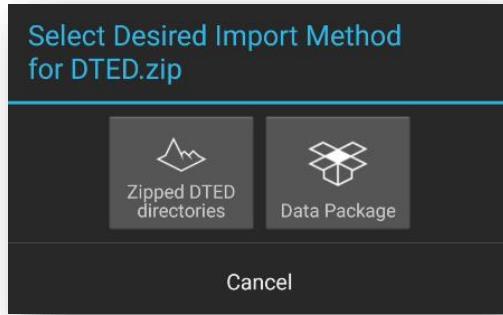


Figure 12 – DTED Folder

6. Follow the steps outlined in Section 2.2 (Loading via ATAK Import Manager) to bring in DTED data.
7. Select the Zipped DTED directories option when prompted (shown in Figure 13).



**Figure 13 – Choose Zipped DTED Directory**

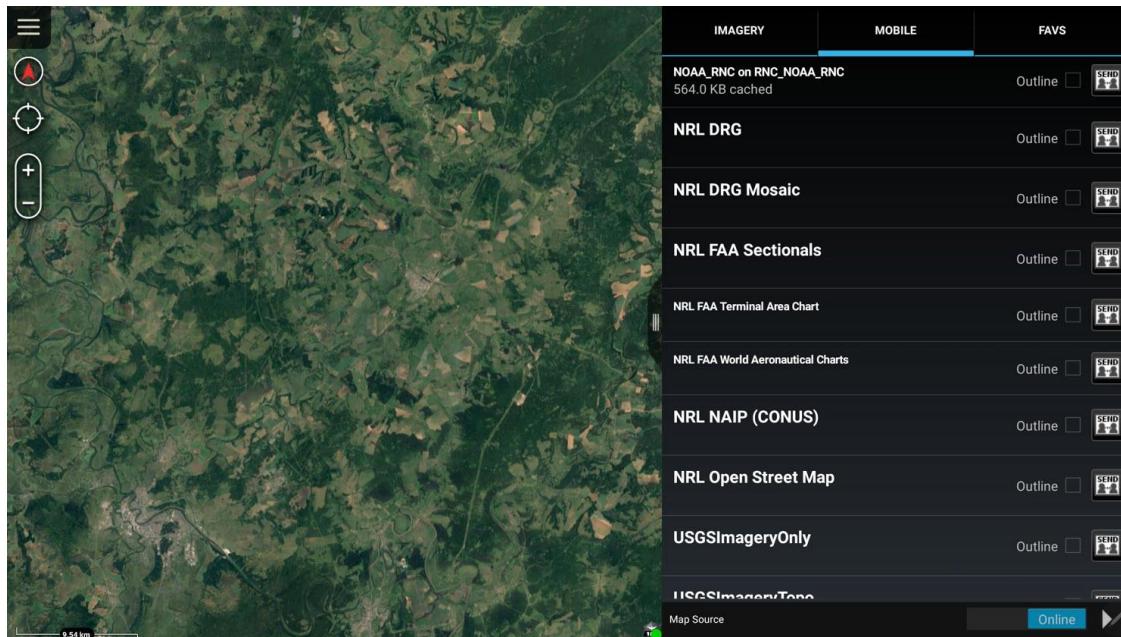
8. It may take a few minutes for ATAK to complete the DTED import. During this time, the Importing File icon will appear in the Android native notification center at the top left corner of the screen. When the DTED import is finished, the Import Complete icon will appear and DTED data will be available.



### 3 SAVING MAP IMAGERY FOR USE WHEN INTERNET CONNECTION IS NOT AVAILABLE

Map source tilesets can be downloaded in advance for missions that will allow no internet access. Follow these steps to create local tilesets:

1. Launch ATAK and select Maps > MOBILE tab > toggle Map Source to Online.
2. Select desired Map Source from the listing, as shown in Figure 14.



**Figure 14 – Selecting Specific Map Source**

3. Select the triangle on bottom right corner of screen (depicted in Figure 14), then tap Select Area. Choose between Rectangle, Free Form, Lasso or Map Select (to use an existing Drawing Tools shape) to define the boundary. Selection of the Rectangle is assumed for the following instructions.
4. Designate the tileset download area by using a three-point entry (2P+D). The first 2 points define the edge, and the third point defines the depth of the desired rectangle and then the rectangle will appear, as depicted in Figure 15.



**Figure 15 – Tileset Download Selection Area**

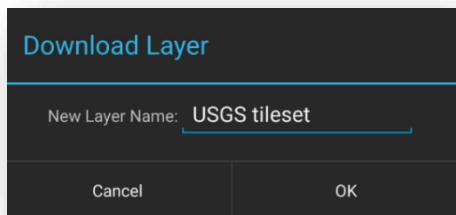
5. Adjust for the number of tiles in the set by sliding the blue dots to set the map resolution. As the minimum and maximum values are changed, the tileset size will change as shown in Figure 16.



**Figure 16 – Adjusting Tileset Size**

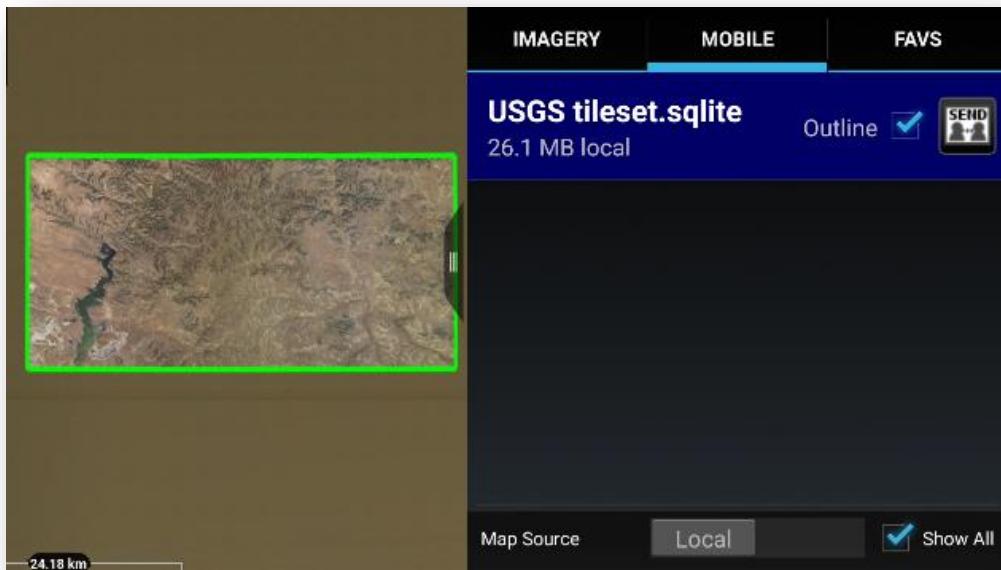
- **Note:** The number of tiles displayed on the right side of the blue area. Creating tilesets less than 1,000 tiles will take a few minutes. Creating a very large tileset could take hours. The creation of tilesets greater than 300,000 tiles is not supported.

  6. When the resolution and rectangle are as desired, select Download > Create a new tileset > enter desired name > OK. This is shown in Figure 17.



**Figure 17 – Entering Name for Downloaded Tileset**

7. When download is complete, switch from Online to Local and find the newly created tileset in the MOBILE tab listing.
8. Tap the outline check box (Figure 18) to differentiate the local tileset from the online cached tiles.



**Figure 18 – Viewing Newly-Created SQLite Image**

- The local tileset will remain in ATAK until the Clear Content function is performed.
- The generated .sqlite file can be copied from atak\imagery\mobile and distributed to other users through other media.

## 4 ENCRYPTING MESH COMMUNICATIONS

ATAK can be configured to encrypt all mesh communication using AES-256. When mesh encryption is enabled, ATAK will no longer send or receive unencrypted traffic on the local network and will only be able to communicate with other devices on the local network if they have also been configured with the same encryption key.

### 4.1 Generating an Encryption Key

1. Launch ATAK.
2. Select Additional Tools (3 lines) > View all tools & plug-ins > Settings > Show All Preferences > Network Preferences > Network Connection Preferences > Configure AES-256 Mesh Encryption.
3. Select Generate Key.
4. Enter a file name for the generated key.
5. Select OK. The key will be saved on the ATAK device's local storage in the atak/config/prefs directory, with the file name entered in the previous step.

### 4.2 Loading an Encryption Key

After a key file is generated, it must be loaded onto every ATAK device on the local mesh network in order for all the devices to successfully communicate in mesh mode.

1. Copy the generated key file to the ATAK device's local storage.
2. Launch ATAK.
3. Select Additional Tools (3 dots) > Settings > Show All Preferences > Network Preferences > Network Connection Preferences > Configure AES-256 Mesh Encryption.
4. Select Load Key and browse to the location of the key file. After the key file is selected, a toast message should appear saying "Mesh Encryption Key Loaded".

### 4.3 Disabling Mesh Encryption

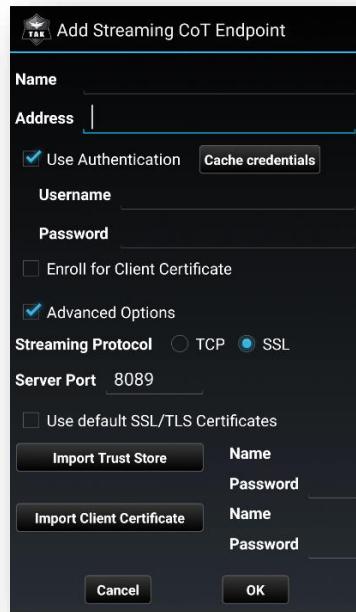
1. Select Additional Tools (3 lines) > View all tools & plug-ins > Settings > Show All Preferences > Network Preferences > Network Connection Preferences > Configure AES-256 Mesh Encryption.
2. Select Forget Key. ATAK is now in unencrypted mesh communication mode.

## 5 CONNECTING TO A TAK SERVER

Use a TAK Server to provide connectivity between users on different networks. Connection to a TAK Server can be implemented manually or by importing a pre-configured TAK Server connection package zip file. The TAK Server administrator will provide users with all server specifications, passwords and .p12 *Trust Store* and *Client Certificates* files that are necessary to establish a server connection.

### 5.1 Establishing a TAK Server Connection Manually

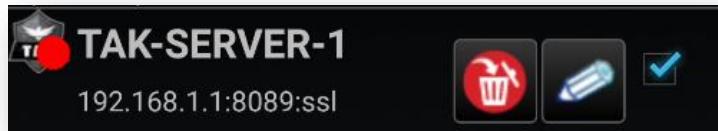
1. Acquire Trust Store and Client Certificates .p12 files on local device.
  - **Note:** If the user's TAK Server supports Client Provisioning they will need only the TrustStore .p12 certificate file.
2. Launch ATAK.
3. Select Additional Tools (3 lines) > View all tools & plug-ins > Settings > Network Connections. If no previous network connections have been established, a dialog box will appear for configuration options. Select Network Connections > Manage Server Connections > select the 3 dots in the upper right corner > Add. The Add Streaming CoT Endpoint screen appears as shown in Figure 19.



**Figure 19 – Adding TAK Server Connection**

4. Enter a name for the TAK Server connection in the name field.

5. Enter a Host IP address or name in the Address field.
6. If user credentials are necessary for the TAK Server:
  - Check the box for Use Authentication.
  - Enter a username.
  - Enter a password.
  - If the user would like to cache credentials or username, choose from the drop-down menu.
7. Check the Advanced Options box.
8. Choose SSL (or TCP if non-secure connection is desired), as depicted in Figure 19.
9. Enter the Server Port number (if not using the default value).
10. Uncheck the Use default SSL/TLS Certificates box.
11. Select the Import Trust Store button and browse to the location of the *Trust Store*.p12 file.
12. Enter the Password (if any) for the *Trust Store* file.
13. If the user's TAK Server supports Client Provisioning and wish to use it, select Enroll for Client Certificate. If successful, skip to Step 16. Otherwise, proceed to Step 14.
14. Select the Import Client Certificate button and browse to the location of the *Client Certificate*.p12 file.
15. Enter the Password (if any) for the *Client Certificate* file.
16. Select the OK button at the bottom of the screen. The user will be returned to the TAK Server Connection screen and see the new connection. A green dot indicates connectivity, and a red dot indicates no connectivity (shown in Figure 20).

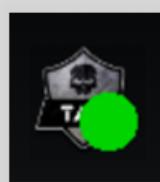


**Figure 20 – TAK Server Connection Status (Not Connected)**

## 5.2 Establishing a TAK Server Connection via Pre-Configured Zip File

Follow these steps to use a pre-configured TAK Server Connection Package zip file to establish a connection:

1. Launch ATAK.
2. Select Import > Local SD.
3. Navigate to the pre-configured zip file and select it.
4. When the TAK Server connection is established, the TAK connection green dot icon will appear in the Android notifications area as shown in Figure 21. The green connection icon may also appear at the Self Marker widget in the lower right of the display, if enabled in preferences.



**Figure 21 – TAK Server Connected**

5. For security purposes, the zip file will be automatically deleted by ATAK. After import, the file will no longer appear in original location within Android folders.
  - **Note:** The exception is that ATAK may not delete the zip file if it is located on the external SD card for Android 4.4 to Android 10.

## 6 UNINSTALLING ATAK FROM AN ANDROID DEVICE

Follow these steps to remove ATAK from an Android device:

1. Launch Android settings.
2. Scroll through listing to find the Application Manager (on some devices called Apps or Applications, as shown in Figure 22).



**Figure 22 – Installed Apps**

3. Tap the ATAK entry in the list. The ATAK application information screen will appear as shown in Figure 23.



**Figure 23 – ATAK Information**

4. If Clear Data option is not available on this screen, look for them by selecting Storage.
5. Select Clear Data then tap OK.
6. Select Uninstall then tap OK.
7. If there are standalone applications that were installed to support ATAK, they can be removed by repeating the steps above for each. Supporting applications include Night Vision, TAK GeoCam, TAK ICU, Network Monitor, Serial Monitor and Image Markup.
8. Any plug-ins that were installed to support ATAK can be uninstalled in a similar fashion as standalone application. On some Android devices plug-ins will appear in a separate listing and may require some exploration to find them.
9. Using a file browser, navigate to the internal “atak” folder and delete it.

10. If a duplicate “atak” folder structure has been created on an external card, use a file browser to navigate to the folder and delete it.
11. Depending on how they were created, files on an external SD card may not be available for deletion by the Android device. If this presents a security issue, remove the SD card from the Android device.
12. The Android installation file can be removed from the device by using the file browser to locate the ATAK-x.x.x-civ-release.apk file (x.x.x represents build number and version) and deleting it. If unsure as to location of the apk file, it may be in the Download folder.