Consumer OASIS User Guide
Software Version 7.13.04

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Contents

Introduction

Scope and audience

This document explains how to use the **Onsite Accelerated Service Installation System** (OASIS^{TM}) app when performing a consumer installation. It is written for professional installers who use the app on their smart devices to facilitate their duties during site visits.

Installers should reference this document whenever they need additional guidance.

Overview

The OASIS app is designed for use with smart devices (e.g., tablets and smart phones). It provides a step-by-step process for the installer to follow from site arrival to site departure.

This guide is best read from beginning to end. It follows the flow of the app and the chronology of the installation process.

This manual was written using software version 7.13.04.

Installing OASIS

OASIS is available as a download from the Hughes^{TM} Appstore (http:\\appstore.hughes.com); you cannot download this app from the Apple App Store or the Google Play Store. **You must download this app from the mobile browser of a smart device (i.e., not from a computer).**

Notes:

- Make sure you delete any previous versions of the app from your device before installing a new version.
- The app consumes approximately 15 MB of space in Apple iOS and 12 MB of space in Google Android, but Hughes recommends your device have at least 100 MB of free space to accommodate the photos you will take during your installations.
- *For Android devices*, check your settings to make sure apps from unknown sources are allowed.
- *For iOS devices*, check your Device Management settings to make sure Hughes Network Systems^{TM} is listed as a trusted source.
- Before you install a software update for your smart device, uninstall OASIS. Once you have applied the software update, download and reinstall the latest version of OASIS from the Installation Portal (IP).
- For OASIS to work correctly, *you must have global positioning system (GPS) location services enabled on your smart device*. Consult your smart device's documentation for instructions on how to enable this.

Launching and logging in to OASIS

Before you depart for any installation, you must connect your smart device to the internet and log in to OASIS so the app can verify your installer account, synchronize your field service orders (FSOs), and download the latest satellite-based commissioning (SBC) file. **If you do not sync your device daily, you may not have the latest SBC file, which will prevent you from getting a high enough signal quality factor (SQF) to complete the installation.**

Note: While you need internet access for initial syncing, you will not need internet access while you are performing the installation.

To log in to OASIS and sync your device:

1. Ensure your device is connected to the internet.
2. Tap the OASIS icon to launch the app. A splash page displays for a few seconds while the app loads (Figure 1).

Figure 1: OASIS splash page

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The User Login page appears (Figure 2).
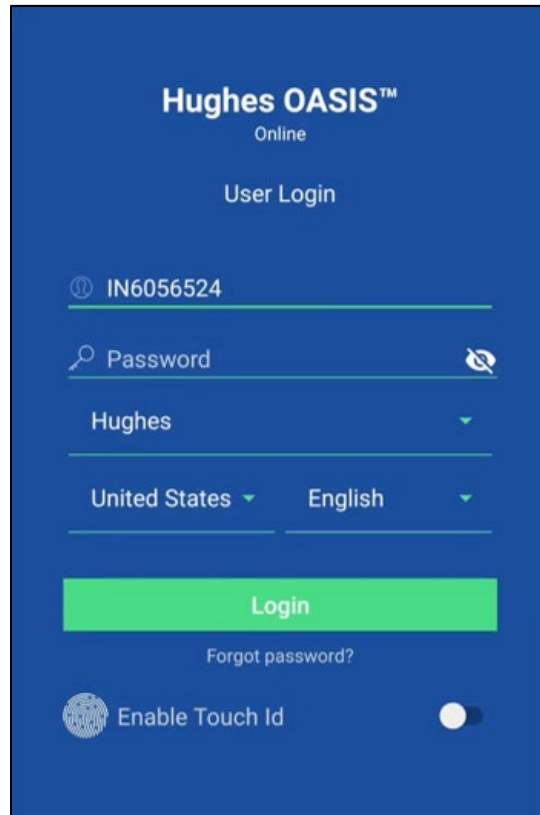
Figure 2: User Login page

3. Enter your installer ID number for your username and then enter your password in their respective fields.
   – Your login credentials for OASIS are the same as your credentials for the Installation Portal.
   – When your password expires, OASIS will display an error message.
     • Reset your password by using the prompts from the error message or by tapping the **Forgot Password** link. You can also reset your password in the Installation Portal.
     Note: If you forget your password, use the **Forgot password** link below the **Login** button.
   – OASIS remembers your username between logins, but you will need to re-enter your password.
   – If OASIS crashes and you re-launch in fewer than 15 minutes, the app will automatically log you in again.
     Note: You can leave the app unattended for up to 15 minutes before it automatically logs you out.
   – See Appendix B on page 107 for steps on how to fix login errors.
4. Tap **Login**.

The OASIS homepage appears (Figure 3).
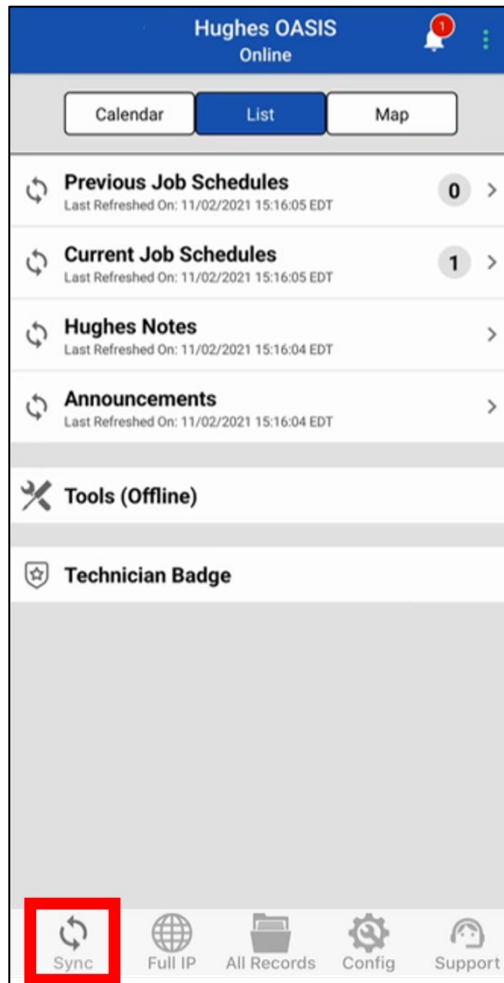
Figure 3: OASIS homepage – List view

The homepage automatically synchronizes if you are connected to the internet. If you are using a cellular connection, the homepage will synchronize automatically as well, but you will receive the message displayed in Figure 4.
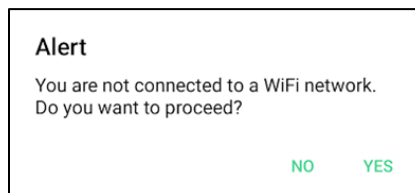
Figure 4: Synchronizing on a cellular connection

You can also manually synchronize your device by tapping **Sync** icon ( ) in the bottom toolbar (Figure 3). An exclamation icon ( ) will appear to show that the sync is in progress, and a checkmark icon ( ) will appear when the sync is complete (Figure 5).

Note: Your device might take up to 30 seconds to manually synchronize. *Do not interfere with the app during the synchronization process.*
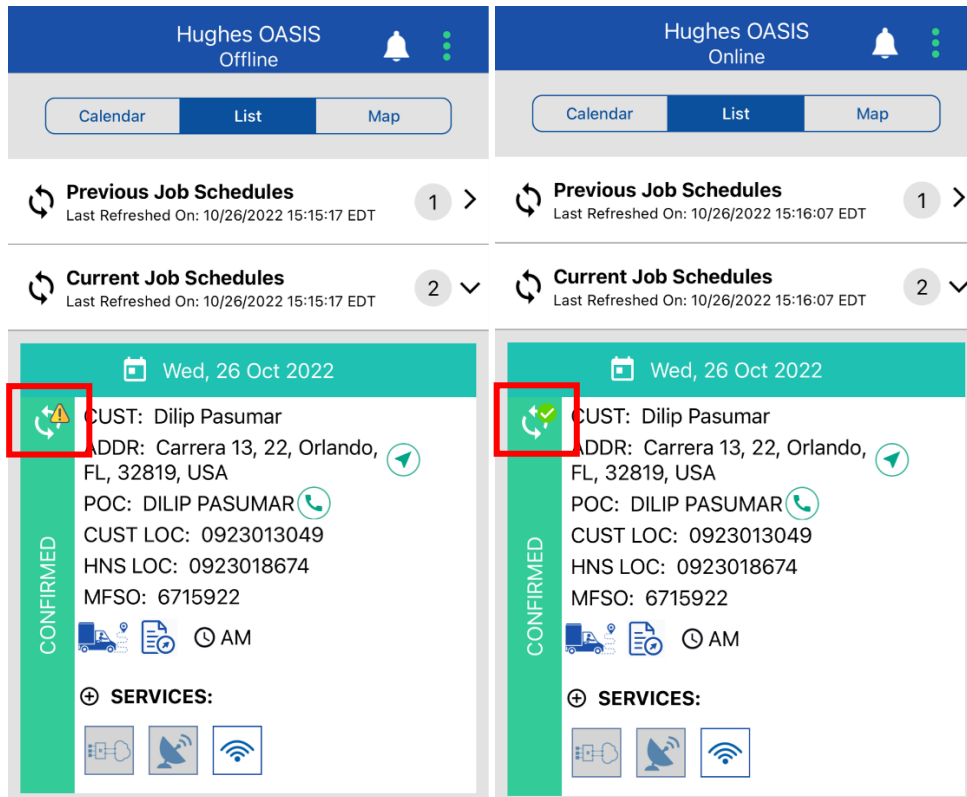
Figure 5: Sync in progress (left) and sync complete (right)

OASIS homepage

The OASIS homepage (Figure 3 on page 8) contains menus for previous jobs, current jobs, current Hughes notes, announcements, offline tools, and your electronic badge. Tap a menu to expand it. Tap the refresh icon (↻) to refresh a specific menu. The contents of each menu are explained below.

- **Previous Job Schedules** – Shows jobs that were scheduled for previous dates, including any jobs you completed.
- **Current Job Schedules** – Shows current and future jobs and provides maps and directions to the job location.
- **Hughes Notes** – Shows current news pertaining to Hughes. Identical to the Hughes Notes section on the Installation Portal.
- **Announcements** – Shows current news pertaining to HughesNet™ and OASIS. Identical to the Announcements section on the Installation Portal.
- **Tools (Offline)** – *Commonly used during repair orders or when repointing.* Shows a selection of tools you can use offline without affecting your work order (Figure 6).
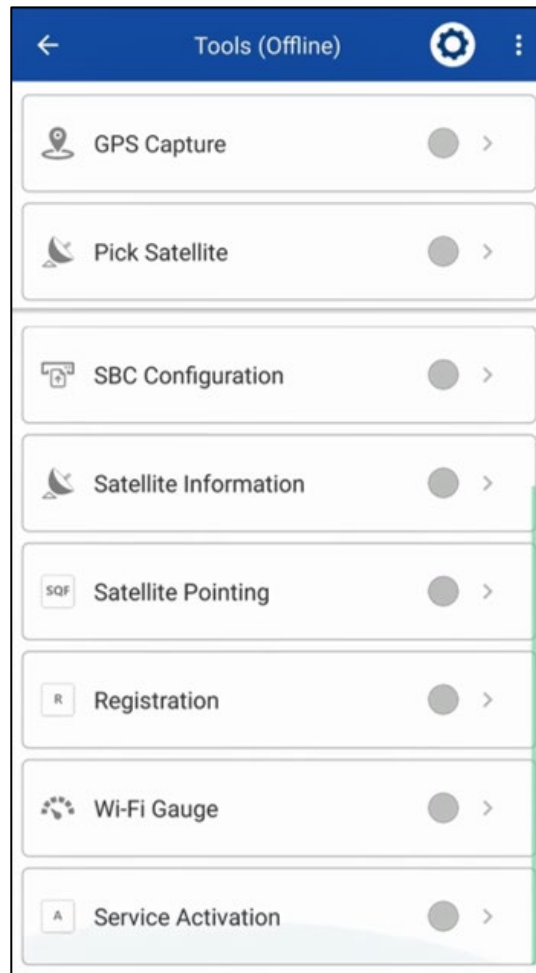
Figure 6: OASIS homepage – Tools (Offline)

- **Technician Badge** – Shows your identification and badge information. For more on the technician badge, see Technician badge on page 13.

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Figure 7 shows an expanded Current Job Schedules menu.
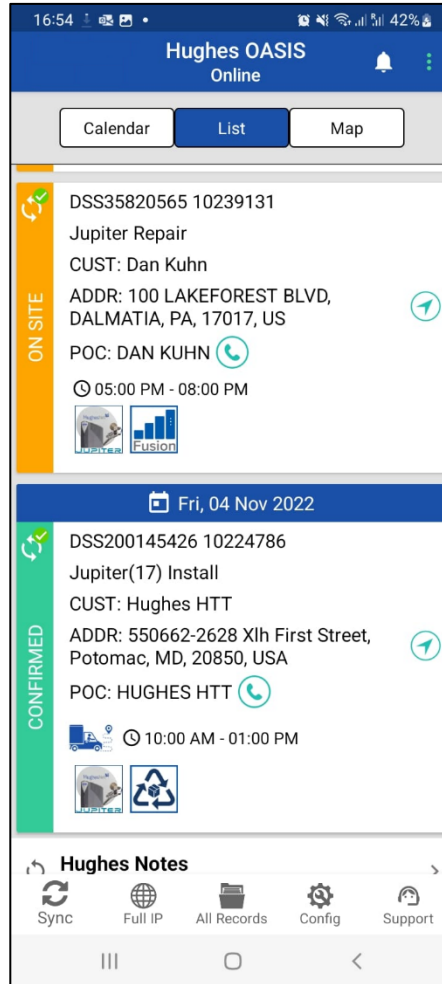
Figure 7: Current Job Schedules – List view

Note: For JUPITER™ installations, the job description specifies the satellite to which you will point the antenna.

By default, the homepage displays a list view of current jobs (as in Figure 7).

The map view (the screenshot on the left in Figure 8) shows each FSO on a street map, allowing the installer to plan out multiple installs in a day and easily navigate to the installation sites.
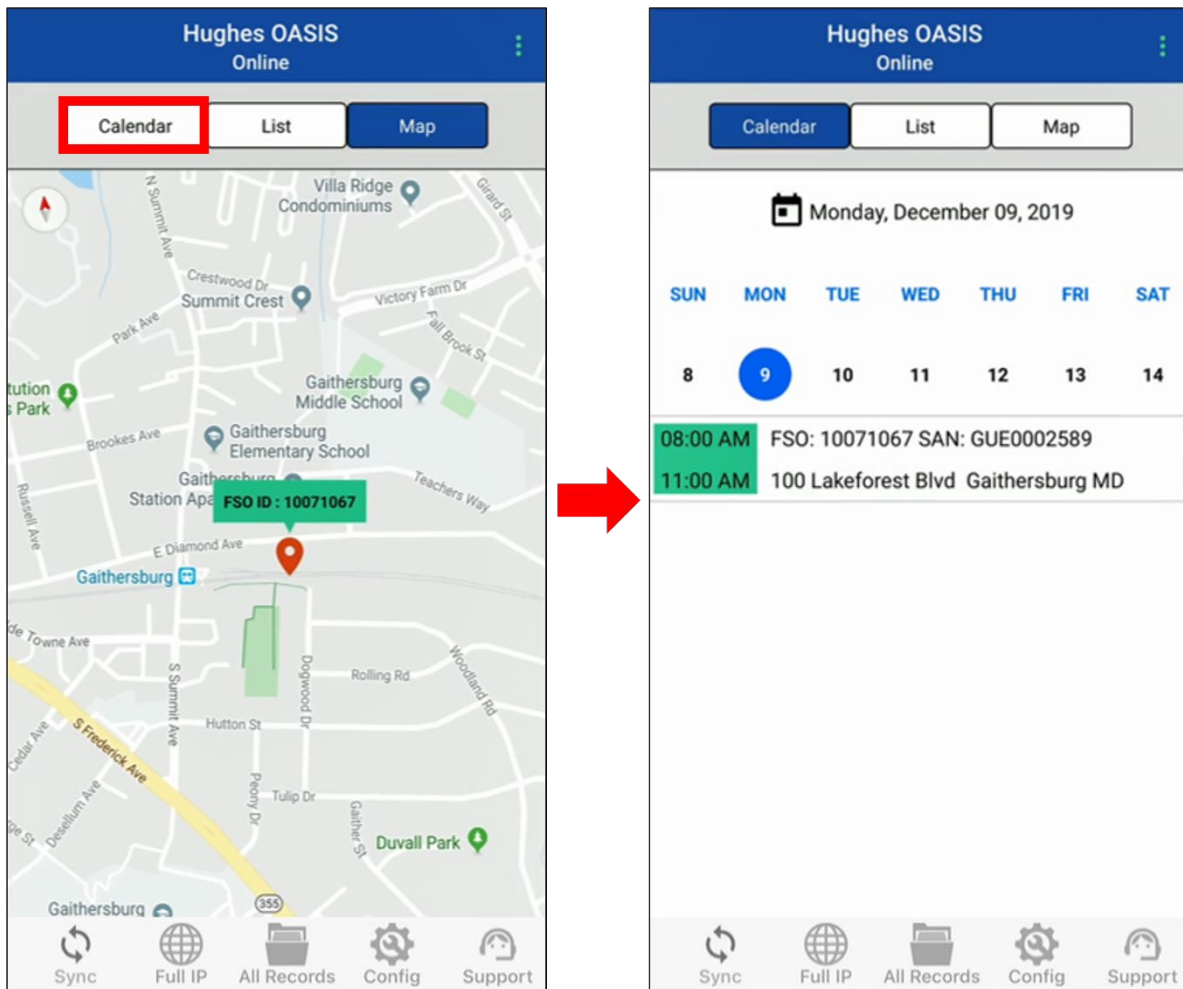
Figure 8: Current Job Schedules – Map and Calendar Views

If you tap **Calendar** at the top left of the screen, the app switches to a calendar view (the screenshot on the right in Figure 8), which shows a timeline of your upcoming installations.

Technician badge

The OASIS homepage also includes a link to your electronic badge. To access the badge, tap **Technician Badge** on the OASIS homepage (outlined in Figure 9). The badge includes your photo, name, installer ID, and the current date.
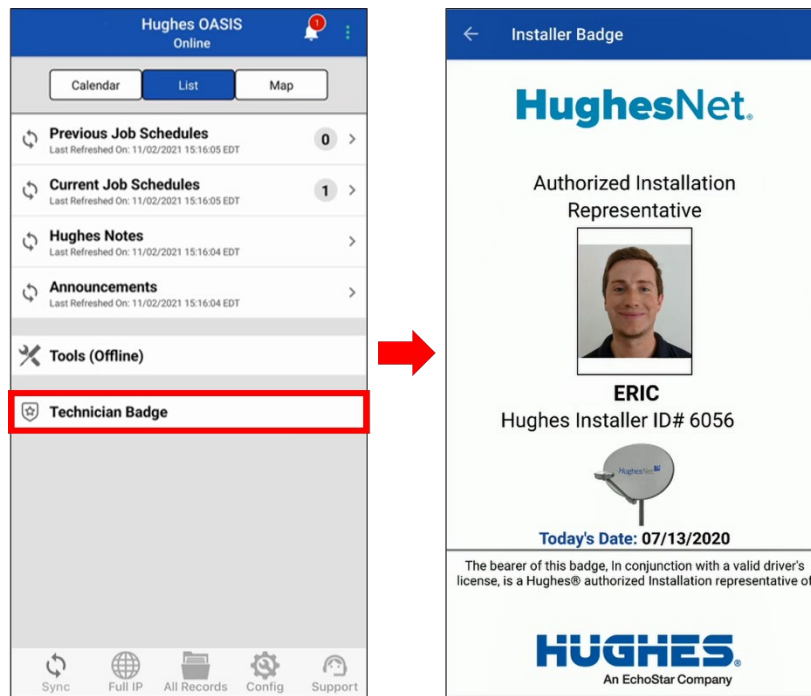
Figure 9: Accessing the electronic badge

Homepage bottom toolbar

The icons in the bottom toolbar on the OASIS homepage (Figure 10) perform the following actions.

Figure 10: OASIS homepage – bottom icons

- **Sync** ( ) – Pulls your latest work order data from the Installation Portal. Tap to manually resynchronize your orders.
- **Full IP** ( ) – Opens the Installation Portal from a browser on your device and automatically signs you in.
- **All Records** ( ) – Shows data from orders currently saved on your smart device. You can delete this data or upload it to the Installation Portal from this page.
- **Config** ( ) – Allows you to customize OASIS. Options you can update include:
  - The number of days displayed on the work order calendar
  - How often OASIS downloads information from and uploads information to the Installation Portal
  - Whether OASIS will sync using cellular data of Wi-Fi only
  - The resolution of the photos you take
    Note: We recommend you set this as high as possible for photo audit purposes.
  - The app color scheme
  - Whether OASIS automatically exports attachments, such as photos and customer signatures, to your device's gallery
  - Whether Touch ID is enabled
- **Support** ( ) – Launches live installation chat support, where you can chat with a support agent about your current installation or upcoming installations. You can also auto-dial different support groups from this page. For more on the **Support** button, see Support on page 16

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Notifications

A bell icon on the top of the screen (outlined in Figure 11) notifies you that you have received messages, such as order updates, password expiration notices, and important notes from Hughes.
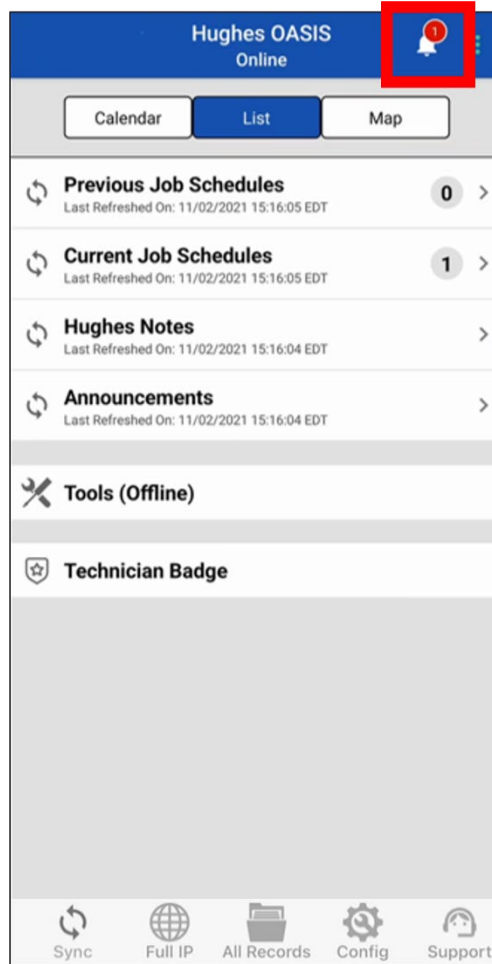
Figure 11: Bell icon

Support

Use the **Support** button to chat with an installation support person. The steps below describe how to access this tool.

1. Tap on the **Support** button (shown in the bottom toolbar of Figure 11).
2. The *Install Support* menu will appear, as shown in Figure 12. You can choose to tap on any of the phone numbers to call any of the support lines directly or chat with a live agent using **Live Chat**.
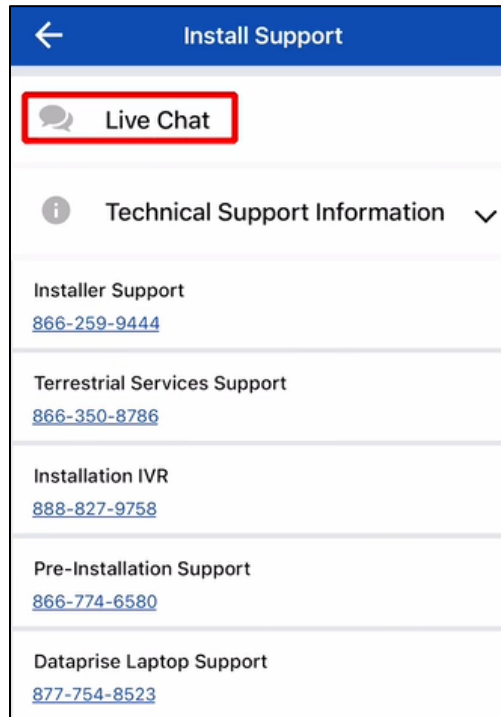
Figure 12: Install support

3. Selecting Live Chat will notify an agent to connect to the chat, as shown in Figure 13. You can discuss whatever issue you are currently experiencing with the agent and work together to correct the issue.
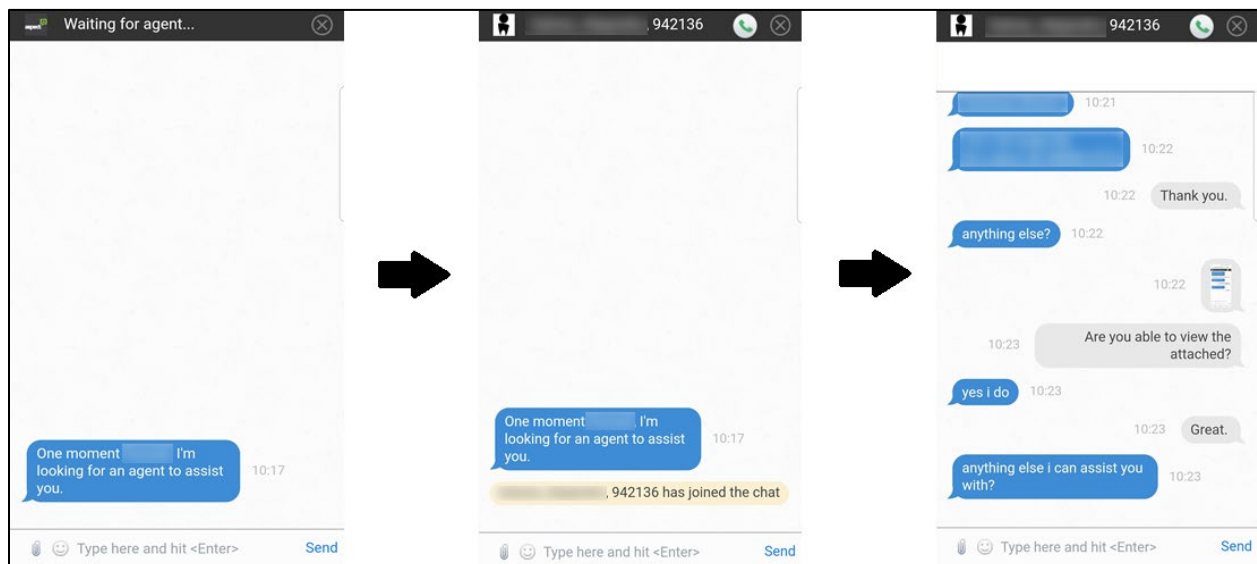
Figure 13: Chatting with an agent

4. When you are finished chatting with the agent, you can tap the **Exit** button (⊗) in the upper right-hand corner of the window, as shown in Figure 14. The chat client will ask you to verify that you want to end the chat session. Tap **OK** to proceed.
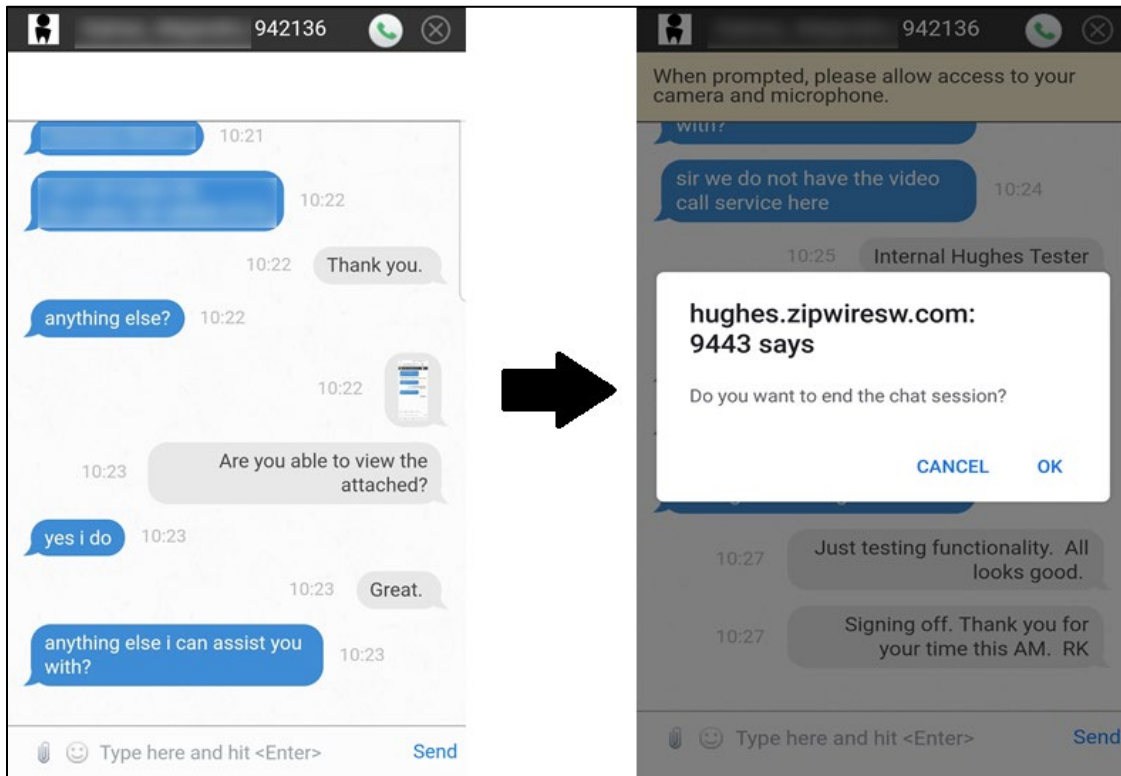
Figure 14: Closing the chat client

Step progression, navigation bar, and tools bar

Either tap the right arrow (→) or swipe to the left to proceed to the next step if you are following the step-by-step OASIS sequence.

As you continue through OASIS, the navigation bar shown in Figure 15 will remain at the top of the screen (unless you choose to hide it). Your current step is underlined in orange, your previous step is shown on the left, and the next step in the sequence is shown on the right. Swipe left or right on the navigation bar to scroll to future or previous steps, respectively.

Figure 15: Navigation bar

The Tools bar, shown in Figure 16, will remain at the bottom of the screen as you progress through the app (unless you choose to hide it).

Figure 16: Tools bar

Tapping an icon does the following.

- **Home** (🏠) – Navigates back to the OASIS homepage and syncs any orders you have if you are connected to the internet.
- **Records** (☰) – Shows the status of completed steps in your current work order. Also shows information about completed orders.
- **Notes** (📝) – At any point during the workflow, you can enter notes about the order by tapping the **Notes** icon (Figure 17). You will also see any other notes that were entered for the work order.
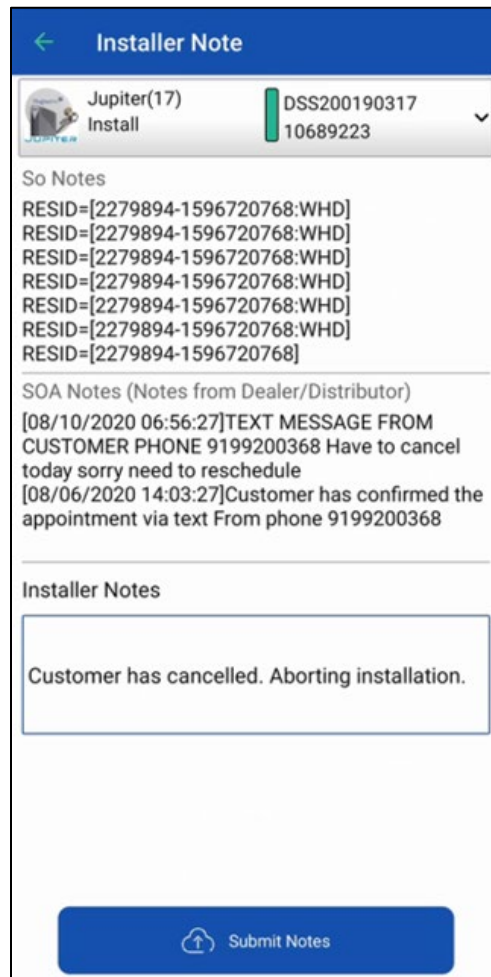
Figure 17: Installer notes

- **More** (☰) – An expanded menu that allows you to jump to any step within the OASIS workflow (see Figure 18).
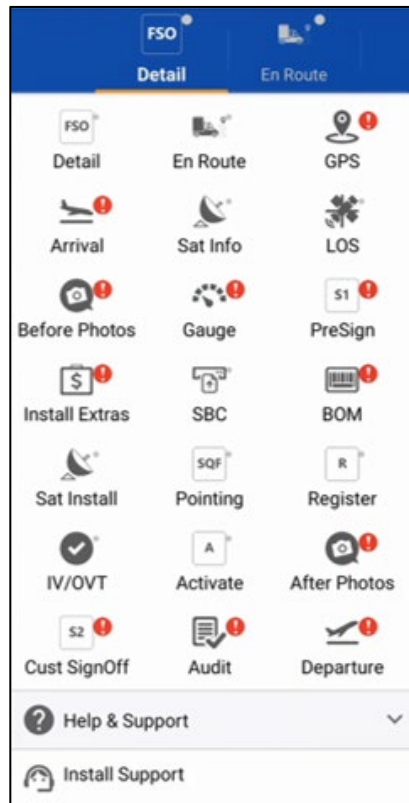
Figure 18: More menu

Any step that has a red exclamation point by it is a mandatory step that has not yet been completed.

You can also launch the Installer Support page from the *More* menu.

Backing up attachments

At any point during the installation, you can back up any attachments you have (for example, pictures and signatures). This prevents data loss in the event of an app crash. If you do not have internet access to upload the attachments to the Installation Portal at the end of an installation, backing them up allows you to save the attachments and upload them later when you have a better connection.

To export your attachments to the photo gallery on your smart device:

1. In the bottom toolbar of the home page, tap **All Records** (outlined in Figure 19) to navigate to the Records page.

Figure 19: All Records icon in bottom toolbar

2. In the Records page, scroll to the bottom of the page and tap the blue icon (⬈) to export the attachments to your phone (Figure 20).
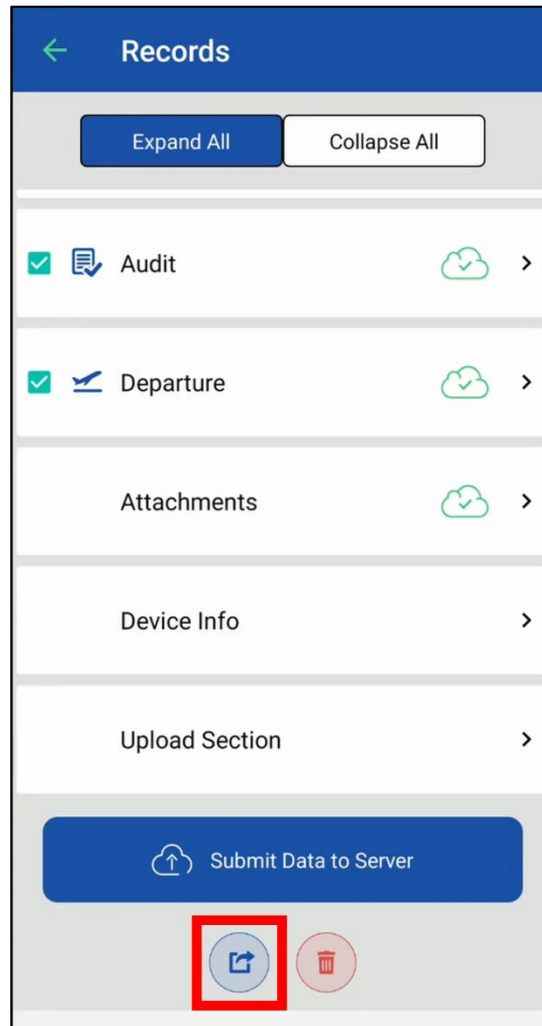
Figure 20: Backing up attachments

OASIS exports all the attachments for your current FSO to a folder in your photo gallery named, `OASIS_<FSO number>_<SAN>_<Timestamp>`.

Troubleshooting

Before contacting Hughes, read the troubleshooting information in Appendix B on page 107. If the solution to your problem is not given there, call Hughes Installer Support at 1-866-259-9444.

Alternatively, contact Mobile-App-Issues@hughes.com or click the **Installer Feedback** link on the Installation Portal to access the Installer Feedback Submittal form. To fill the form:

1. Select **Mobile App Issues** from the *Subject* drop-down (outlined in Figure 21).

Figure 21: Installer Feedback Submittal form on the Installation Portal

2. In the *Message* textbox that appears, describe the problem you encountered with OASIS.
   Note: Error codes are present in all error messages that appear in OASIS (Figure 22). Include the error code when possible.

Figure 22: Example error message with code

3. Fill out the remaining required fields, and as many of the optional fields as you can.
4. Click **Submit**.

Before the installation

Beginning an installation

To begin a standard OASIS installation, expand the *Current Job Schedules* menu and find the work order for the job you are going to perform (Figure 23).
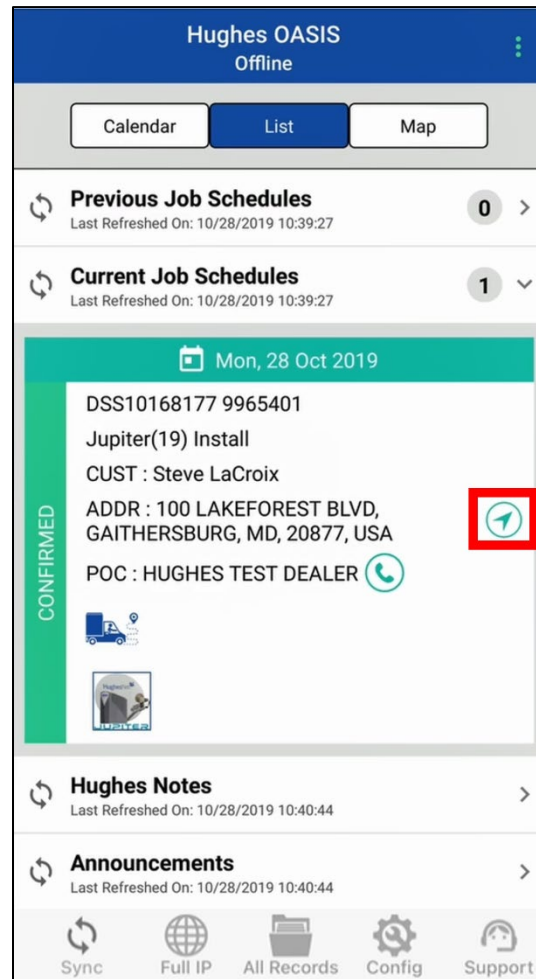
Figure 23: Expanded Current Job Schedules menu

The expanded order shows the customer's information, such as the customer's name, their telephone number, and the address of the installation location.

You have the option to launch turn-by-turn directions to the customer's house. To do this, tap the green arrow (outlined in Figure 23).

Icons at the bottom of the order indicate the services you will be installing (outlined on the left in Figure 25). If the customer is eligible to receive refurbished equipment, the ![recycle icon] icon will appear as shown on the right in Figure 25. If this icon is present, use refurbished equipment if it's available.
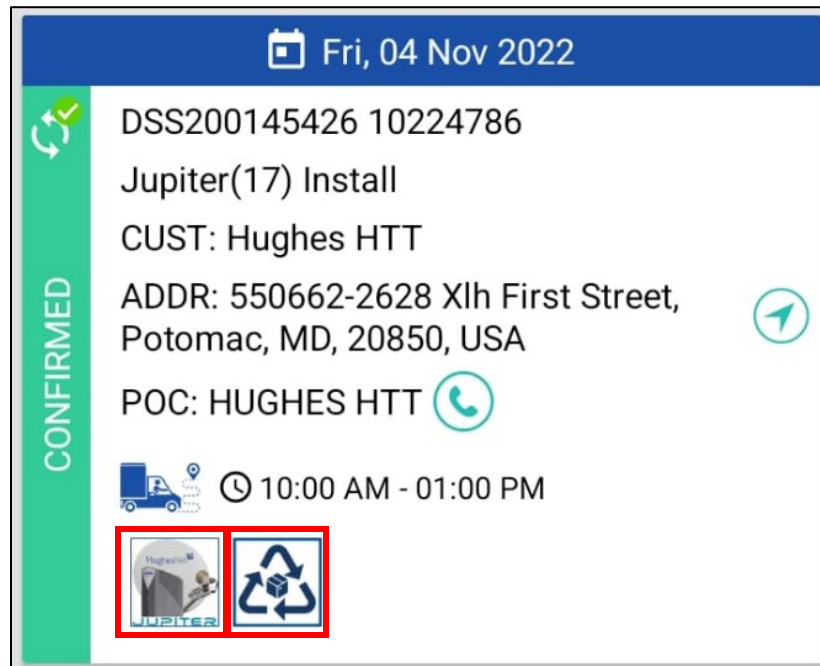
Figure 24: Service order icons

The order depicted in Figure 24 is for a standard HughesNet installation, but other orders can include things like voice over IP (VoIP) service.

Tap the work order to navigate to the first step in the OASIS workflow, the FSO Detail step.

FSO Detail step

The FSO Detail step (Figure 25) contains all the pertinent information about your currently selected job.
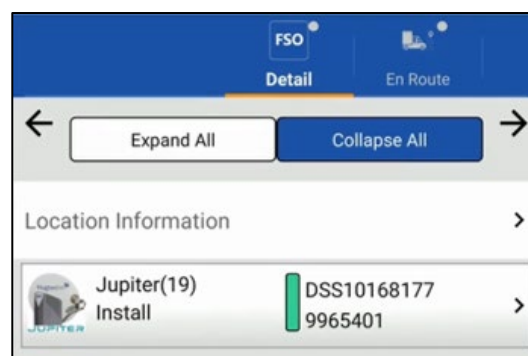
Figure 25: FSO Detail step

Tap a menu to expand it. Tap **Expand All** or **Collapse All** to open or close every menu at once. The menus include location information and service order information.

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Location Information

The *Location Information* menu (Figure 26) displays the customer's name, address, phone number, and email address. It also gives the dealer's name, phone number, and email address.
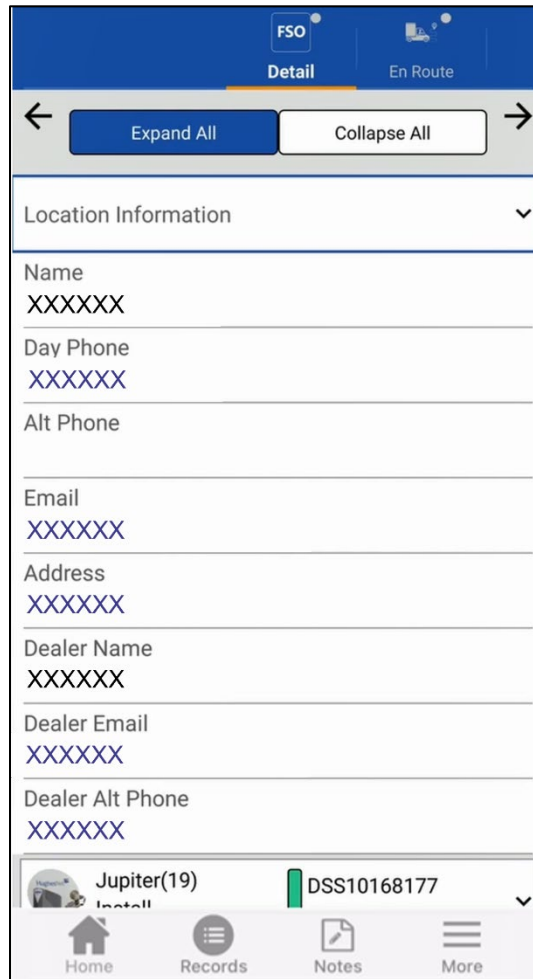
Figure 26: FSO Detail – Location Information

Each of the hyperlinked fields on this page automatically launches the applicable app on your smart device. For example, tapping the email address will launch your device's email program and create a draft message to that address.

Service Order Information

The *Service Order Information* menu (Figure 27) provides in-depth information about the order.
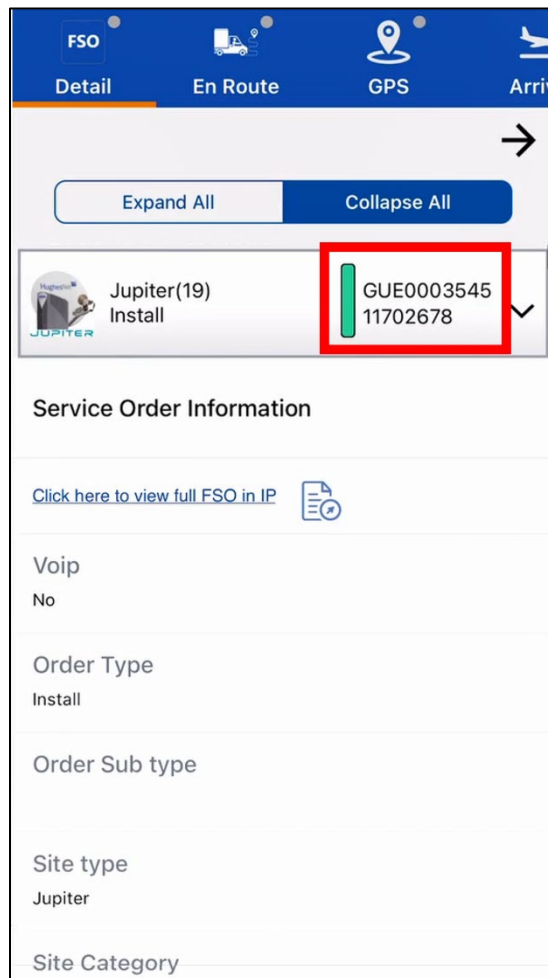
Figure 27: FSO Detail – Service Order Information

The site account number (SAN) and FSO number for the order are displayed at the top (outlined in Figure 27).

Other important information includes the PIN and the installation parameters (outlined in Figure 28).
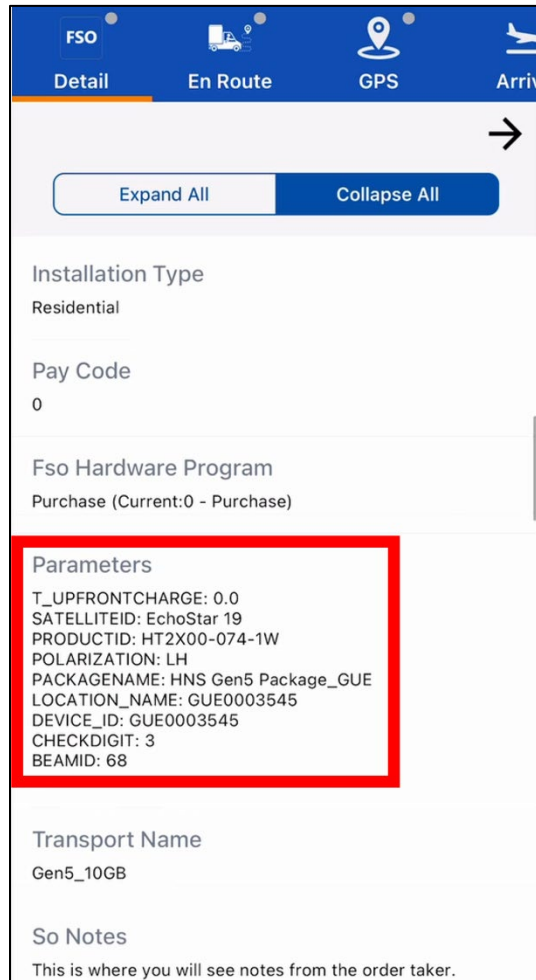
Figure 28: FSO Detail – Installation Parameters

Take note of the following information in the *Installation Parameters* section:

- Satellite ID
- Polarization
- Beam ID

Note: Always make sure the radio polarization shown in the Installation Parameters is the polarization you use for the installation.

Further down on the screen, the notes section (Figure 29) lists notes about the order written by the person who took the order, the dealer or distributor, or Hughes, as well as any notes given by the customer.
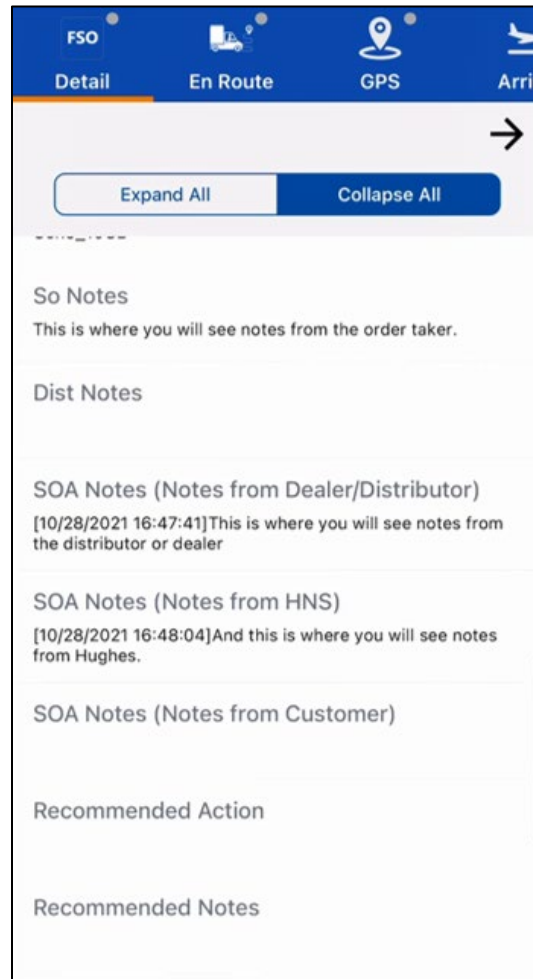
Figure 29: FSO Detail – Notes

En Route step

Before you leave for the site, you must use the En Route function in OASIS to let the customer know you are on the way. This step (Figure 30) immediately follows the FSO Detail step.
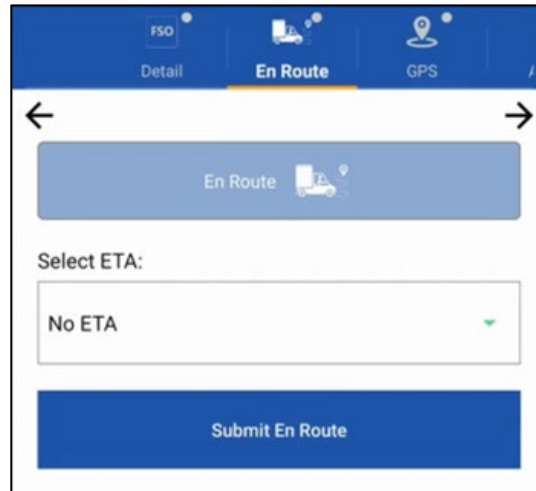
Figure 30: En Route step

1. Tap **En Route**.
2. Select your estimated time of arrival (ETA) to the site from the *Select ETA* drop-down.
3. Tap **Submit En Route**.

The customer will be notified via a text message that you are on the way.

If something happens and you need to postpone or cancel the order, you can abort the en route by tapping **Abort En Route** (Figure 31).
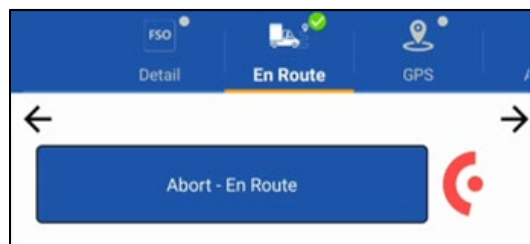
Figure 31: Abort En Route

You will then have to select a reason for the abort, give additional comments, and then submit the abort (Figure 32). Be sure to call the customer to let them know about the delay or cancellation.

Figure 32: Submit Abort En Route

Site arrival

This chapter describes the steps you must take when you arrive at the installation site.

GPS step

Once you've arrived on-site, move on to the next step, GPS (Figure 33).
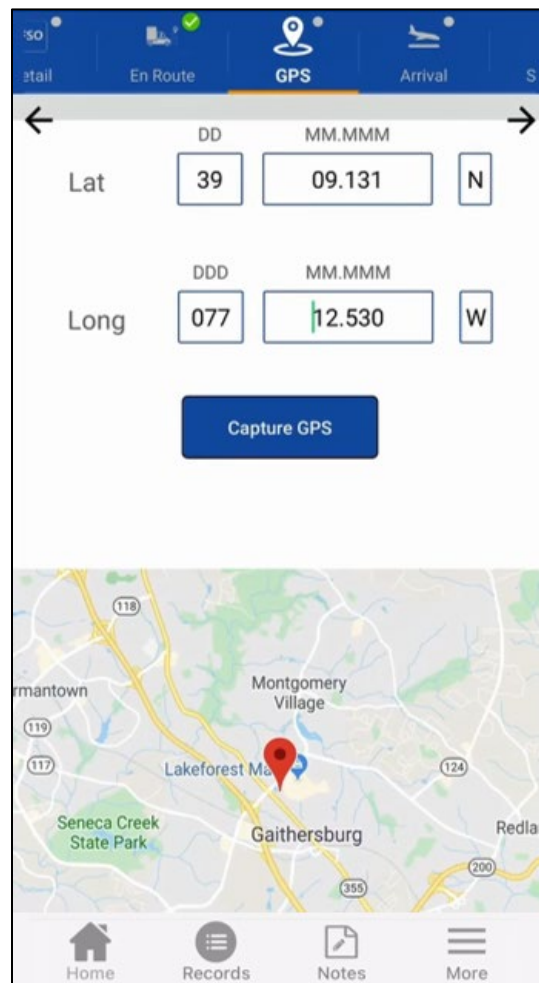
Figure 33: GPS step

The app will automatically capture your GPS coordinates.

> **Note:** Your smart device's GPS must be enabled to capture your coordinates.

If OASIS cannot acquire your location within 15 m accuracy, tap **Capture GPS** to try to improve the accuracy. Make sure this GPS location is as close as possible to the actual location where you will install the antenna.

If OASIS still cannot accurately capture your location, you must manually enter your GPS coordinates (from another GPS unit). The coordinates must be in the degrees/minutes/decimal minutes format. OASIS tracks if you manually enter GPS coordinates.

Tap → to proceed to the next step, Arrival.

Arrival step

In the next step, Arrival, tap **Arrival On Site**. A textbox appears (see Figure 34).
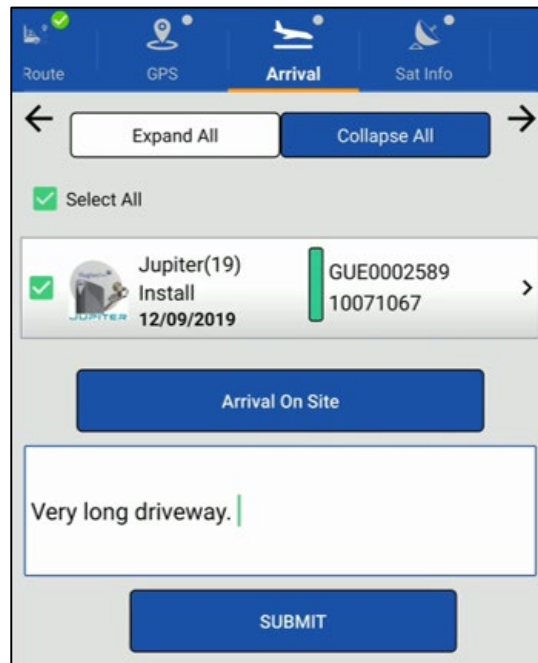
Figure 34: Arrival step – Entering notes

In the textbox, enter notes about any unique traits of the installation location (e.g., a long driveway, a heavily wooded lot, or located on the north face of a mountain which offers a limited view), then tap **Submit**. Use only alphanumeric characters when typing notes (i.e., A to Z, a to z, 0 to 9).

> **Note:** Any notes written in the app can be viewed by the customer. Make sure each note you write is appropriate and professional.

If your arrival location is too far away from the location of the order, you must enter a note addressing why this is the case (Figure 35). Verify the customer information it shows, then tap **Proceed** to proceed to the next step, Sat Info.
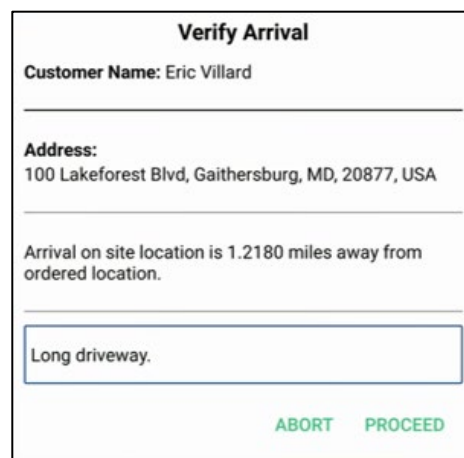
Figure 35: Arrival step – Verify Arrival

> **Note:** Pay close attention to the arrival on-site distance measurement. The customer's street address (the ordered site location) might be far away from the physical location of their home. If this is the case, you should leave a note stating this.

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Introducing yourself to the customer

At this point, you should introduce yourself to the customer by showing them your technician ID. For information on accessing the electronic badge, see Technician badge on page 13.

Verify that you have the correct customer and are at the correct installation location.

Explain to them how you will progress through the installation. Thoroughly answer all the customer's questions.

Performing an indoor site survey

Before you perform an outdoor site survey to find a good location for the antenna, you must perform an indoor site survey to determine a good location for the modem.

1. Ask the customer where they would like the modem placed and accommodate their request the best you can.
2. Plug in and power on the modem. **Be sure to test the outlet with an outlet tester before you plug the modem into it.**
3. Use your smart device to connect to the modem's wireless network. See Connecting to the modem's Wi-Fi on page 42 for information.
4. You must now test the wireless signal around the customer's house. **First, ask the customer for permission to walk around the inside of their house to test the wireless signal in several rooms.**
5. Next, use the Wi-Fi gauge in OASIS to measure the wireless signal in multiple rooms. See Gauge step on page 41 for an explanation of how to use the tool. To access the Wi-Fi gauge, expand the **More** menu in the bottom toolbar of OASIS and tap the **Wi-Fi Gauge** icon ( ) to jump to the step.
6. Based on the test results, determine if the modem can provide good wireless coverage to the customer's house from its current location. If it cannot, offer to move the modem to a different location, or, if the customer prefers, they may purchase a Hughes Wi-Fi extender to extend the modem's wireless signal.
7. If the customer chooses to purchase a Wi-Fi extender, you must itemize the purchase as described in Installation Extras step on page 46.

Performing an outdoor site survey

Once the customer agrees to the modem placement location, begin an outdoor site survey to determine the location for the antenna. Use the information provided in the appropriate site preparation and mount installation guide, depending on the type of installation you are performing. **Make sure the customer approves of your chosen antenna location.**

If you discuss any installation extras with the customer during the outdoor site survey, be sure to itemize those extras as described in Installation Extras step on page 46.

Sat Info step

The Sat Info step (Figure 36) displays the recommended satellite, beam, and polarization for the best signal and performance. It also displays the satellite location, latitude, longitude, azimuth, elevation, and tilt angle based on your arrival coordinates.
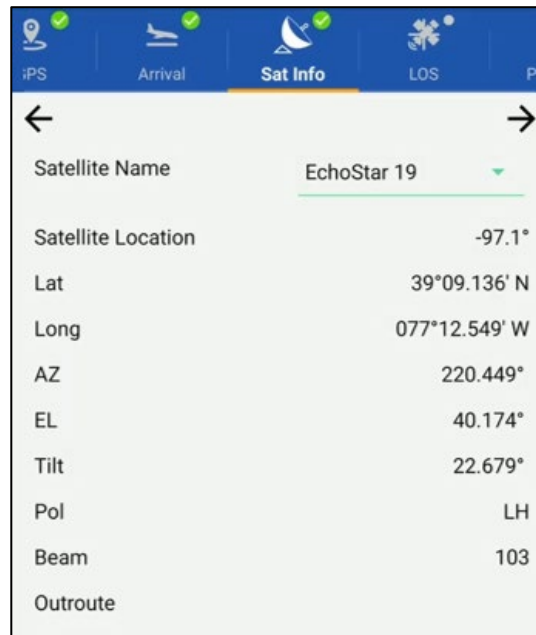
Figure 36: Sat Info step

Always use the satellite and beam indicated on the work order whenever possible.

The satellite should only be changed for line of sight (LOS) issues or if told to do so by install support.

Tap → to proceed to the next step, LOS.

LOS step

> **Important:** Make sure the compass on your smart device is calibrated correctly prior to using this step. Calibrate the compass by following the instructions provided by your device.

OASIS uses the parameters from the previous step and your device's camera to help ensure you have a clear unobstructed view of the satellite. You can choose to use either the front camera or back camera to take the pictures: in the LOS screen, tap the camera button (📷) in the bottom left-hand side of the screen to toggle the camera.

If OASIS does not automatically launch the LOS tool, tap **Launch LOS**. To find the LOS to the satellite:

1. While holding your smart device *parallel to the ground*, orient the onscreen compass until the arrow lines up with the topmost center line. As shown in Figure 37, the arrow and the vertical line turn green when your device is correctly oriented.

Figure 37: LOS step – Azimuth

2. Lift your device towards the sky. This activates your device's camera with a cross-hair overlay (Figure 38).

1 → **2** → **3**

Figure 38: LOS step – Elevation

3. Maneuver your smart device until the red crosshair (which represents the direction you are currently pointing) lines up with the yellow crosshair (which represents the location of the satellite).
4. The yellow crosshair will turn green when you are within 5 degrees of exact alignment with the satellite, as shown in the middle screenshot in Figure 38.
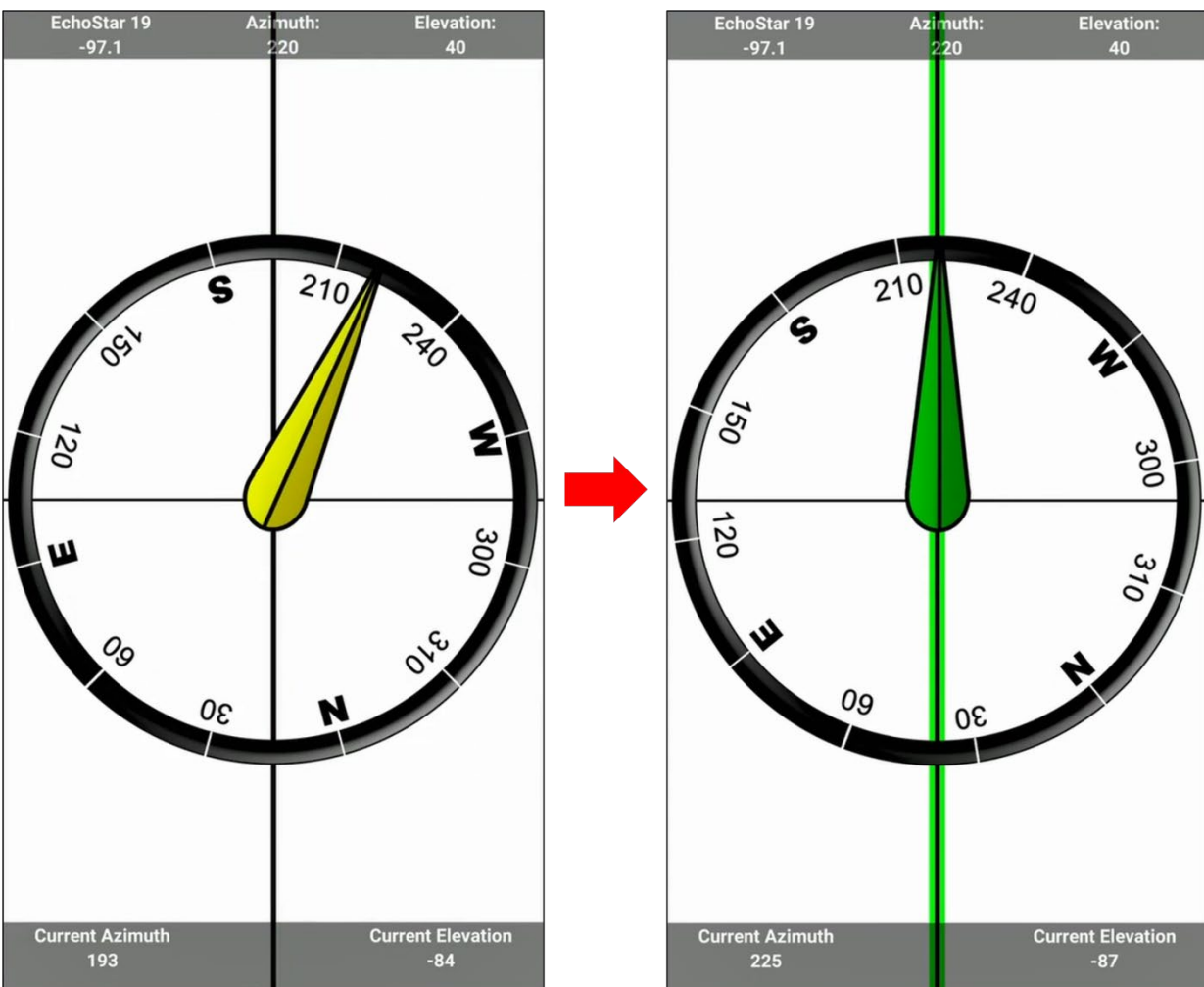5. Make sure nothing blocks the LOS. The LOS must be free of obstructions, such as plants, trees, buildings, or other structures.
6. Examine nearby plants and trees and consider how they might grow and eventually block the signal. If you perform the installation during the fall or winter, consider spring and summer leaf growth.
7. Ask the customer if they have any plans (such as landscaping) that might obstruct the satellite signal at some time in the future.
8. *If anything blocks the LOS, you must find another installation location.*
9. Tap **Capture** (outlined in Figure 38) to take a screenshot of the LOS measurements. OASIS records the required LOS information (satellite name, satellite location, and Az/El measurements).
   Note: This is a site assessment tool only. The photo you take here does not count as the required LOS photo.

   OASIS returns you to the main screen of the LOS step. A thumbnail of the photo appears on the bottom of the screen (Figure 38).
10. Tap → to proceed to the next step Before Photos.

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Before Photos step

Hughes requires you to take certain photos before you begin work at the site. The Before Photos step (Figure 39) allows you to capture these photos, which are typically difficult to get after the installation has been completed (for example, the photo documenting the use of an outlet tester).
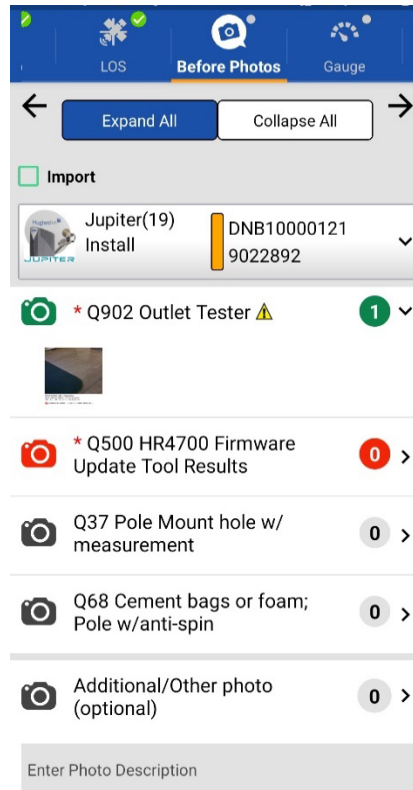
Figure 39: Before Photos step before the photo has been taken

To see which photos you need to take, expand the menu for the current FSO.

Each item you need to photograph has a corresponding drop-down. The colored camera icons and circles have the following meanings.

- Red ( ) – you still need to take the required photo.
- Green ( ) – you have taken the required photo.
- Gray ( ) – optional photo.

Note: You must take a photo of the outlet tester for every installation.

To take a photo:

1. Tap the name of the photo. Your smart device's camera launches (Figure 40).

Figure 40: Before Photos – Camera

2. Take a photo of the item, then tap ✔ if you are satisfied with the result (Figure 41).

Figure 41: Before Photos – Capturing the photo

Note: Make sure the picture clearly shows the correct item, is focused, and is well-lit.

3. OASIS returns you to the main screen of the Before Photos step (Figure 42).
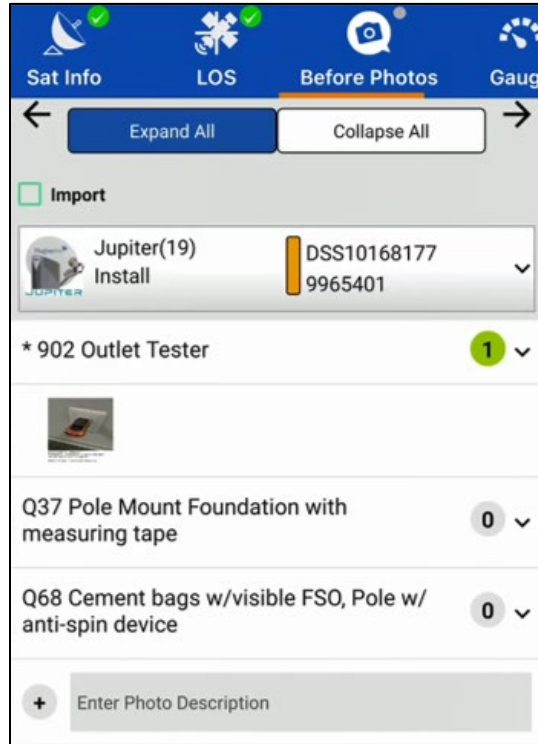
Figure 42: Before Photos step after the photo has been taken

4. A thumbnail of the photo you just took appears below the item (as in Figure 42). It is tagged with the SAN, FSO, installer ID number, time, date, latitude, and longitude.
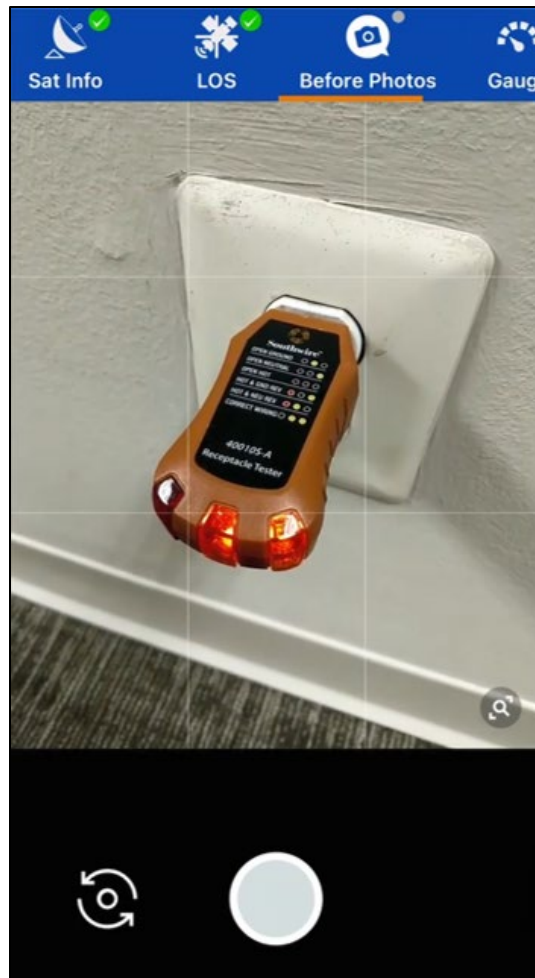5. Repeat this procedure for each required photo.

Note: Hughes encourages you to take every photo, including any optional ones that apply to your installation.

Figure 42 depicts a standard installation, so the photos marked with gray circles are not applicable. The photos marked with gray circles would be mandatory if the order was for a pole mount installation.

You can also take additional photos to show Hughes certain unique aspects of the customer's site that might impact the installation. To do this, enter a photo description in the text box and tap the plus icon (+).

Tap → to proceed to the next step, Gauge.

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Gauge step

The Wi-Fi gauge (Figure 43) tests the signal strength of the wireless router.
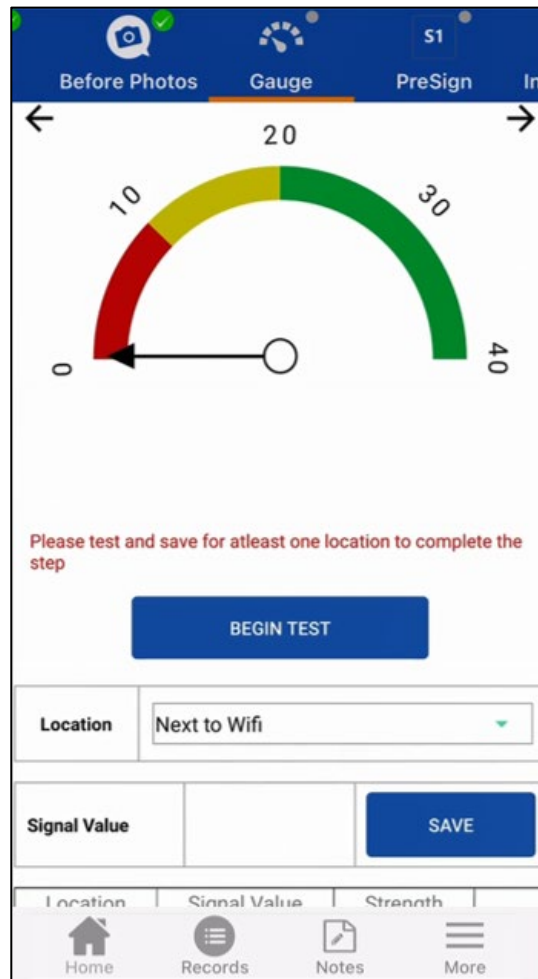
Figure 43: Wi-Fi gauge

Your smart device must be wirelessly connected to the modem's Wi-Fi to complete this step.

Connecting to the modem's Wi-Fi

The service set identifiers (SSIDs) and the corresponding passwords are provided on a sticker on the back of the modem (Figure 44 and Figure 45).

Figure 44: Sample HT2000W label
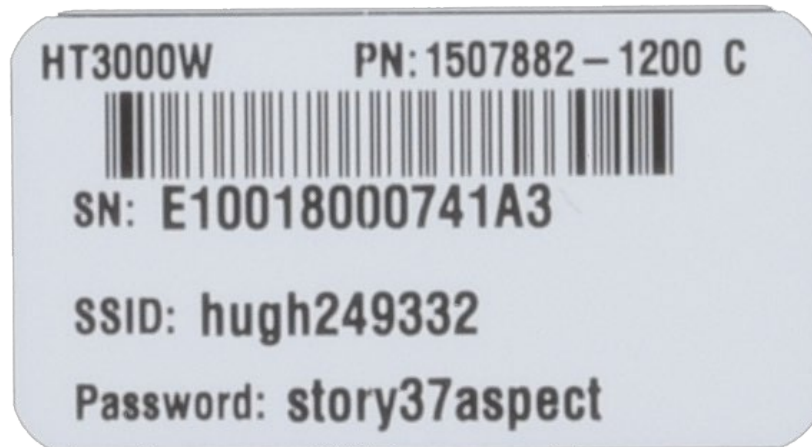
Figure 45: Sample HT3000W label

Some devices may ask you to confirm the connection.

Testing the Wi-Fi signal strength

Use the gauge to help determine if the router can provide adequate Wi-Fi coverage to the house by itself. To use the gauge:

1. Select an area of the house from the *Location* drop-down (Figure 46). OASIS has several locations from which to choose, but you can also create your own location by selecting **Other** and typing the name of the location in the field that appears.
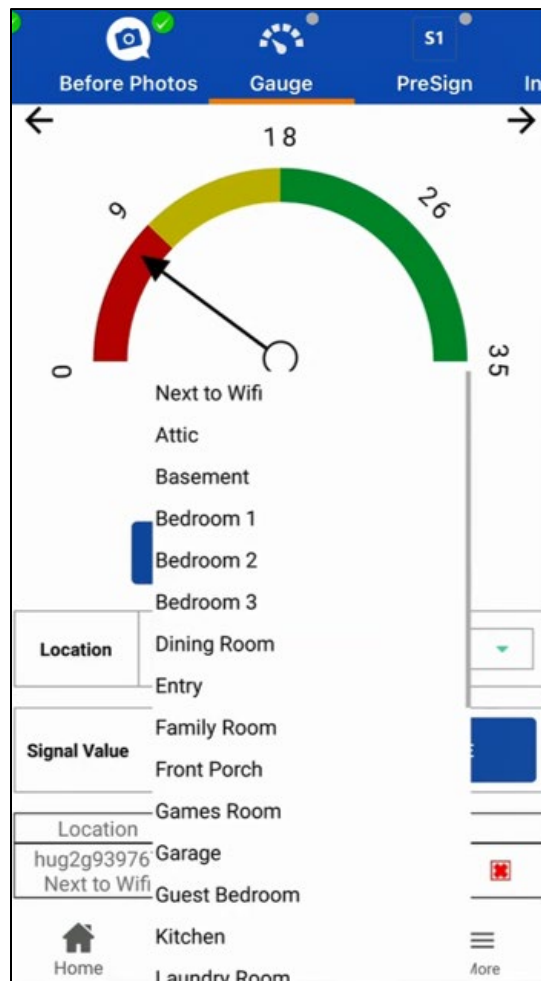
Figure 46: Choosing a location on the Gauge step

Note: Always get permission from the customer before moving around their house to test the Wi-Fi.

2. Tap **Begin Test** to have OASIS test the signal strength. The signal strength value will appear in the *Signal Value* field.
3. Tap **Save** to save the value to a table that appears below the *Signal Value* field. See Figure 47.

Figure 47: Signal value table

4. Repeat this process for each area of the house you want to test. You must tap **Save** after you collect each value, otherwise it will not save to OASIS.

Note: Hughes recommends you test the signals in at least three locations in the house.

Based on the results, you may want to relocate the modem or suggest the customer purchase a Wi-Fi extender.

When you are done checking signal values throughout the house, tap → to proceed to the next step PreSign.

If you are completing an installation for the WL3000 Multipath Device, when you are done checking signal values throughout the house, tap → to proceed to the next step Sat Install step on page 60.

PreSign step

At this point, you should let the customer know what you've deemed to be the best installation location and mounting method based on your indoor and outdoor site surveys. During the review, tell the customer about the dish location you have chosen, the type of mount you will use, and any additional charges (for example, cosmetic moldings, or a Wi-Fi extender).

The PreSign step (Figure 48) is where the customer signs off on the installation as you've proposed it to them. Ensure the customer agrees with your proposal, and then perform the following steps.
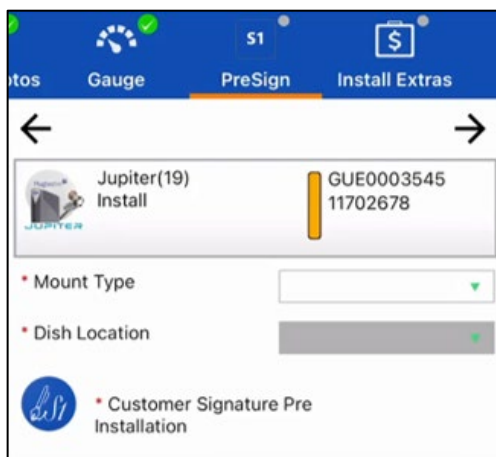
Figure 48: PreSign step

1. Select the type of antenna mount from the *Mount Type* drop-down.
2. Select the location of the antenna from the *Dish Location* drop-down.
3. Tap the Customer Signature icon (outlined in Figure 49).
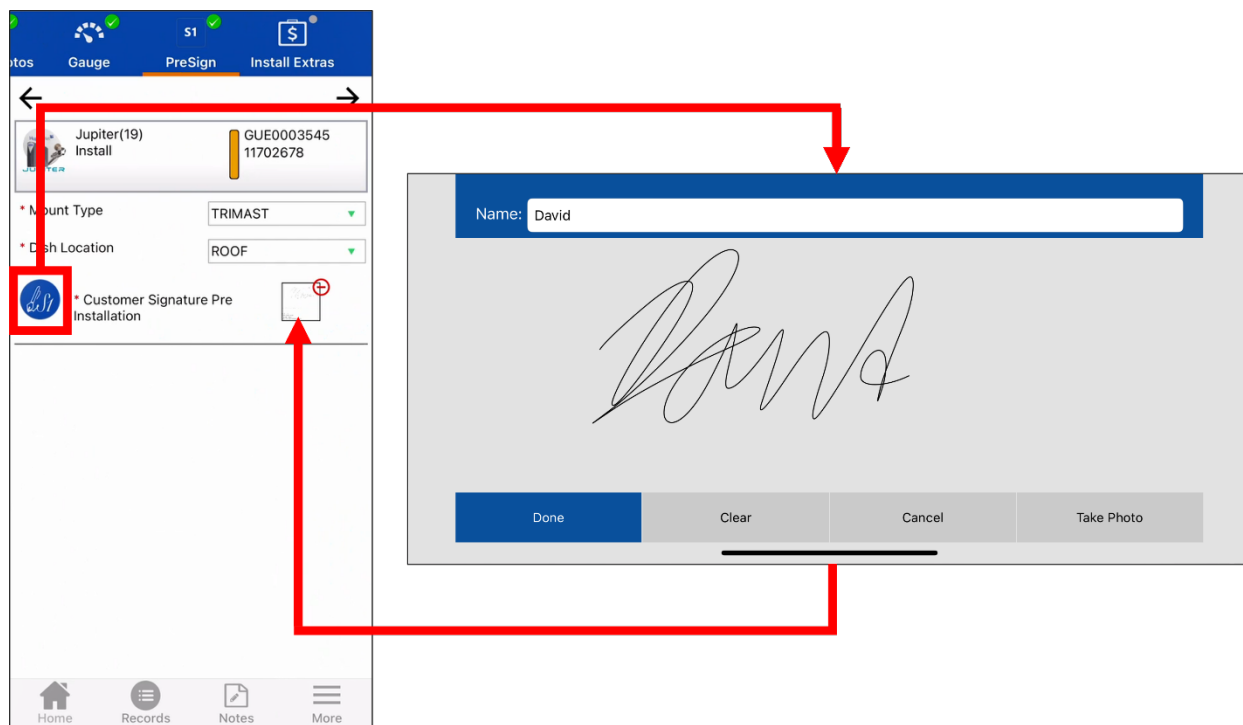
Figure 49: PreSign step – customer signature

4. In the signature screen that displays, the customer must sign their name on the screen and type their name in the *Name* field, as shown in Figure 49. This signifies their approval of the antenna location and mount type.
   - Alternatively, you can take a picture of a piece of paper the customer has signed. To do this, tap **Take photo**. Even if the customer chooses to do this, they still must type their name in the *Name* field.

5. Tap **Done**. A confirmation page will appear if the signature was good (Figure 50). If the customer signature needs to be re-captured, a warning will appear (Figure 51). Tap the **checkmark** to continue.

DSS200023888, 6665935
IN5, 09/28/2022 14:00:57 EDT
39°12.735' N, 077°15.817' W
PreSign:* Customer Signature Pre Installation: David

Figure 50: Good signature

Warning

Signature appears invalid, please ask customer to sign again with their unique signature

RE-CAPTURE   PROCEED

Figure 51: Invalid signature

6. OASIS navigates back to the PreSign step, where the customer's signature now appears (Figure 49 on page 45). The signature is saved as an attachment on the FSO.
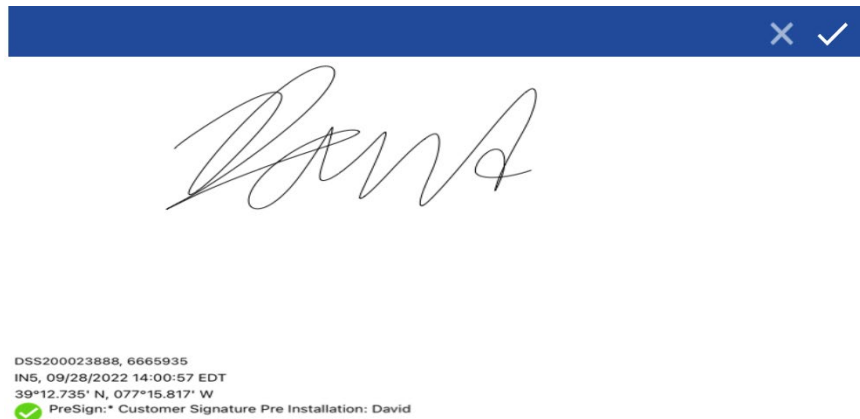7. Tap → to proceed to the next step, Installation Extras.

Installation Extras step

The Installation Extras step (Figure 52) is where you add any extra charges related to a nonstandard installation, such as charges for a Wi-Fi extender or additional trenching for a pole mount.

Note: Pole mount installations are non-standard. Upon request, new pole mounts can be installed for an additional cost. The actual amount is shown in this step.

Note: Pole mount installations ONLY - If for some reason, the customer refuses to pay for the pole mount, remove the charge from this step. You are responsible for completing the installation regardless of customer acceptance to pay.

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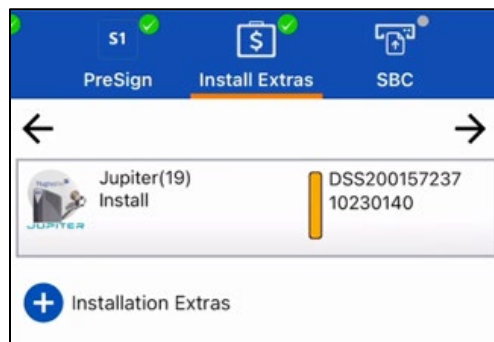
If your installation will include extra charges:

1. Tap the plus sign (⊕) to begin entering your installation extras information.
2. Select the item and quantity from the corresponding drop-down menus (Figure 53).
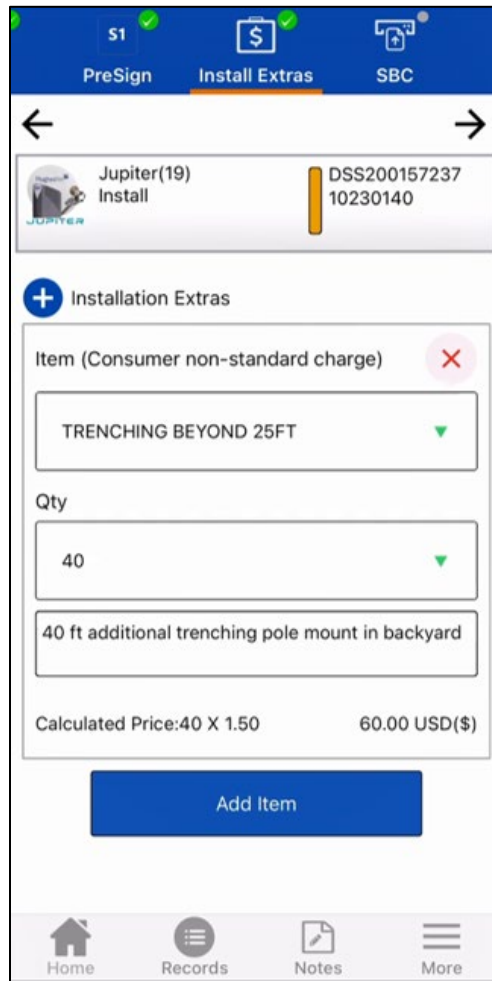
Figure 53: Installation Extras step – selections

3. You may enter a note about the item in the provided textbox.
4. Tap **Add Item**.
5. The customer must agree to these charges, which will appear on their next HughesNet bill. This is the only approved method for charging a customer for a HughesNet-related installation extra. **Receiving cash, checks, or a credit card from the customer directly is not allowed.**

6. For some items, you may give a discount to the customer. You can enter a note that gives the reason for the discount, such as if the customer negotiated a lower price (Figure 54).

Figure 54: Installation Extras step – discounts

The charges appear in the table at the bottom of the step (outlined in Figure 55). The discount amount only appears in OASIS. **The customer will see only the net cost on their HughesNet bill.**

Figure 55: Installation Extras table

As with the PreSign step, the customer must sign off on these charges before you proceed with the installation (Figure 56).
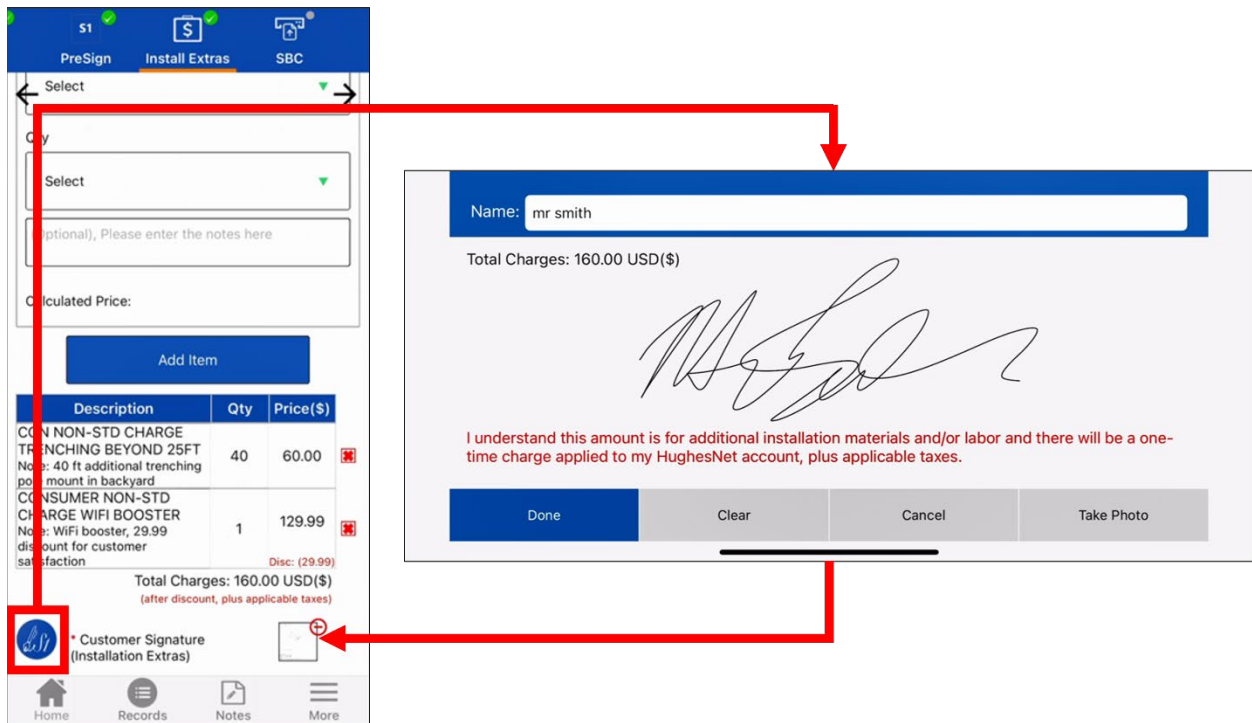
Figure 56: Installation Extras step – customer signature

Once the customer signs off on the installation extras, move on to the next step, SBC.

SBC step

In this step (Figure 57), you connect to the modem and upload the latest SBC file, which was downloaded when you synced OASIS. Make sure the modem is powered on and fully booted and that you are connected to it wirelessly with your smart device.
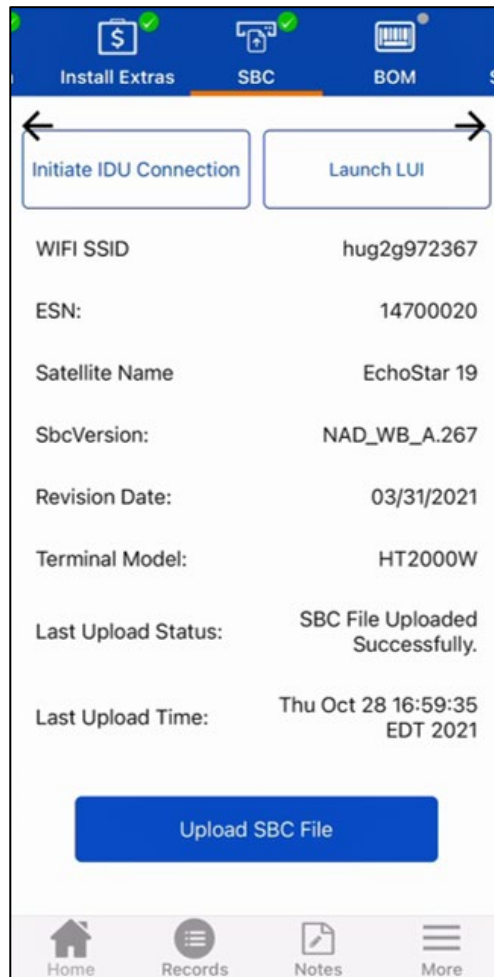
Figure 57: SBC step

1. Tap **Initiate IDU Connection**. Notice how information about the modem populates.
2. Tap **Upload SBC File**. This uploads the most recent SBC file from your device to the modem.

This is very important and must be done for every installation.

When the **Last Upload Status** indicates that the upload was completed successfully (as in Figure 57), tap → to proceed to the next step, BOM.

BOM step

The bill of materials (BOM) step (Figure 58) requires you to scan the serial numbers (S/Ns) or part numbers (P/Ns) of the materials you use in your installation (for example, antenna, mount, and modem power supply). These are usually found on the box in which the part was shipped.
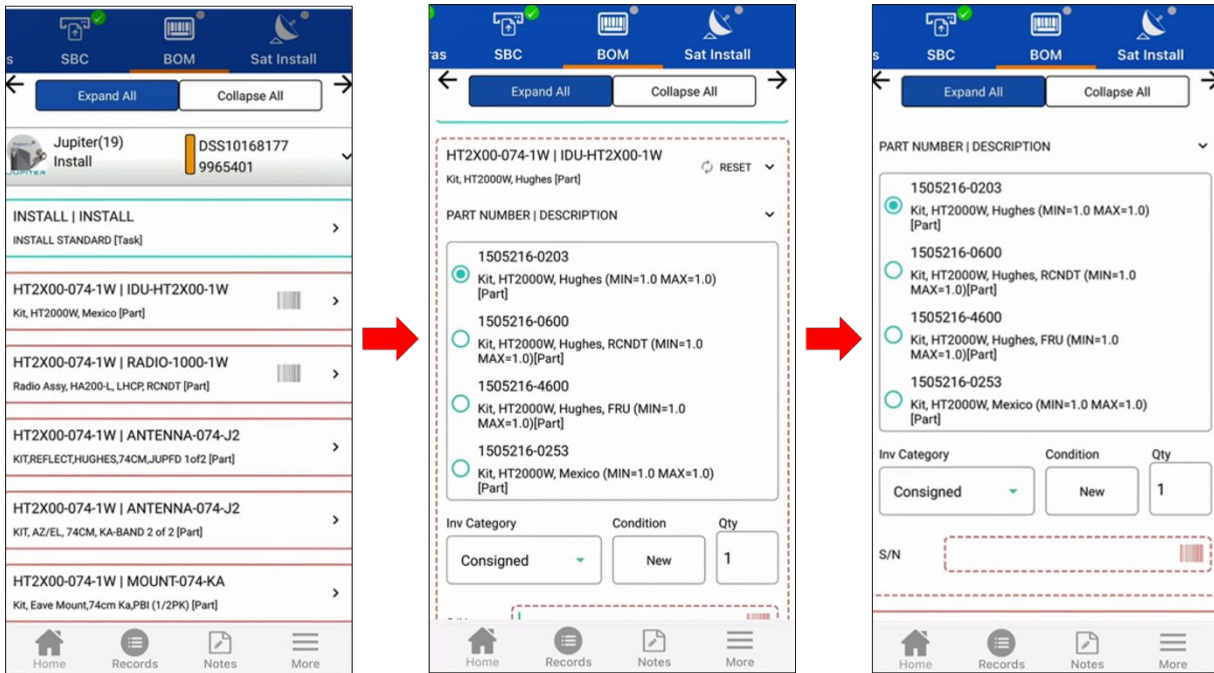
Figure 58: BOM step

Mandatory selections are outlined in red (see Figure 58 for an example). Parts with a barcode icon (▦) will require you to scan a serial number.

To complete this step:

1. Expand each mandatory item.
2. Select the correct part number for the item.
3. If required, scan the serial number by tapping the barcode icon (▦). OASIS will launch your device's camera.

   Note: If your smart device does not have a rear autofocusing camera with a resolution of 5 megapixels or better, you will have a hard time successfully scanning the barcodes. If your device is unable to scan barcodes, you must manually input the numbers.

4. Center the barcode on the screen (Figure 59). Ensure your smart device focuses on the barcode.

Figure 59: Scanning the barcode

5. Tap **Done**. OASIS will populate the serial number field with the correct bar code (Figure 60).

Figure 60: *Serial number* field populated

6. Ensure the serial/part numbers OASIS collected are accurate.
7. Repeat this process for all parts.

Certain parts, such as the reflector and mounts, only require that you select the correct part number.

To add information for additional parts [for example, an analog telephone adaptor (ATA)]:

1. Tap the blue plus sign (⊕) to add another item. See Figure 61.
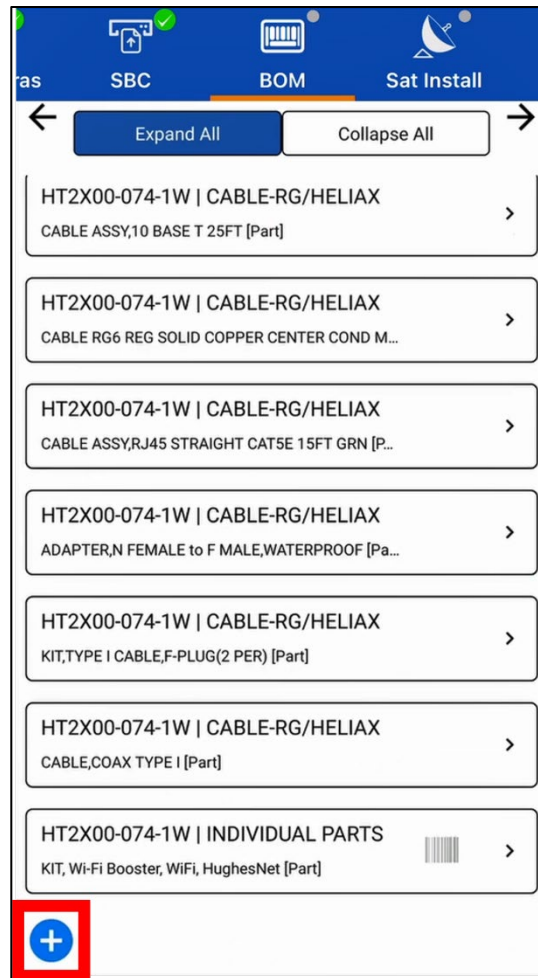
Figure 61: Adding an installation part

2. Fill each of the fields in the menu based on the type of part. For the part number and serial number, tap the barcode icons (▥) to scan the actual barcode sticker on the part, as you did before.

3. Repeat this process for each additional item.
    Note: Tap the X icon (⊗) in the expanded menu for the item to delete it.

If you are NOT installing a WL3000 Fusion device, when you are done, tap → to proceed to the next step, ZTP (Zero-touch Provisioning) step

This step only applies to WL3000 Fusion device installations. The purpose of zero-touch provisioning (ZTP) is to automatically update and configure the devices that you are installing. The steps below describe how to perform the ZTP steps.

ZTP uses the information from the BOM step to pull the correct configuration files from the Hughes servers.

1. When you reach the ZTP screen, first ensure that the correct site account number (SAN) is selected, and that the device type is correct (Figure 62). OASIS associates the device to the indicated SAN.

a. Make sure that the device is connected to the internet, and then press the **Assoc** button as shown in (Figure 62). Alternatively, expand the device and select the individual Assoc button to complete the associations one at a time.

Figure 62: ZTP screen

2. OASIS automatically applies the latest configuration settings to the devices and associates the devices with the site.

Figure 63: ZTP status updates

When you are done, tap → to proceed to the next step, Wireless.

Wireless step

This step only applies to WL3000 Fusion device installations. Use this step to view the current and target RSRP and RSRQ. Make adjustments to the antenna position as required. Refresh the values by tapping Check Signal.

Figure 63: Wireless signal

When you are done, tap → to proceed to the next step, Gauge on page 39.

Sat Install step on page 57.

For WL3000 Fusion device installations, tap → to proceed to the next step, ZTP.

ZTP (Zero-touch Provisioning) step

This step only applies to WL3000 Fusion device installations. The purpose of zero-touch provisioning (ZTP) is to automatically update and configure the devices that you are installing. The steps below describe how to perform the ZTP steps.

ZTP uses the information from the BOM step to pull the correct configuration files from the Hughes servers.

3. When you reach the ZTP screen, first ensure that the correct site account number (SAN) is selected, and that the device type is correct (Figure 62). OASIS associates the device to the indicated SAN.

   a. Make sure that the device is connected to the internet, and then press the **Assoc** button as shown in (Figure 62). Alternatively, expand the device and select the individual Assoc button to complete the associations one at a time.
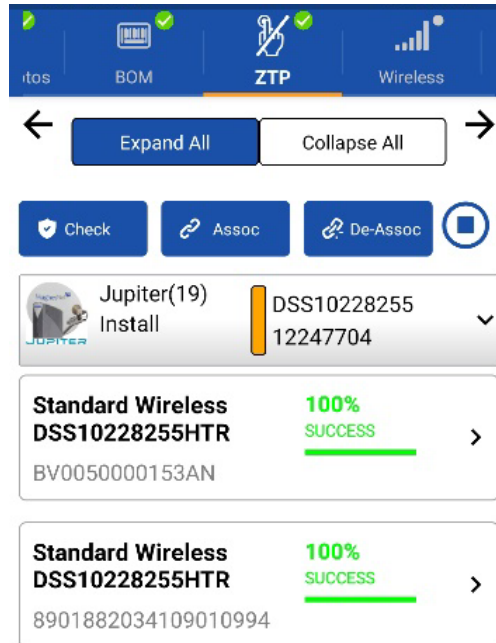
Figure 62: ZTP screen

4. OASIS automatically applies the latest configuration settings to the devices and associates the devices with the site.
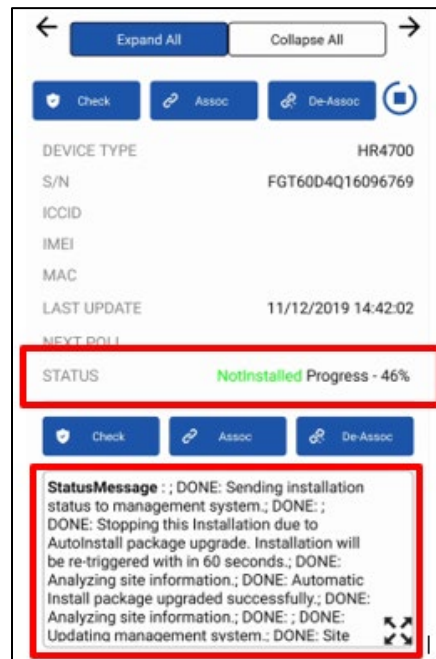

Figure 63: ZTP status updates

When you are done, tap → to proceed to the next step, Wireless.

Wireless step

This step only applies to WL3000 Fusion device installations. Use this step to view the current and target RSRP and RSRQ. Make adjustments to the antenna position as required. Refresh the values by tapping Check Signal.
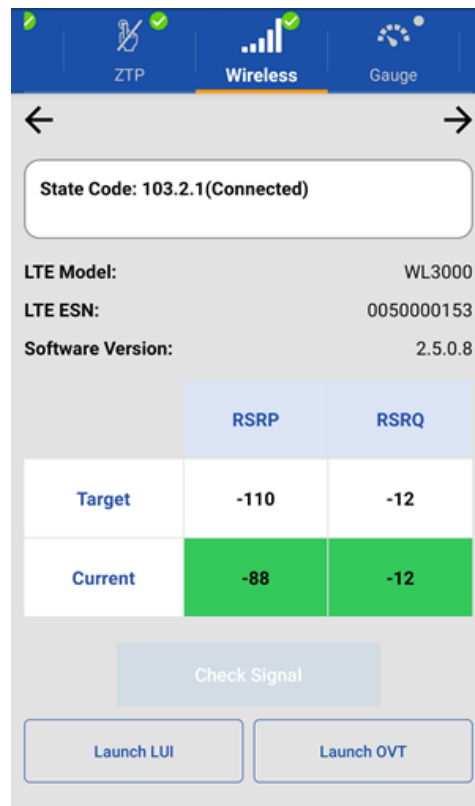
Figure 64: Wireless signal

When you are done, tap → to proceed to the next step, Gauge step on page 41.

Sat Install step

The Sat Install step (Figure 65) gives you the parameters you need to have the modem generate the correct polarization, beam, and outroute values. The step sends latitude and longitude information to the modem to put it into pointing mode. The *Sat Name*, *Sat Location*, *Lat*, *Long*, *Az*, *El*, and *Tilt* fields on the screen will populate automatically.

Figure 65: Sat Install step

The *Pol*, *Beam*, and *Outroute* fields will populate after you submit the installation parameters. These fields may have values, but you will still need to submit the parameters. On rare occasions, the latitude or longitude on the order may not be accurate and an alternate satellite, beam, or polarization may be recommended based on a more precise latitude and longitude captured in OASIS.

Note: OASIS may take some time to respond during the following steps. Follow the logs at the bottom of the Sat Install screen (see Figure 65 on page 60) to check the app's progress.

To submit the parameters:

1. Tap **Submit Install Parameters**.
2. Tap **Yes** on the pop-up warning message that asks if you want to start the installation.

   OASIS populates the *ODU Pol*, *Beam*, and *Outroute* fields once the modem calculates the correct values.

   Important: Ensure the outdoor unit (ODU)(i.e., radio) polarization shown in OASIS matches the polarization shown in the service order notes in the FSO Detail step.

If the site location requires a different beam than is listed in the FSO, you must choose the beam manually.

To manually choose the beam:

1. Tap **Initiate Beam Override**. You will get a selection of different beams.
2. Select the specific beam that matches the coordinates of the installation site. Check the Parameters textbox of the FSO (outlined in Figure 66) for these coordinates.

Figure 66: Parameters textbox on the FSO

This message (Figure 67) indicates the modem is in pointing mode.
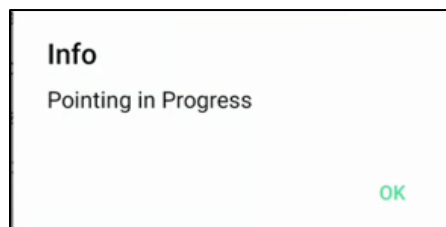
Figure 67: Pointing mode

Tap → to proceed to the next step, Pointing. This is described in the next chapter.

Pointing the antenna

Antenna installation

At this point, you must install the antenna mount and antenna at the location you determined would be the best during the site survey. The steps below provide a general overview for this process.

1. Assemble and install the antenna mount (for example, trimast, pole, or nonpenetrating).
2. Refer to the appropriate site preparation and mount installation guide, depending on the type of installation you are performing, for additional information about preparing the installation site and assembling the antenna mount.
3. Run the interfacility link (IFL) cable and install the ground block.
4. Assemble and mount the antenna. Preset the antenna tilt, elevation, and polarization to the values indicated.
5. Refer to the appropriate antenna installation guide for additional information about assembling and mounting the antenna.
6. Ground the antenna and connect the IFL.
7. Get ready to point the antenna using OASIS. Stand near the antenna and return to the OASIS app.

   Important: Before you point the antenna, make sure the radio polarization matches the polarization given in the service order notes shown in the FSO Detail step.

Pointing step

The Pointing step (Figure 68) aids you in pointing the antenna by showing the SQF. It displays the:

- Maximum SQF value achieved during this session
- Target SQF value determined by the onsite verification tool (OVT) within a 6-mile radius
- Maximum indoor unit (IDU) value achieved during this session
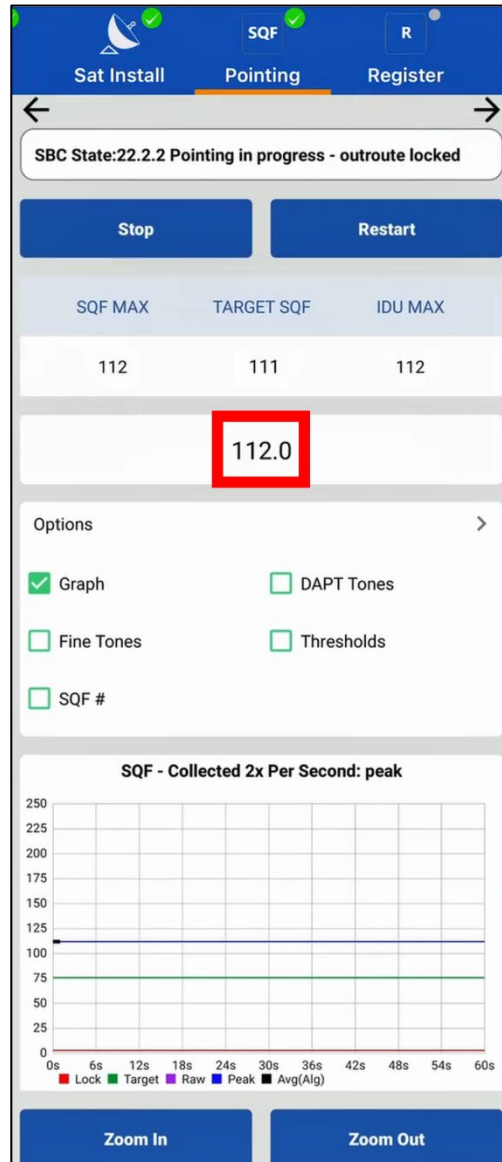
Figure 68: Pointing step

The central number (outlined in Figure 68) displays the current SQF value.

The Pointing step also includes a graph (see Figure 68) that shows how the SQF value has fluctuated over time, with markings for the peak SQF, the target SQF, the raw SQF, the average SQF, and the locking threshold.

Audio options for pointing include:

- DAPT Tones – The higher pitched and faster the beeping, the greater the signal.
- Fine Tones – Indicates whether the SQF is rising, falling, or remaining even.
- Thresholds – Indicates when you cross a certain threshold (peak, target, etc.)

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- SQF # – A computerized voice speaks the current SQF value every 3 seconds.

To point the antenna:

NOTICE

Do not attempt to point the antenna manually by pulling on the feed support arm. This can cause permanent damage to the antenna. Instead, use the antenna mechanical adjustments.

You may gently maneuver the antenna reflector to coarsely point the antenna, but only if the Az/El canister bolts are loose enough so that the reflector rotates easily.

1. Preset the antenna elevation to 1° above the number specified in the Sat Info step in OASIS. This helps compensate for any elevation loss caused by the loose antenna canister. Remember to align the elevation value with the black line under the elevation bolt.
2. Sweep the antenna in the direction of the azimuth value until you to get an SQF above 30, indicating you acquired the satellite.
3. Continue to carefully sweep the antenna until you achieve an SQF value of 50 or more.
4. Lock down the canister bolts to steady the antenna on the mount. You will now begin to fine-point the antenna.
   Note: After you have locked down the canister bolts, do not attempt to adjust the antenna by grabbing the reflector. *This will damage the reflector*.
5. Wait for the SQF to settle on a value, then use the appropriately sized wrench for the antenna (found in the manual specific to that antenna) to fine-tune the antenna's azimuth and elevation adjustments. Continue until you achieve the highest possible SQF value.
6. When the signals are peaked, tighten the azimuth and elevation bolts completely.
   Note: Because slight movement of the antenna occurs during lockdown, always measure the signal peak value after locking down the antenna.
7. When you are done pointing, make sure all outdoor cable connections are weatherproofed with dielectric grease and are securely tightened. A loose connector will degrade SQF. Depending on your installation environment, additional weatherproofing may also be needed.
   Note: Use cable ties and cable hangers that are resistant to ultraviolet rays to secure all outdoor cables.

NOTICE

Hughes-approved connectors, in conjunction with the dielectric grease on the F-connector threads, provide weatherproofing for outdoor connections. These connectors should be used in new installations, upgrades, and any repairs.

Outdoor connectors on radios and ground blocks that are in areas with corrosive environments (e.g., salt air) may need additional weatherproofing, such as weatherproofing tape or a weather boot filled with dielectric grease.

Tap → to proceed to the next step, Register. This is described in the next chapter.

Registering and activating the modem

You can only register and activate a modem via OASIS during JUPITER installations. As such, all the content in this chapter, except for the IV/OVT step, only pertains to JUPITER installations.

To register and activate the modem during installations of the HN9000 or HN7000 series modems, you must launch the modem's user interface from your smart device's internet browser, then proceed as you normally would when using a laptop.

Register step

The Register step (Figure 69) allows you to perform the modem's registration procedure to the Hughes network.
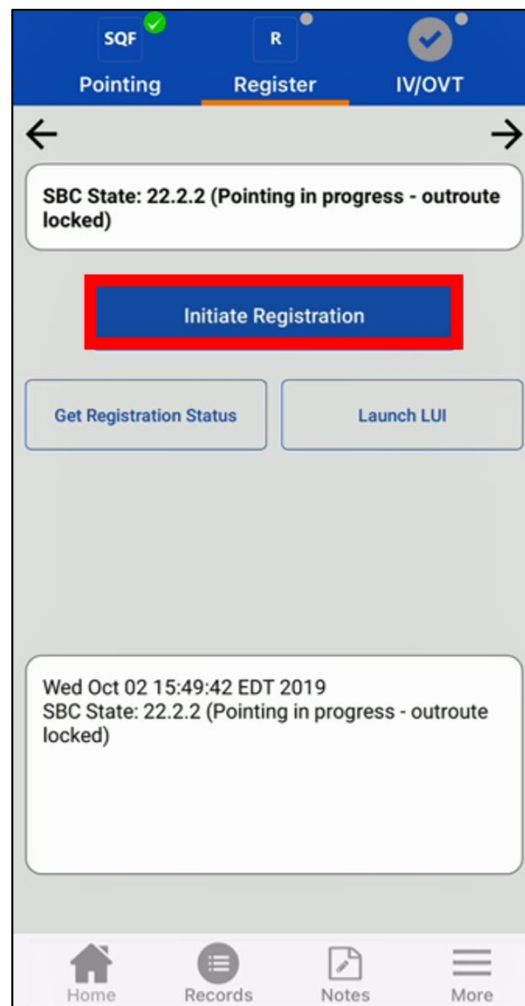
Figure 69: Register step – pre-registration

To register the modem:

1. Tap **Initiate Registration** (outlined in Figure 69).
2. As the registration process progresses, the current modem state is shown in the top textbox and a summary of states the modem has achieved is shown in the bottom textbox.
   Note: If the terminal fails to register, OASIS will recommend a solution in the bottom textbox.

3. When the modem successfully registers, a `Success` pop-up message appears (Figure 70). Tap **Ok**.
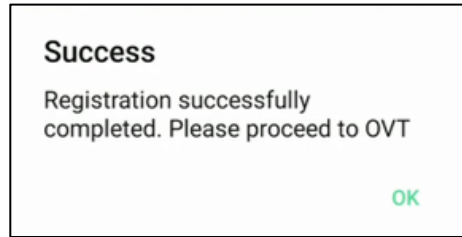
Figure 70: Registration successful

The SBC state on OASIS will turn to 22.3.5, terminal activation stage (see Figure 71).
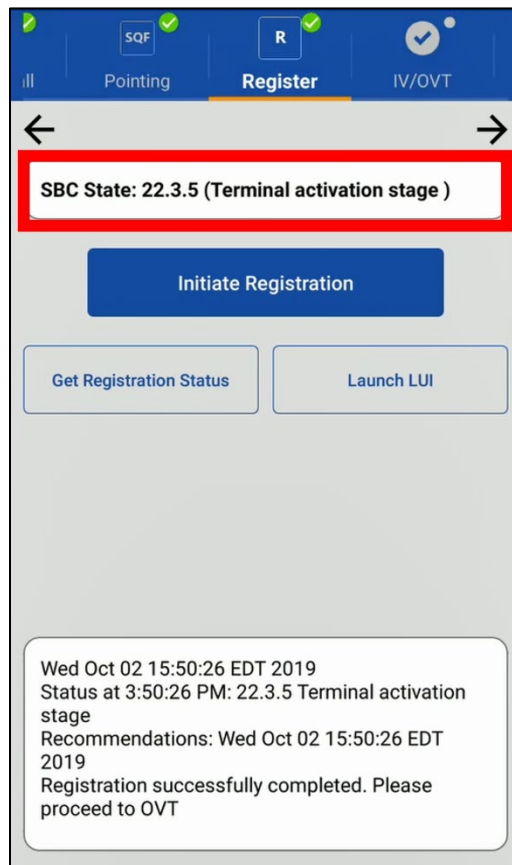
Figure 71: Register step – post-registration

Tap → to proceed to the next step, IV/OVT.

IV/OVT step

The installation verification (IV)/OVT step (Figure 72) allows you to launch the onsite validation tool (OVT) from OASIS. The OVT performs checks on all devices to ensure that the satellite services meet Hughes requirements and specifications for speed and connectivity. Every device must pass the checks, and you will need to pull signoff codes from OVT into OASIS in order to close out the order

Figure 72: IV/OVT step

To complete this step:

1. Tap **Launch OVT** (outlined in Figure 72) to launch the OVT in your smart device's web browser.

OASIS automatically fills the fields on the OVT sign-in page (Figure 73).

Figure 73: OVT pre-collection page

2. Ensure the information is correct, then tap **Launch OVT** (outlined in Figure 73) to open the tool.

3. Step 1 asks you to verify the FSO and site information. Tap **Refresh Site Information** (outlined in Figure 74) to ensure the most up-to-date information is populated.
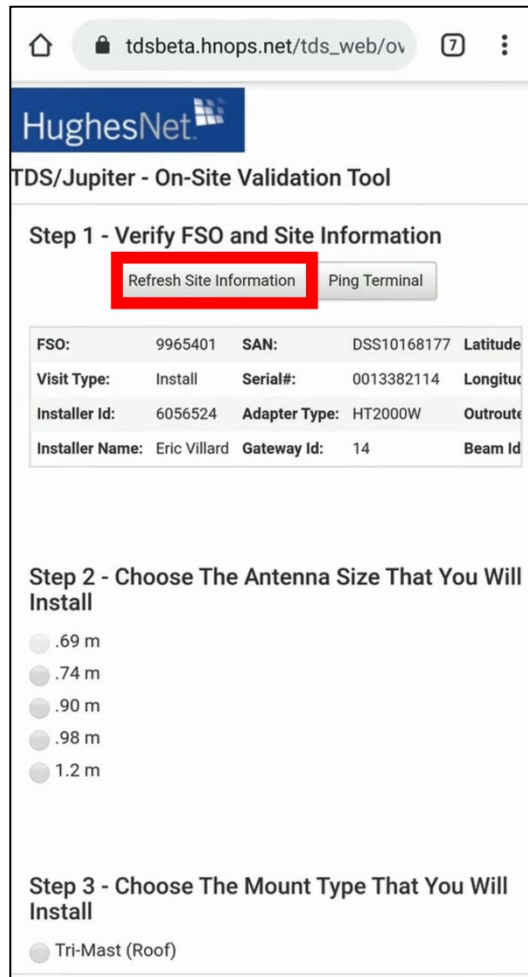
Figure 74: OVT step 1

You will receive confirmation that the refresh was successful (see Figure 75).
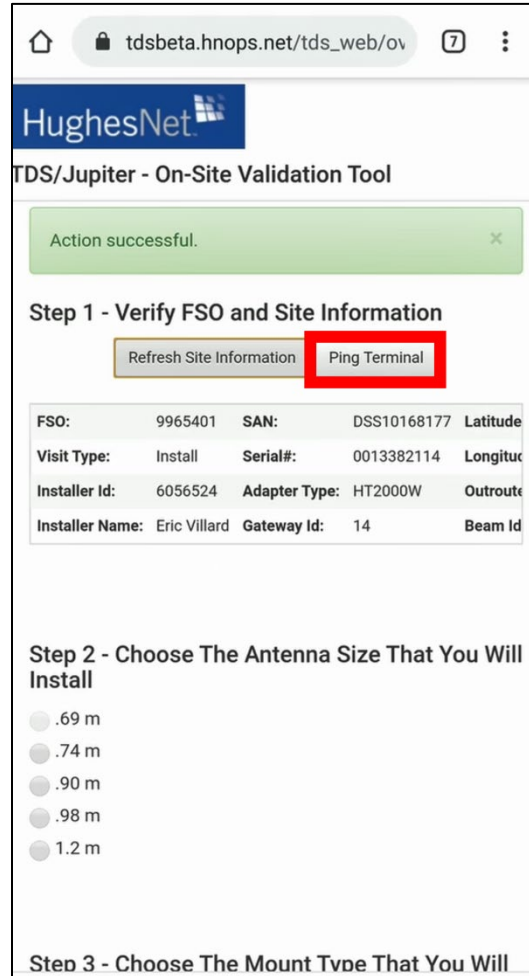
Figure 75: OVT refresh successful

4. Tap **Ping Terminal** (outlined in Figure 75).

You will receive confirmation that the ping was successful (see Figure 76).
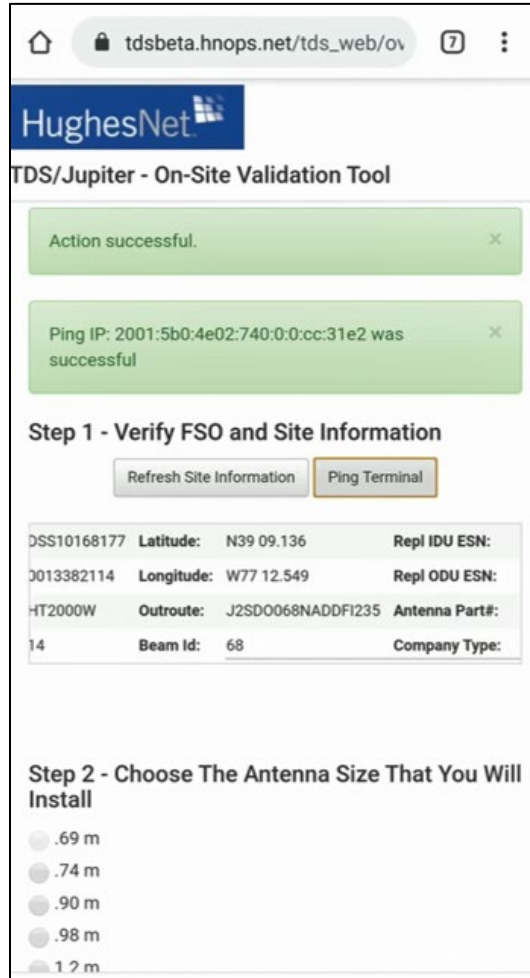
Figure 76: OVT ping successful

5. For Step 2, select the size of the antenna you installed (Figure 77).

Figure 77: OVT steps 2 and 3

6. For Step 3, select the type of mount you installed (Figure 77).
7. Ensure all the information is correct, then tap **Proceed** (outlined in Figure 77). OVT will begin to test the satellite connection and compare your installation to others in the area to determine if it meets Hughes' requirements for uplink, downlink, and other values.

The OVT results page launches (Figure 78).

Figure 78: OVT results page

Passed values will appear in green (as depicted in Figure 78).

8. Perform any recommended actions listed in the *Recommended Action* box.

– If OVT displays polarization errors, you must change the polarization at the radio by adjusting the orientation of the feedhorn. Your JUPITER training provides instructions for how to do this.

– If you are installing an HT2000W, you may see a Wi-Fi error. This error indicates Wi-Fi is turned off on the modem. To correct this error, tap **Enable WiFi**.

9. Tap **Sign Off** (outlined in Figure 78) when the recommended action says *Click Signoff*.

10. On the page that launches (Figure 79), select any installation problems or extra actions performed during the installation. If you had no problems, tap the *No Installation Problems* checkbox.

Figure 79: OVT page 3

In the *Provide Installation Details Below* textbox, type any additional notes you have. *You must enter text inside this textbox to proceed.* If you have no notes, simply type `No problems with installation`. Use only alphanumeric characters when typing notes (i.e., A to Z, a to z, 0 to 9).

11. Tap **Sign Off** (outlined in Figure 79 on page 76).

OVT will generate a sign-off code that displays at the top of the screen (see the screenshot on the left in Figure 80).
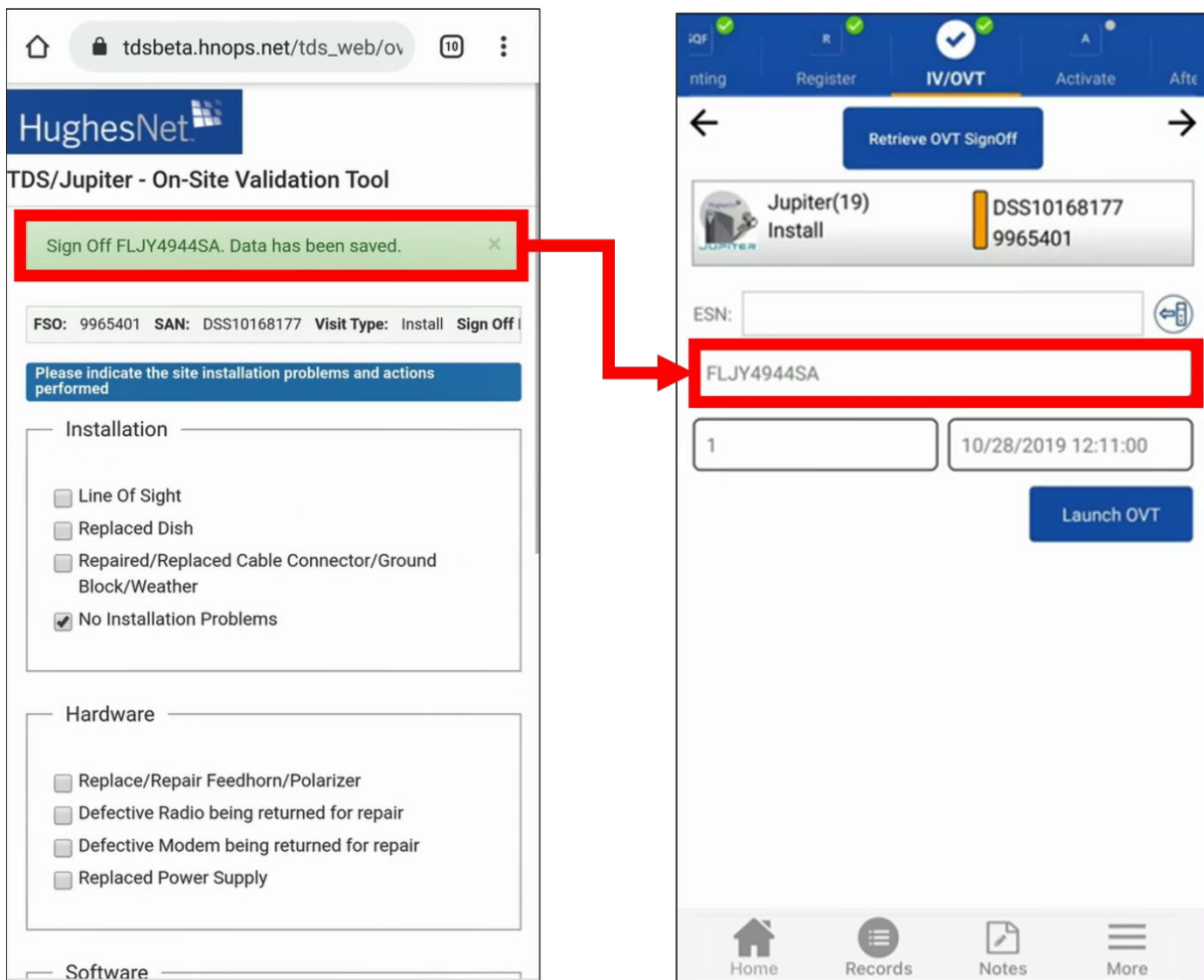
Figure 80: OVT step – signoff number

12. Return to OASIS.
13. Tap **Retrieve OVT SignOff** to pull the number from OVT (see the screenshot on the right in Figure 80).

Once it populates, tap → to proceed to the next step, Activate.

Activate step

The Activate step (Figure 81) allows you to activate the modem.

Figure 81: Activate step

To activate the modem, tap **Initiate Activation**. A successful activation will enable a "Success" popup (Figure 82) to appear. Before continuing, make sure the terminal code is *1000* and the terminal description is marked as *Success* in the box below the button.

Success

Activation successfully completed.
Please proceed to Service Activation

OK

Figure 82: Terminal activation success

Note: Keep in mind that terminal activation is not the same thing as service activation. Service activation, wherein the customer's HughesNet service is established, should be accomplished after terminal activation and before the next step in OASIS.

Activating the customer's service

Prior to proceeding in OASIS, you must walk the customer through the service activation process *on their computer or other device.* The full details of service activation are described in your JUPITER training and in the modem guide specific to the type of modem you are installing, but the steps below summarize the process.

1. Connect the customer's computer or other device to the modem, either wirelessly or via a local area network (LAN) connection.
2. Using a browser on the customer's computer or device, enter www.systemcontrolcenter.com into the address bar to access the modem's System Control Center.
3. Click on the **Service Activation** link in the System Control Center's side menu, and then guide the customer through the HughesNet Welcome Experience. *Encourage them to download the HughesNet Usage Meter to monitor their service plan data.*
4. For the HT2000W, be sure to explain to the customer the difference between the 2.4 GHz and 5 GHz Wi-Fi bands.
5. For the HT3000W, explain to the customer that it uses a single SSID. Devices will intelligently choose which GHz Wi-Fi band to connect to, based on criteria like their proximity to the modem and their current usage requirements.

Return to OASIS once you have activated the customer's service. Tap → to proceed to the next step, After Photos, which is described in the next chapter.

Taking photos

At any point during the installation, you can take required photos by tapping the photo buttons in the **More** menu in the bottom toolbar of OASIS (outlined in Figure 83). You can take photos whenever it is convenient for you during the installation process.
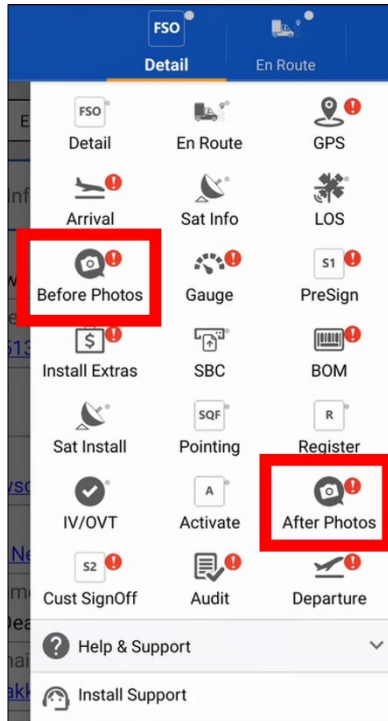
Figure 83: Photo buttons

After Photos step

The After Photos step (Figure 84) walks you through which photos you need to take before departing from the installation site.
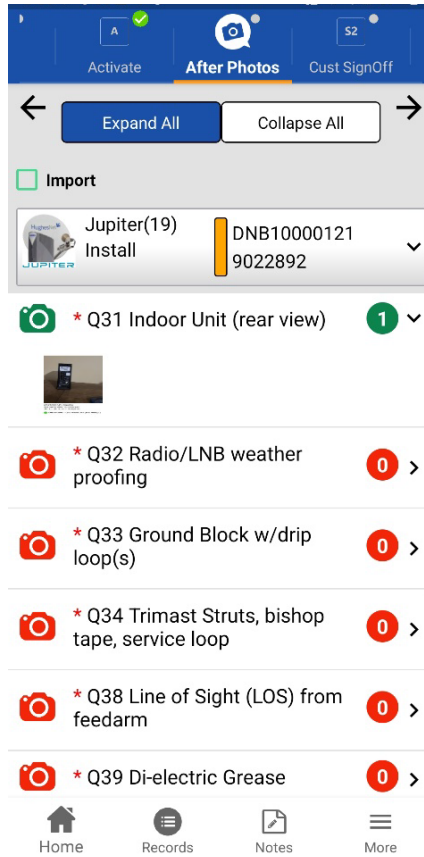
Figure 84: After Photos step

Just as in the Before Photos step, all required photos in this step are marked with a red camera icon and circle. These are the photos that Hughes audits to ensure quality customer installations.

For instructions and information on taking photos, see Before Photos step on page 37. For in-depth descriptions of each photo, refer to your online training.

Hughes uses artificial intelligence (AI) to automatically audit your photos before you take them. If the subject is unclear or if the smart device's camera is not showing what we expect to see, you'll see a `Not Qualified` warning (see the screenshot on the left in Figure 85).

Figure 85: Automatic photo audit

If the photo is showing what we expect to see, you'll see a `Qualified` message (see the screenshot on the right in Figure 85).

Make sure to take every required photo (Figure 86).
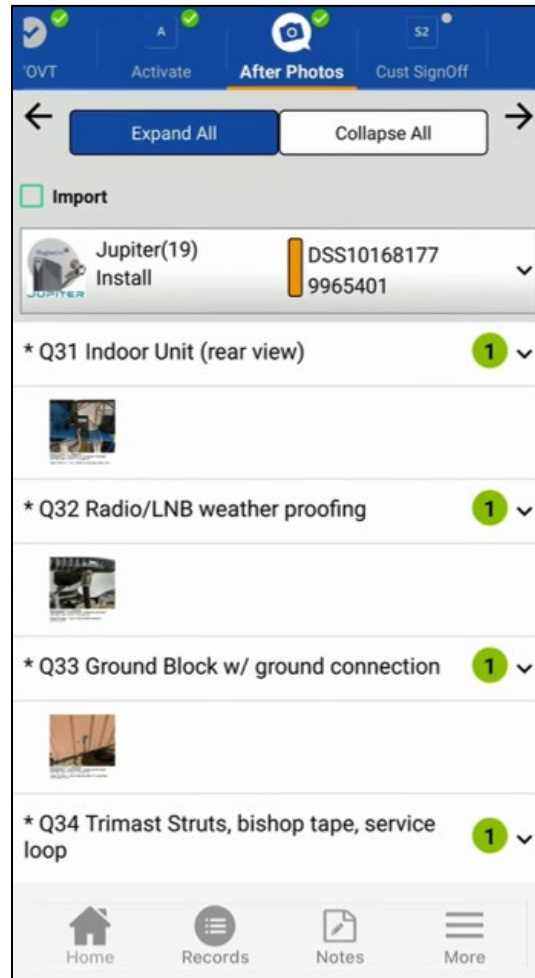
Figure 86: After Photos completed

When you are done, tap → to proceed to the next step, Customer Signoff, which is described in the next chapter.

Departing from the site

This chapter explains the final steps you must take to complete the installation.

Customer SignOff step

The Customer SignOff step (Figure 87) helps ensure the installation was completed successfully and the customer has no further issues.

Figure 87: Customer SignOff step

> **Important:** Hughes requires the technician to connect up to two customer devices to the modem's Wi-Fi or LAN. If the customer wishes to have more devices connected or requires a more elaborate networking setup or configuration, the technician can charge the customer's HughesNet bill for that work from the OASIS Install Extras page.

To proceed with the Customer SignOff step:

1. Walk the customer through the questions presented in the step. Have them answer *Yes* or *No* to each question.
2. Ensure the customer agrees to any installation extras you added.
3. Tap the Customer Signature Post Installation icon (outlined in Figure 88). The customer must sign off on the installation the same way they did for the PreSign step.
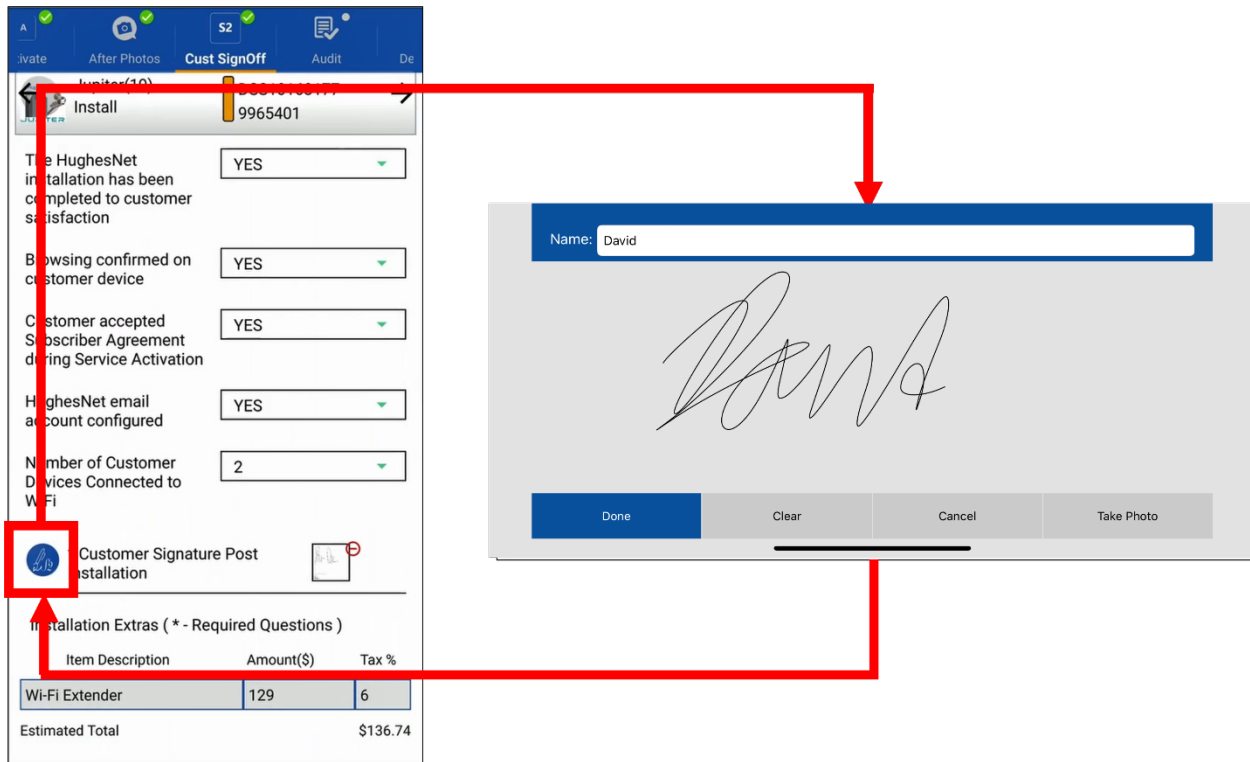
Figure 88: Customer Signature Post Installation

4. In the signature screen that displays, the customer must sign their name on the screen and type their name in the *Name* field (see Figure 88). This signifies their approval of the completed installation.
    –   Alternatively, you can take a picture of a piece of paper the customer has signed. To do this, tap **Take Photo**. Even if the customer chooses to do this, they still must type their name in the *Name* field.

5. Tap **Done**. A warning will appear if the customer's signature is invalid.

Figure 89: Invalid customer signature

6. OASIS navigates back to the Customer SignOff step, where the customer's signature now appears (see Figure 88). The signature is saved as an attachment on the FSO.

Once the customer has signed off, tap → to proceed to the next step, Audit.

Audit step

The Audit step (Figure 90) asks a few questions about the installation for tracking purposes. Audit questions are for Hughes reference only.

Figure 90: Audit step

The questions are as follows:

- Did you need to use a ladder taller than 28 ft during the installation?
- Which machine did you use for activation? Your own personal computer (PC) or the customer's PC?

  Note: Most often, this should be the customer's PC.

- Did you have any installation issues with the site?
- Did you contact Install Support on this visit?

Once you're answered all the questions, tap → to proceed to the next step, Departure.

Departure step

The Departure step (Figure 91) is where you perform final signoff on the installation.
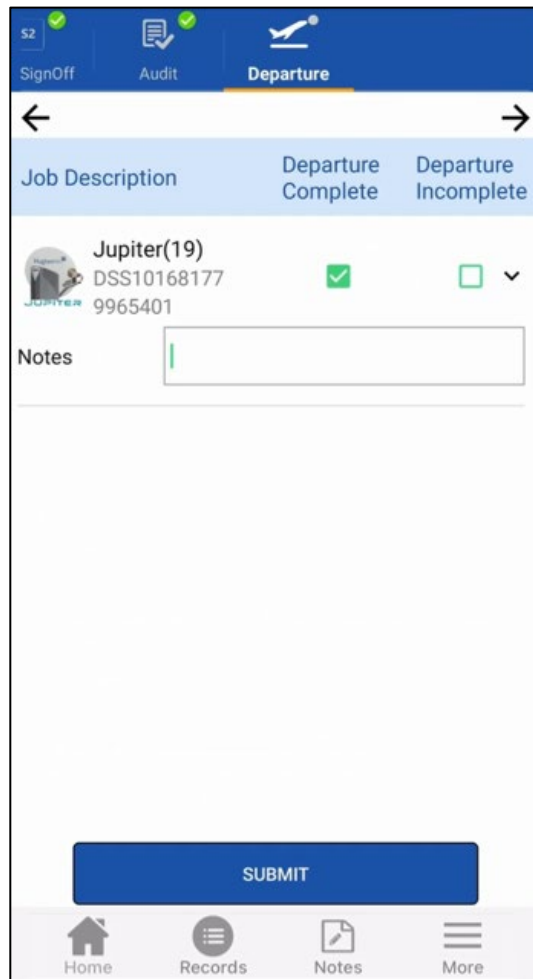
Figure 91: Departure step

Important: Do not proceed with departure until you have taken all the required photos of the installation.

To proceed with departure:

1. Ensure that the *Departure Complete* checkbox is selected.
   - If the *Departure Incomplete* checkbox is selected, OASIS will list the incomplete steps that are preventing you from completing your order (see Figure 92). If you must depart from the site with an incomplete order, OASIS requires you to enter a reason code and notes.

Figure 92: Departure Incomplete

2. Enter any notes relevant to the installation. Even with a successful departure, you must enter a note about the installation.

   Important: Any notes written in the app can be viewed by the customer. Make sure each note you write is appropriate and professional.

3. Tap **Submit**.

   Important: Once you tap **Submit**, you cannot edit any information in the FSO. Make sure you have all the required information and have completed each step fully before proceeding.

   At this point, your installation information is stored locally on your smart device and data will automatically upload to the Records page. OASIS then launches the Records page. You will be able to view the upload's progress and verify it was saved correctly.

Records page

It is best to have a stable wireless connection to perform the steps in this section.

The Records page (Figure 93) provides a list of each step you completed. Tap any step menu to expand it and see additional details.
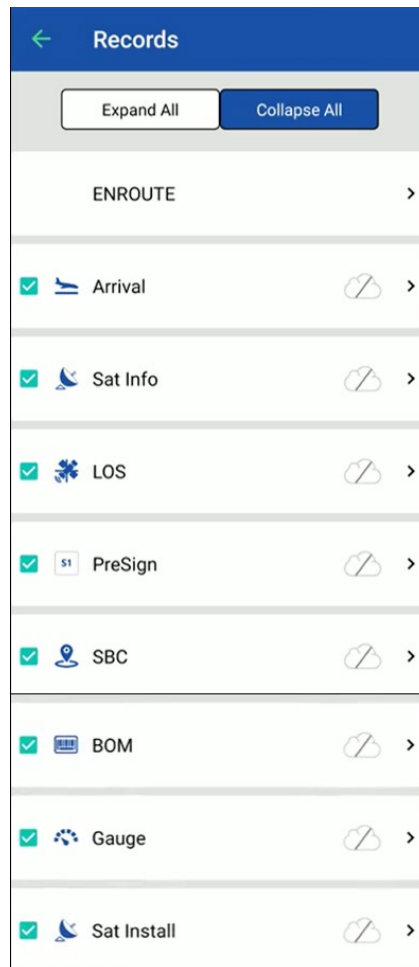
Figure 93: Records page

The check marks (✓) indicate you have visited the step. The white clouds with lines through them (⛅) indicate that the step data has not yet been uploaded to the Hughes server. OASIS removes the line from the cloud (☁) once the data has been uploaded.

The blue icon (🔵) at the bottom of the screen exports all attachments to your smart device, so they are saved locally. The red trash can icon (🔴) deletes the data from OASIS. **Do not do this until you have successfully uploaded the data to the Installation Portal.**

Data will upload automatically. In case of error, a manual upload can still be completed. To manually upload the information to the Hughes servers:

1. Tap **Submit Data to Server** (outlined in Figure 94 on page 91).
2. Tap **Ok** on the `Success` pop-up message that appears.
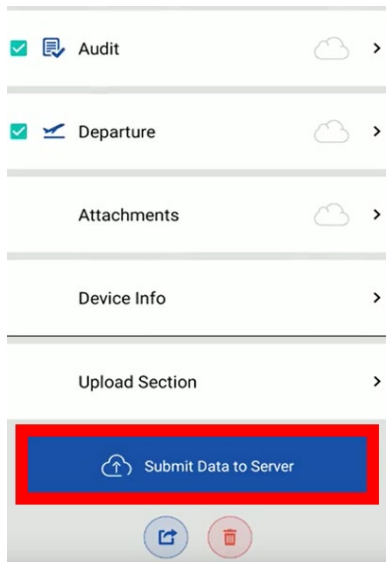
Figure 94: Records – submit data to server

Once the data has been successfully uploaded, tap the Home icon to navigate back to the OASIS homepage, where you will verify the data upload.

Verifying the data upload

Note: It is best to have a stable wireless connection to perform the steps in this section.

The FSO you just completed is highlighted in blue on the OASIS homepage under the Current Job Schedules menu (see Figure 95).
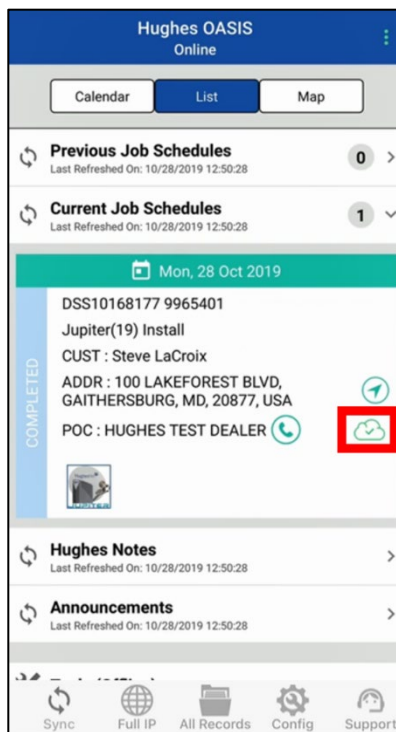
Figure 95: Completed FSO

Notice how the order now includes a green cloud with a checkmark in it (outlined in Figure 95). It also has the word *Completed* in the blue bar on the side. These two items indicate that the order has been successfully completed and submitted.

As a final check, verify that all the data has been received by Hughes on the Installation Portal. To do this:

1. Tap the Full IP icon on the bottom toolbar of the OASIS homepage. This launches the Installation Portal in your smart device's web browser.
2. In your calendar of upcoming installations, tap the link for your current FSO (outlined in Figure 96).
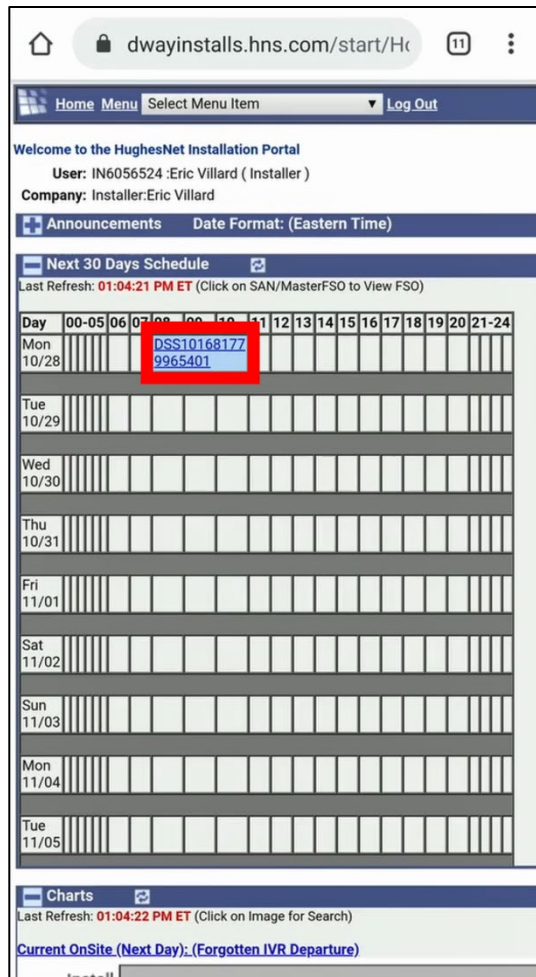
Figure 96: Select current FSO from the Installation Portal calendar

3. On the page that launches, tap **OASIS WorkFlow Summary** (outlined in Figure 97).
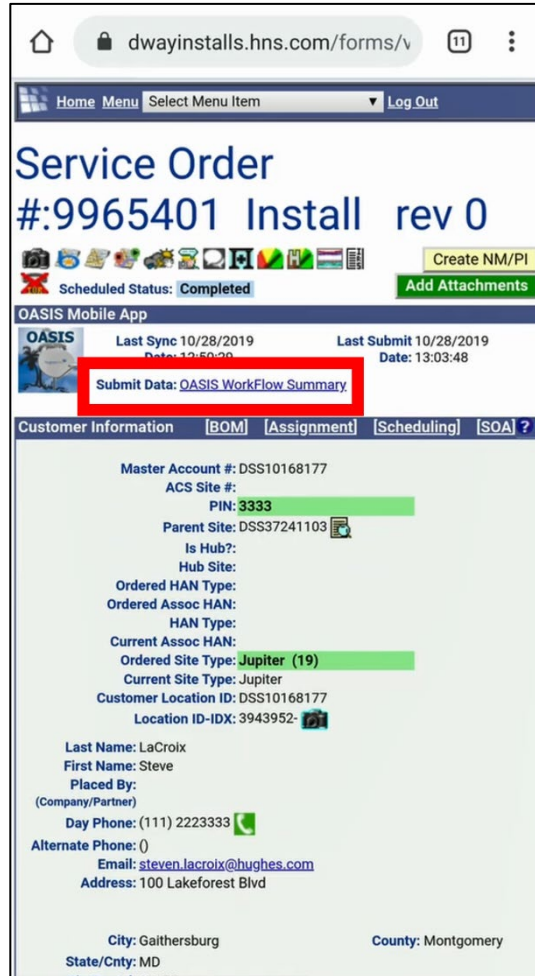
Figure 97: FSO page on the Installation Portal

The OASIS Workflow Summary page launches (Figure 98).
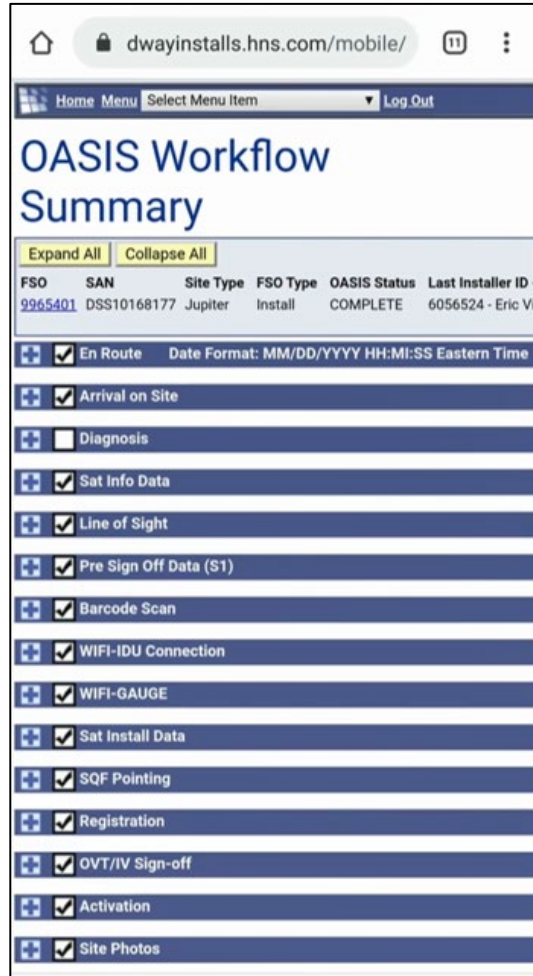
Figure 98: OASIS Workflow Summary page

4. Expand each of the menus in the workflow summary and verify all the data and attachments in your FSO have been uploaded and are correct.
5. Return to the FSO page (Figure 97 on page 93).

6. Tap the camera icon ( ) at the top to launch the Site Photo Quality Audit page (Figure 99).
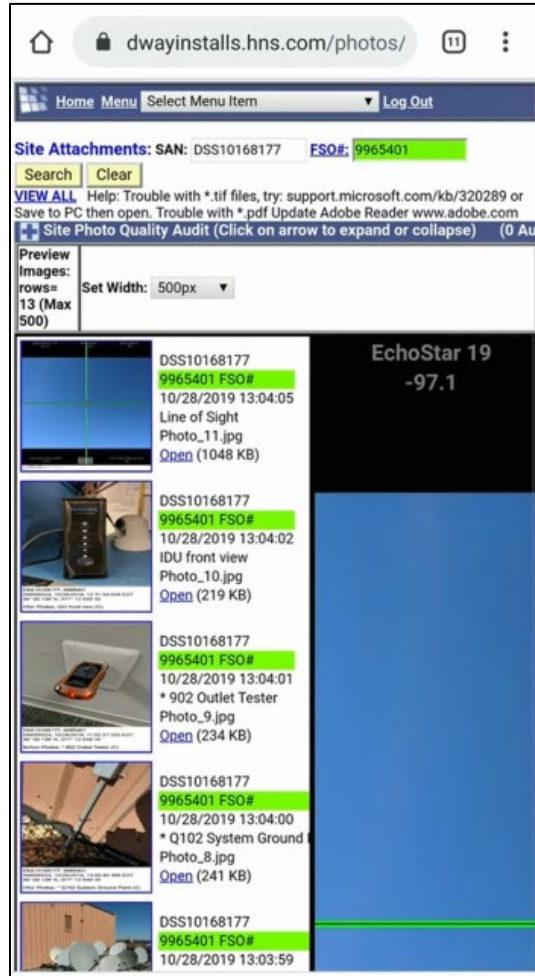
Figure 99: Site Photo Quality Audit page

7. Check to make sure all your photos uploaded correctly.

Once you have verified all the FSO data has been uploaded to the Hughes servers, you can delete the local data from your smart device to free storage space.

Deleting local files

Closed order data that is older than 30 days will be deleted automatically. To change this setting, go to the Config section of OASIS, select Auto Delete Orders, then select to turn the feature on or off.
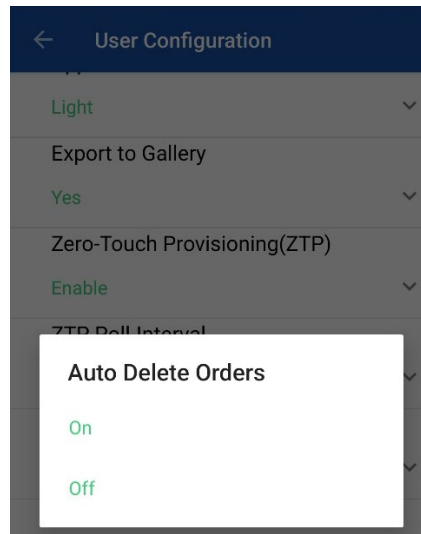
Figure 100: Auto Delete Orders

To manually delete the local data from your wireless device, follow the steps below. Hughes recommends you clear all FSO data weekly to maintain optimum OASIS performance. **Only delete the data after you have confirmed it has successfully uploaded. Once it is deleted, you cannot get it back.**

To delete FSO data from your wireless device:

1. Tap the All Records icon (outlined in Figure 101) in the bottom toolbar of the OASIS homepage.

Figure 101: All Records icon

2. On the All Records page, select the FSO you want to delete by checking the green box next to it.
3. Tap the three green dots on the top-right of the screen (outlined in Figure 102).
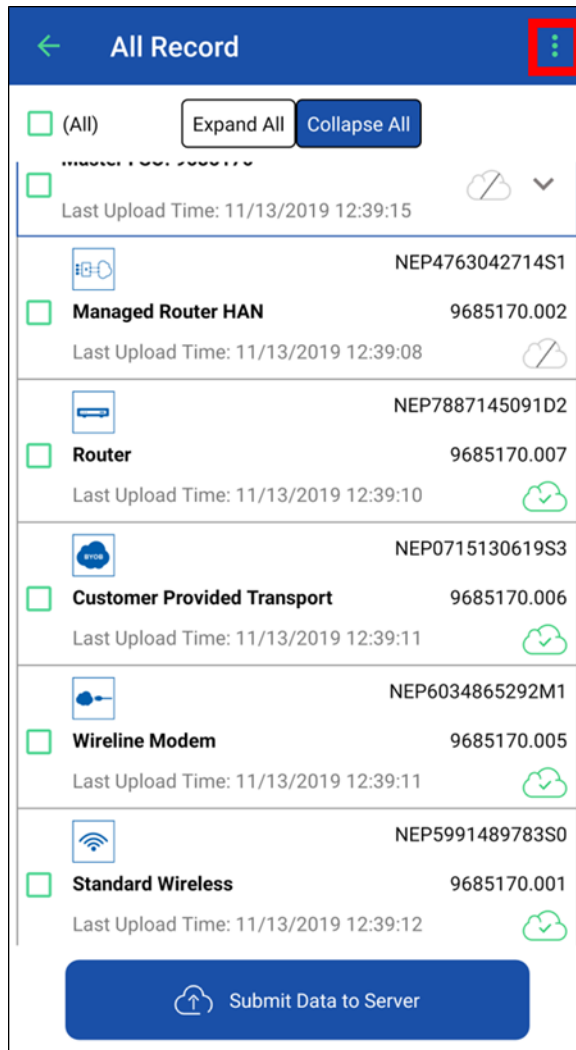
Figure 102: All Records page

A menu, like the one in Figure 103, appears.
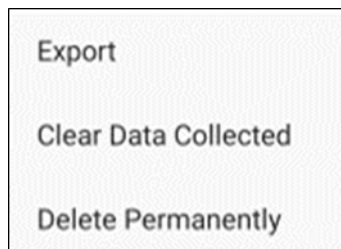
Figure 103: Data menu

4. Select **Delete Permanently**.

Performing repair orders

Installers can use certain steps in OASIS to help with JUPITER repair orders.

Diagnosis step

The Diagnosis step (Figure 104) provides access to diagnostic options. It allows you to open OVT, ping the terminal, and see the work history of the site.
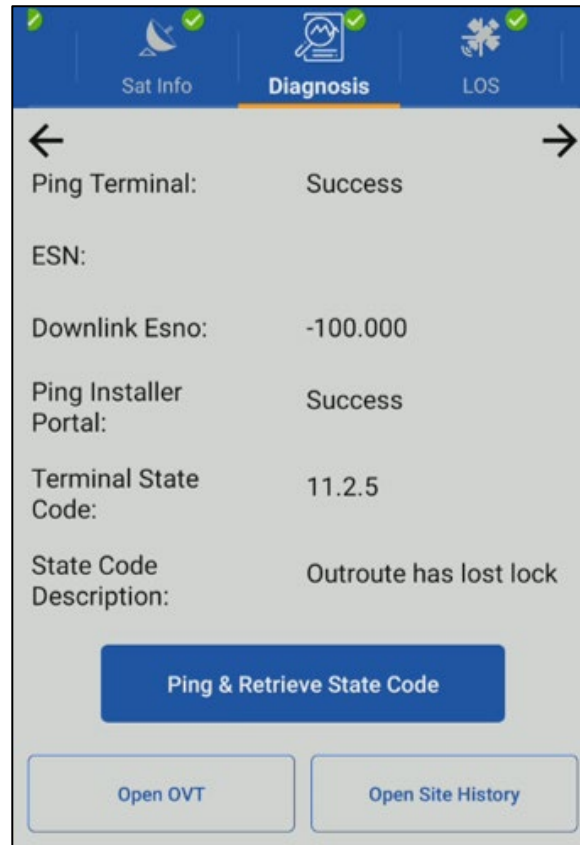
Figure 104: Diagnosis step

Tap **Ping & Retrieve State Code** to connect to the modem and see its state code.

If the modem connection fails when you tap that button, a pop-up message informs you that you can retry the connection (Figure 105). Tap **Try Again** to retry the connection.
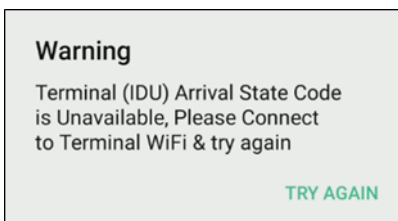
Figure 105: Diagnosis step: Unable to connect to modem

Audit resolution codes

For repair orders, the Audit step requires you to enter an explanation of how you resolved the order. To do this:

1. Tap the *Resolution Code* drop-down to launch a list of possible resolution types (Figure 106).
2. Select the resolution code that best matches how you resolved the repair order. Table 1 on page 102 gives a description of each code.
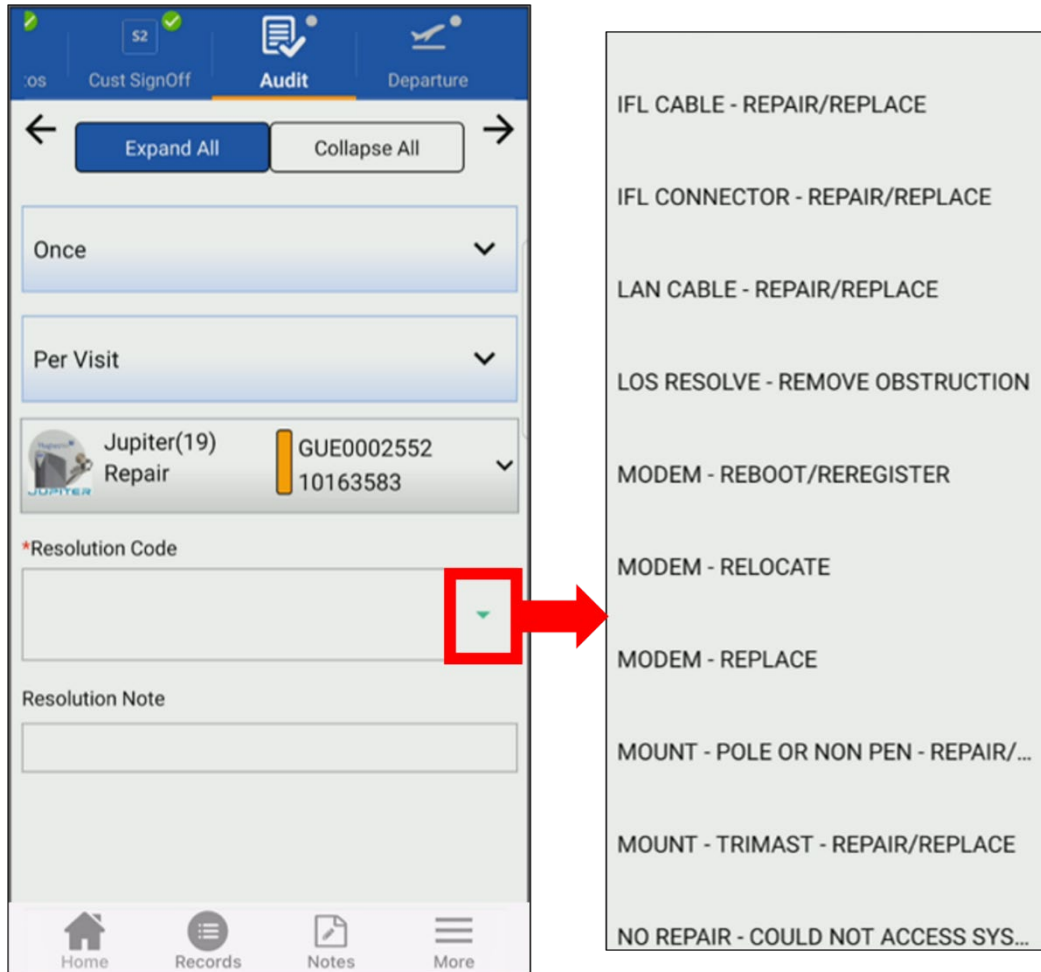
Figure 106: Selecting a resolution code

3. Enter any additional explanation in the Resolution Note textbox (Figure 107).
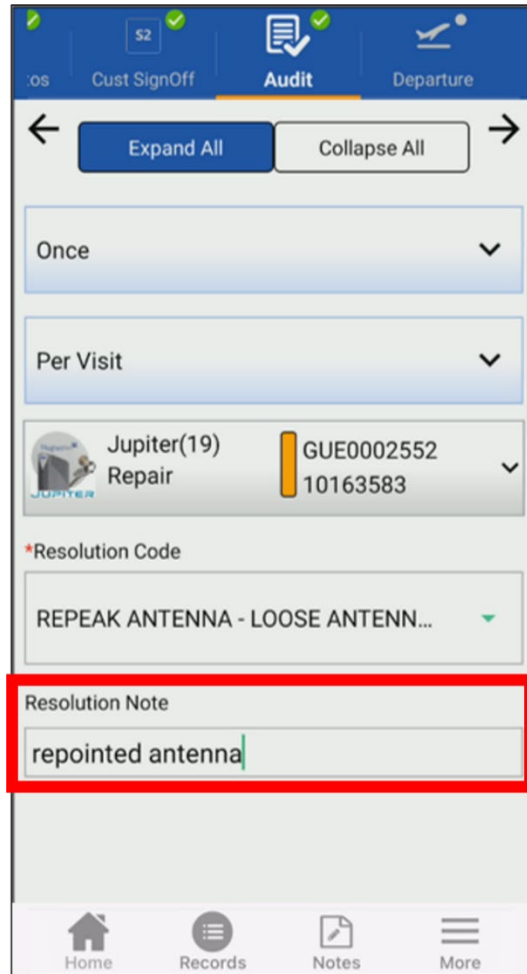
Figure 107: Resolution Note

Important: Any notes written in the app can be viewed by the customer. Make sure each note you write is appropriate and professional.

Continue departure as described in the next chapter.

Table 1: Resolution codes

Resolution code	Explanation	Examples
Antenna – Relocate – Customer Request	Relocated the antenna purely because the customer wanted it to be relocated.	The dish is located on the roof at the front of the house, but for aesthetic reasons, the customer wants the dish moved to the roof at the back of the house. The customer says the pole mount is an obstacle for mowing and children playing in lawn, and they would like the dish moved to the roof. The customer had the dish removed for construction (e.g., remodeling) and needs the dish reinstalled.
Antenna – Relocate – LOS Resolve	Relocated the antenna to resolve an LOS issue.	Tree branches have grown into the antenna's LOS since the original installation. You move the dish to a location with a better LOS.
Customer Owned Equipment Fix (not router)	Fixed a customer-owned hardware or software issue. *This does not apply to wireless routers.*	The customer incorrectly connected their computer, or their computer has a virus. Service is working fine on another device, or when the customer's hardware/software issue is resolved.
De-Install	De-installed the antenna.	The customer needs the radio removed from the mount and given to them, so they can return it to Hughes to close/credit their account (lease).
Force Range	Force ranged.	After you perform a force range, the system is operational.
Grounding – Repair/Replace	Replaced the ground wires or ground block.	After you correct the faulty grounding (to meet specifications), the system is operational.
IFL Cable – Repair/Replace	Repaired or replaced the IFL cable.	After you repair or replace the IFL cable, the system is operational.
IFL Connector – Repair/Replace	Repaired or replaced the IFL connector.	After you repair or replace the IFL connector(s), the system is operational.

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Resolution code	Explanation	Examples
LAN Cable – Repair/Replace	Repaired or replaced the LAN cable.	After you repair or replace the LAN cable, the customer can browse the Internet.
LOS Resolve – Remove Obstruction	Resolved an LOS issue by moving an obstructing object.	Cut a tree branch to clear LOS. Remove an item that the customer placed on the radio/reflector. Clear snow/ice from the reflector.
Modem – Reboot/Reregister	Rebooted or reregistered the modem to restore service.	After you reboot or reregister the modem, the customer's service is restored.
Modem – Relocate	Relocated the modem inside the customer's house.	The customer wants the modem moved to a room closer to the center of their home to get the best wireless signals in all rooms. The modem was overheating and needed to be moved to a cooler/less confined area. The customer recently remodeled their house and would like the modem moved to a new location.
Modem – Replace	Replaced/swapped the modem.	After you replace or swap the modem, the customer's service is restored.
Mount – Pole or Non-Pen – Repair/Replace	Replaced or reinstalled a pole mount or non-penetrating mount.	The customer hit the pole mount with their car, and the mount needs to be replaced. The existing pole mount is degraded/rusted and needs to be replaced. The pole is not to specification (e.g., wrong size, used an upsizing adapter) and needs to be replaced or reinstalled. The pole is spinning in the ground or wobbling due to lack of concrete/hole depth and needs to be replaced or reinstalled.

Resolution code	Explanation	Examples
Mount – Trimast – Repair/Replace	Repaired or replaced a trimast mount.	The trimast is rusted, falling apart, and requires replacement. A trimast leg is damaged and requires replacement. The trimast legs are not screwed into studs, and you must readjust the mount and/or move the legs, so they are secure in studs. Trimast triangulation is incorrect, and you must adjust the legs for proper triangulation.
No Repair – Could Not Access System	Could not perform the repair because you could not access the modem or antenna.	The customer relocated the dish next to their electrical service entry, so you cannot access the dish without being put in a hazardous situation. Cannot find or access the modem because of clutter in the house.
No Repair – Customer/Vendor to Fix	No repair is performed because the customer or another vendor will fix the problem.	The customer says they will trim trees to resolve LOS issue. The customer says they will hire an electrician to fix an electrical issue causing modem failure.
No Repair – No Problem Found	No repair is performed because the system is working at target values.	Site passes OVT, and SHP shows the system working at or above the target values.
No Repair – Weather Related	No repair is performed because the service disruption was caused by weather.	You determine that the customer was experiencing rain fade.
Power Supply – Replace	Replaced the power supply.	After you replace the power supply, the system is operational.
QA Audit	For quality assurance (QA) photo audits only.	You return to the site to take pictures at the request of Hughes QA. No repair is completed.

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Resolution code	Explanation	Examples
Radio & Modem – Replace	Replaced both the radio *and* the modem.	After you replace the radio *and* the modem, the system is operational.
Radio – Replace	Replaced radio.	After you replace the radio, the system is operational.
Reflector – Replace	Replaced reflector.	You replace the reflector because it is bent or damaged.
**Repeak Antenna – Customer Caused Misalignment	Repeaked/realigned the antenna because of a customer-caused misalignment.	The customer knocked the mount and caused a misalignment. When you realign the antenna, the system is operational.
**Repeak Antenna – Loose Antenna Assembly	Repeaked/realigned the antenna because of a loose assembly.	The Az/El or canister needs to be realigned or tightened. After you make the adjustment, the system is operational.
**Repeak Antenna – Loose Mount	Repeaked/realigned the antenna because of a loose mount.	Screws at the feet of the trimast legs need to be tightened. After you re-secure the mount, the system is operational.
**Repeak Antenna – Weather Caused	Repeaked/realigned the antenna because of a weather event.	A storm or high winds caused dish misalignment. After you realign the dish, the system is operational.
VoIP/ATA Install	VoIP/ATA install on a repair order, or VoIP/ATA repair.	The customer receives an ATA returned material authorization (RMA) to install VoIP themselves, but they cannot complete the install. You respond to a repair order to perform the install. You replace ATA or restore the customer's VoIP service in some way.
Wireless Router – Repair/Replace	Replaced, reconfigured, reset, or otherwise repaired a wireless router.	You replace, reconfigure, reset, or otherwise repair a wireless router.

Resolution code	Explanation	Examples
Important: If the mount needs to be reinstalled or replaced, it is a *mount repair*, **not** a repeak. See examples for mount resolutions earlier in this table. If the dish needs to be relocated, it is an *antenna repair*, **not** a repeak. See examples for antenna resolutions earlier in this table.		

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Appendix B
OASIS troubleshooting

Install support is equipped to handle the more common OASIS issues, such as accessing the app or viewing orders, but some problems (such as photo errors or app crashes) may require further investigation. If your issue cannot be resolved in real time, report it to mobile-app-issue@hughes.com so the OASIS application development team can review it.

Keep in mind, many installation errors may be the result of a backend system issue and not a problem with the app itself. For example, an SBC file upload error, pointing error, or activation error is more likely an issue with the terminal or installation systems than the OASIS app itself.

If you have an unresolved OASIS issue, complete the FSOs to the best of your ability with the OASIS functions that do work. If OASIS is not operational at all or your mobile device dies, you can complete the FSOs without OASIS by using the installation steps in the terminal local user interface (LUI) (**192.168.0.1 > Install**).

Training on a non-OASIS installation is available here. Other resources, such as a full OASIS user guide and training videos, are available in the Installation Portal.

Installing or re-installing the OASIS app on your mobile device

1. To download the OASIS app, navigate to the Installation Portal (https://install.hughes.com) with your mobile device and click on the download or Appstore links (Figure 108).

Figure 108: OASIS Mobile App Download and Hughes Appstore links

2. Recommended devices: OASIS supports Android and iOS platforms. Hughes recommends more popular models, but any Android/iOS device should work well if it meets the minimum requirements. Check the Installation Portal home page notes for updates on the recommended operating system (OS) version and specifications.

Important tips

- **Do** sync your device every morning when you have a good Wi-Fi or long-term evolution (LTE) connection; do this before leaving for your first order. Syncing multiple times throughout the day is good practice.
  - To sync your device, press **Sync** ( ) on the OASIS homepage (see Figure 3 on page 8).
- **Do** enable cookies in your device's default browser settings. Cookies are required for certain OASIS functions to work properly.
- **Do** review your app's configuration by navigating to **Config** ( ) on the OASIS homepage (see Figure 3 on page 8). This allows you to configure things such as sync intervals and photo settings.
- **Do** update your mobile device's OASIS permissions for access to GPS (for coordinate capture), photos, push notifications, etc.

- **Do** report any issues you have with the installation or the OASIS app by responding to the "Did you have any installation issues with this site?" question at the end of every FSO (see Figure 90 on page 87). You can also report any OASIS issues or give suggestions for improvement to your dealer/distributor or to Hughes directly by emailing mobile-app-issue@hughes.com.
- **Do** review OASIS homepage announcements, notes, and push notifications for installation and OASIS updates.
- **Do** update to the most recent OASIS app version whenever possible.
- **Don't** allow old records to pile up, since it can cause the OASIS app to become slow or crash.
  - Clean out old records by clicking **All Records** on the OASIS homepage (Figure 19 on page 19) and deleting completed FSOs that have a green cloud and checkmark next to them (see Figure 20 on page 20 for examples). The green checkmark indicates the FSO data was successfully uploaded to the Installation Portal. We recommend you clean out old records at least once a week.
- **Don't** close the app if you want GPS tracking to keep running. The app needs to be running in your device's foreground or background to track your location (for example, when completing the En Route step).

Common issues and questions

- **I am having an iOS certificate issue. (Untrusted Developer error)**
  a. On your iOS device, go to Settings > General > VPN & Device Management.

  b. Select the *Hughes Network Systems, LLC* option in the Enterprise App section and tap **Trust Hughes Network Systems** to validate the certificate.

- **How do you reset your password in OASIS? (Password Expired error)**
  - OASIS and the Installation Portal share the same credentials and authentication process. If your password has expired, log in to the Installation Portal (https://install.hughes.com) and try to log in using your old password. The Installation Portal will prompt you to reset your password.
  - If your password is lost or forgotten, tap **Forgot Password?** on the Installation Portal login page or the OASIS login page (see Figure 2 on page 7) to reset the password. Once the password is reset, try using the updated password in OASIS.
- **I'm having trouble logging in to OASIS. (Invalid token - token not found error).**
  - For any Dish Installers login issues, call 888-332-3474 and select option 3 (Mobility Support Desk). If calling after 5 pm, call 303-723-2222 for the IT Support Group.
  - Make sure you have internet connectivity.
  - Make sure the Installation Portal is operational by logging in via a web browser from the same device. If your password has expired, reset it.

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- **The sync/upload is taking a long time.**
  - Sync the OASIS application with a good internet connection (ideally Wi-Fi) before leaving for your first work order each day.
  - If any information is missing on the FSO steps/screen, go back to the home screen and sync on the FSO level (see Figure 109).
  - Click **All Records** and make sure to upload all the data to the server and then delete any old, completed FSOs.
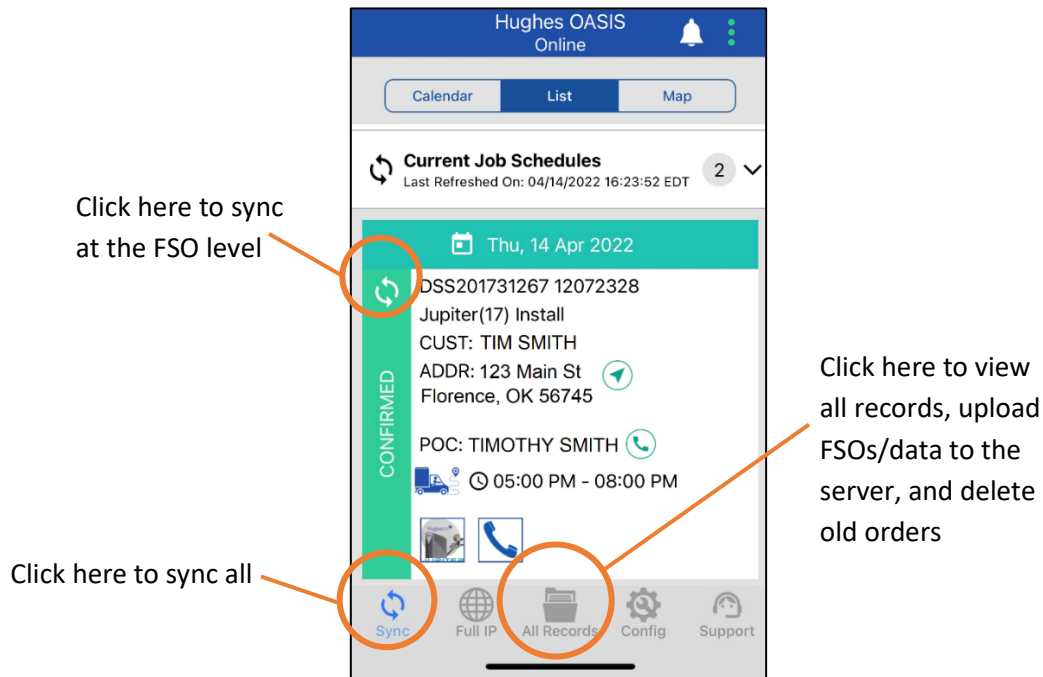
Figure 109: Syncing on OASIS

- **I'm unable to see a particular FSO in my OASIS app.**
  - OASIS will not sync orders that are closed/completed or canceled. Make sure the order has a status of "In Progress."
  - OASIS will only sync orders with a tentative or confirmed scheduled date. OASIS will not sync orders with past scheduled dates, so make sure the FSO has been scheduled for the current date or a future date.
  - Make sure the FSO is assigned to the same installer ID that is being used for OASIS. Check with the technician's Dealer/Distributor for further help if any reassignment or rescheduling needs to be done.
  - If you are looking for an order that is scheduled more than 7 days in the future, go to the Config menu in OASIS and change the scheduled days from the default (7 days) to up to 1 month.
- **The Enroute function is not working.**
  - The Enroute function requires adequate cellular or Wi-Fi service on your device. If the Enroute button is grayed out, or you receive an error upon attempting Enroute, you may not have adequate service.
  - You can only use the Enroute function on one FSO at a time.
  - The Enroute function provides a default travel time to the customer's location based on your current location, but you can select a more accurate enroute time if needed.

- **I am using an Android device and am having issues with its GPS functionality in OASIS.**
    - Make sure you have location services turned on and the High Accuracy Mode is enabled in the mobile settings.
- **GPS is not capturing arrival on-site, or GPS capture is not accurate.**
    - This may be due to poor cellular service. Make sure GPS location permissions are turned on in device settings and try to capture the GPS location again. In the worst-case scenario, use the ordered lat/long (default in OASIS) to activate service, and then correct the lat/long later (if needed) after HughesNet service has been activated.
    - On occasion, the GPS coordinates captured may be significantly different from the lat/long expected from the order. When this happens, you will receive a pop-up message to confirm you are at the correct location. The captured lat/long from your device is typically more accurate than the ordered lat/long, so if you confirm the order is for the correct customer, then use the lat/long you captured in OASIS.
- **The LOS tool in OASIS is not functioning properly (for example, the crosshairs are not moving correctly).**
    - The LOS tool interacts with the native compass inside the device. Your device model must have a compass sensor built in (most modern phones do).
    - The compass can freeze in some exceptional cases. Recalibrating or lightly shaking the device can sometimes help reset the compass needle and make it work much better.
- **A part number is missing from the BOM step, or there's an error capturing the serial number.**
    - This is likely a configuration issue in Hughes' system. Continue with the installation and report the issue to Hughes. You can also include a comment in the "Did you have any installation issues with this site?" question at the end of every FSO.
- **My device is not able to correctly scan barcodes.**
    - Your device must have a rear-facing camera with at least 5-megapixel resolution and autofocus. If your device is unable to scan a barcode, enter the part number or serial number manually.
- **I am unable to connect to the terminal ("Connection to IDU Failed" appears during the Gauge step, or OASIS fails to ping the terminal or query pointing statistics on the Sat Install step).**
    a. Go to your device's Wi-Fi settings and ensure you are connected to the modem's Wi-Fi network.
    b. Go to the Sat Install step and tap on the terminal icon. You will see the following pop-up message: "Terminal (IDU) is unavailable, do you want to continue?"
    c. Tap **Yes**. This will launch a browser on your phone and will try to connect with the terminal's LUI.
    d. After the browser connects and displays the LUI, go back to the OASIS app. You should now be able to connect with the terminal.
- **I got an SBC file upload error.**
    - Report any SBC file upload errors to Install Support and notate it in OASIS upon FSO completion.
- **I am unable to load a photo or am having other problems on the photo screen of OASIS.**
    - If you have already completed the Departure workflow, OASIS will lock some features. You will need to re-arrive on the same site to capture the photos.

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- Having multiple old FSOs stored on your device could cause memory issues with the app. Ensure all old FSOs are uploaded to the Installation Portal, then delete/clear them from the records screen.
- **My iOS camera doesn't launch.**
    - OASIS likely doesn't have permission to access the camera. To fix this:
        i. Open the iPhone's Settings app.
        ii. Scroll down to the **HughesOASIS** settings.
        iii. Turn **On** the toggle button to give OASIS permission to access Photos and Camera.
- **I am having trouble loading on the photo screen after taking a picture.**
    - Photos might be set to too high of a resolution. To fix this:
        i. Close OASIS. Ensure it's not running in the background.
        ii. Open OASIS again.
        iii. Open the Config screen.
        iv. Change the photo resolution to minimum.
        v. Save the settings.
        vi. Return to the photo screen and continue the job.
- **I am receiving a warning that a photo is "Not Qualified" and may fail photo audit.**
    - The photo is failing an automatic check. OASIS uses AI to help ensure good photo quality (for example, that the photo isn't blurry). It also ensures subject matter classification; it compares the photo to similar photos in a database of approved photos. This technology is not necessarily intended to judge installation quality.
    - It is possible that a photo may pass AI but fail a human-reviewed photo audit and vice versa. If you receive the Not Qualified error but believe the photo is good quality and would pass an installation audit, then tap **Proceed** to keep the photo. Otherwise, try to re-capture the image for a better photo.
- **OASIS is not showing the FSO that was previously completed (in other words, there has been data loss).**
    - Look for the FSO in both previous schedules.
    - Check to see if it's listed in the All Records screen. All Records lists all of your saved FSOs. If any FSO was deleted from the All Records page by accident, it is not possible to recover it.
    - Popular safeguards:
        - Log in to the Installation Portal before deleting any FSOs from records to ensure all data was uploaded.
        - Export photos and signatures to your device's photo gallery just in case there is data loss.
        - Keep All Records clean by deleting old completed FSOs that have been successfully uploaded; storing too many old FSOs may cause data issues.
- **I'm having issues uploading FSO information (such as attachments) to the Installation Portal.**
    a. If you are trying to upload multiple FSOs at once, try instead to upload one at a time.
    b. If this doesn't fix your problem, upload the information through the Installation Portal. To do this:
        i. Make sure you have a stable and strong Internet connection (i.e., not 3G or 4G).
        ii. Make sure the Installation Portal is operational by logging in via a web browser.
        iii. Resubmit your upload.
            1. In the OASIS FSO workflow summary page, tap **Clear Upload Status**.
            2. Tap **Submit Data to Server** to resubmit the FSO data.
    c. If you are still failing to upload:

      i.   Tap **Export Attachments** on the All Records screen to save all the attachments to the device gallery.

     ii.   Upload these attachments manually through the Installation Portal via a web browser.

  d. If you have issues exporting the attachments:

      i.   Take screenshots of the individual attachment inside the FSO.

     ii.   Upload these screenshots manually to the Installation Portal via a web browser.

- **I lost data when I switched to a secondary login.**
  - OASIS stores the information of only one user at a time. Switching to another installer login will erase the previous user's data. OASIS warns you before it deletes the previous user's data.
- **OASIS is consuming a lot of my cellular data.**
  - Use a Wi-Fi network to upload attachments to preserve your cellular data.

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Acronyms

A

AI – Artificial intelligence
ATA – Analog telephone adaptor

B

BOM – Bill of materials

D

DAPT – DiSEqC antenna pointing tool

E

ETA – Estimated time of arrival

F

FSO – Field service order

G

GPS – Global positioning system

I

IDU – Indoor unit
IFL – Interfacility link
IP – Installation Portal
IT – Information technology
IV – Installation verification

L

LAN – Local area network
LOS – Line of sight
LTE – Long-term evolution
LUI – Local user interface

O

OASIS – Onsite Accelerated Service Installation System
ODU – Outdoor unit
OS – Operating system
OVT – Onsite verification tool

P

PC – Personal computer

Q

QA – Quality assurance

R

RMA – Returned material authorization

S

SAN – Site account number
SBC – Satellite-based commissioning
SQF – Signal quality factor
SSID – Service set identifier

V

VoIP – Voice over IP
VPN – Virtual private network

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