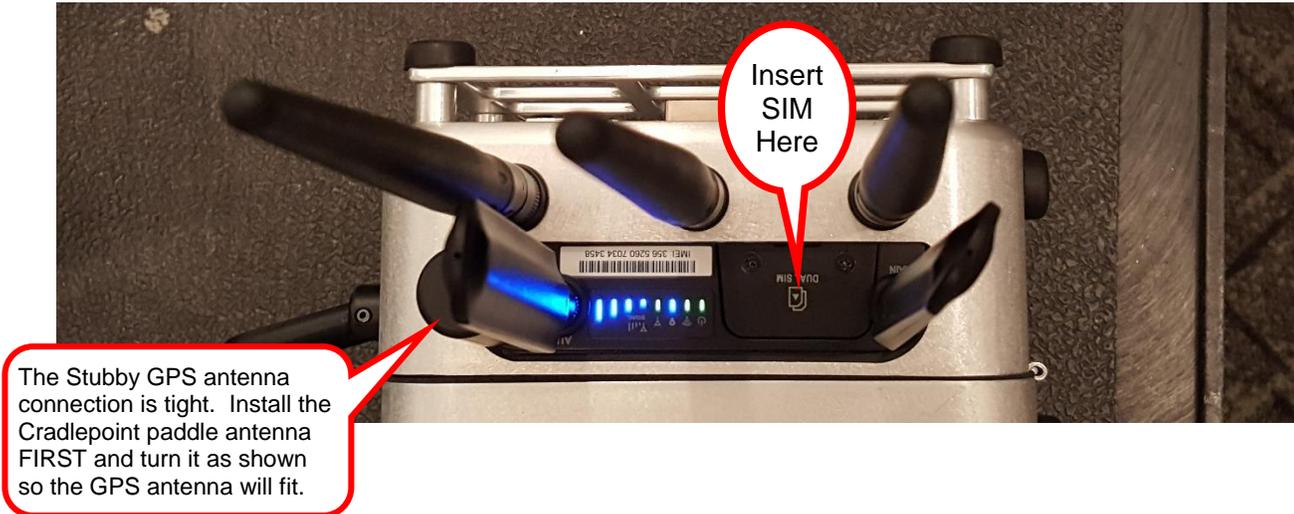


GETTING STARTED WITH THE SMART GATEWAY

SIM Card Installation & Registration

1. First things first. If you haven't yet installed the SIM card, it goes on the OUTSIDE of the case, near the antennae (no need to open the gateway). Two screws out, install SIM in either slot, two screws back in. (Gateway will not boot up if the SIM port screws are out)
2. Next, put on the antennae and fire it up! Let it run ALL DAY, so the Gateway can register the SIM to the wireless network and itself to the DNS server.



Access the Internal Laptop:

Option 1a will work shortly after powering up the Smart Gateway. Option 1b requires a SIM card to be inserted and the gateway be registered on the internet - which takes several hours. Try option 1b only after letting the gateway run for at least half a day if not an entire day.

Option 1a: Windows Remote Desktop Connection via EPAERT1 WiFi Network

- Connect a laptop or mobile device capable of running Remote Desktop Connection to EPAERT1
- Run Windows Remote Desktop Connection
- Computer Name = 192.168.4.4
- Username = \LifelineSmartGateway
- Contact ertsupport@epa.gov to obtain the password
- Click Yes past the security warning screen

Option 1b: Windows Remote Desktop Connection via the Internet

- Must be using an internet source with a public IP Address in the Gateway (Cradlepoint)
- Using an internet-connected laptop or mobile device capable of running Remote Desktop Connection software, run Windows Remote Desktop Connection
- Computer Name = The EXTERNAL gateway address followed by :7000. i.e., EPAERT231.SAFEENV2.COM:7000
- Username = \LifelineSmartGateway
- Contact ertsupport@epa.gov to obtain the password
- Click Yes past the security warning screen

Troubleshooting Access to the Internal Laptop

1. Can't connect via Remote Desktop Connection from within the EPAERT1 WiFi network:

If you can't use Remote Desktop Connection locally to access the Smart Gateway Laptop from a computer or mobile device connected to the EPAERT1 WiFi network, you have two options:

- Connect an external (HDMI) monitor, USB keyboard and USB mouse to the ports on the back of the Smart Gateway
- Open the Gateway and use the touch screen monitor.

If you are able to connect to the Internal laptop using one of the two options above, follow the steps below to verify that the internal Smart Gateway Laptop has the correct IP Address (192.168.4.4). If you cannot access the Smart Gateway at all, please contact ERTSupport.

Check the IP Address Reservation of the Smart Gateway Laptop:

There is an IP Address Reservation in the Cradlepoint which is supposed to maintain the IP Address of the laptop. By default, the laptop IP Address should be 192.168.4.4. The steps below illustrate how to check the IP Address of the internal Smart Gateway Laptop.

On the Smart Gateway Laptop:

To see the Smart Gateway Laptop's IP Address

- Click the search icon and type CMD and press enter to **open a command prompt**
- Type **'IPCONFIG/all'** and press enter
- Look under the Ethernet Adapter section for the **IPv4 Address** and make note of what that says
- Also, under the Ethernet Adapter section, make note of the **Physical Address**

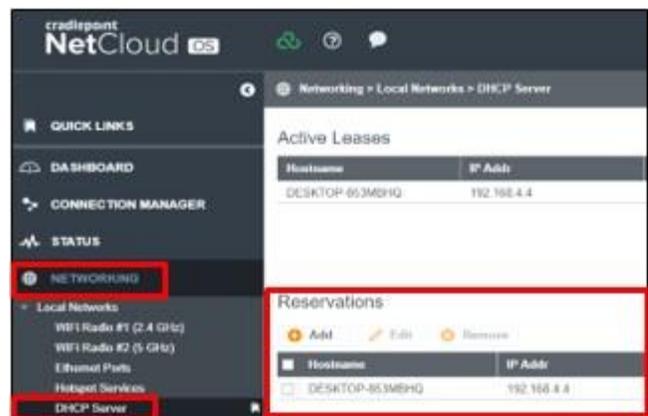
```
Ethernet adapter Ethernet 5:  
Connection-specific DNS Suffix . : local.tld  
Description . . . . . : Realtek USB FE Family Controller #5  
Physical Address. . . . . : 00-E0-4C-36-3D-28  
Link-local IPv6 Address . . . . . : fe80::1937:754a:af50:beb7%3 (Preferred)  
IPv4 Address. . . . . : 192.168.4.70 (Preferred)  
Subnet Mask . . . . . : 255.255.0.0  
Lease Obtained. . . . . : Wednesday, August 29, 2018 8:05:20 AM  
Lease Expires . . . . . : Wednesday, August 29, 2018 8:05:20 PM  
Default Gateway . . . . . : 192.168.4.1  
DHCP Server . . . . . : 192.168.4.1  
DHCPv6 IAID . . . . . : 50389068  
DHCPv6 Client DUID. . . . . : 00-01-00-01-1F-1B-4A-3F-00-E0-4C-36-00-01  
DNS Servers . . . . . : 192.168.4.1  
NetBIOS over Tcpip. . . . . : Enabled
```

Call ERTSupport if the IP Address of the laptop is not 192.168.4.4

Check the IP Address Reservation on the Smart Gateway Cradlepoint:

To see the IP Reservation:

- On the Smart Gateway Laptop, open a browser and type 192.168.4.1 to **access the Cradlepoint Router**
- Contact ertsupport@epa.gov to obtain the password
- Navigate to **'Networking' – 'Local Networks' – 'DHCP Server'**
- There should be a Reservation for the Smart Gateway Laptop. The reservation's **hardware address** should **match** the Smart Gateway Laptop's physical address and **the IP Address** should **match** the Smart Gateway's IP Address



2. Can't connect to the Smart Gateway Laptop via Remote Desktop Connection over the internet:

Check that the "Remote Desktop Connection Port Forwarding Rule" is properly configured on the **CRADLEPOINT** router.

The steps below illustrate how to check the Port Forward Rule in the Cradlepoint.

Option 1 Login to the Smart Gateway Cradlepoint from within the EPAERT1 Wifi network:

- Connect a laptop or mobile device to the EPAERT1 network
- Open a browser and type 192.168.4.1 to access the Cradlepoint Router
- Contact ertsupport@epa.gov to obtain the password
- Follow steps for checking the Cradlepoint port forward rule below

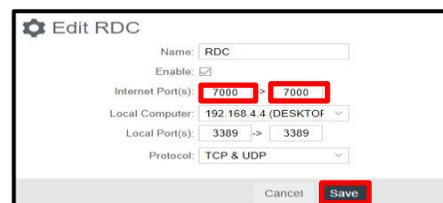
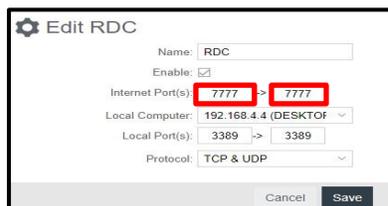
OR

Option 2 Login to the Smart Gateway Cradlepoint over the internet:

- To access the Cradlepoint Gateway over the internet, the Smart Gateway must have internet access (working SIM Card, etc)
- From a laptop or mobile device, open a browser and type EPAERTxxx.safeenv2.com:8080 to access the Cradlepoint Router
- Contact ertsupport@epa.gov to obtain the password
- Follow steps for checking the Cradlepoint port forward rule below

Check the Cradlepoint Port Forward Rule

- Navigate to 'Security – Port Forward & Proxy'
- The Internet Port should be '7000'. If it is not, edit the Internet Port and change it. Click Save.



Internal Smart Gateway Laptop:

1. **Check the Time Zone** of the internal laptop. Change if necessary. Note – don't just change the time and not the time zone as this will cause issues with Deployment Manager. Always make sure the time is correct for the time zone selected.



- a. Use the Search Icon in the lower left corner of the Windows Taskbar.
- b. Enter the words "time zone" and select the option "Change the time zone"

2. Install the latest version of Survey Controller

- a. Verify the current version of survey controller by clicking on the "HELP" menu option in Survey Controller. If the version number is not 1.5.3, you will need to upgrade Survey Controller.
- b. Download the latest version of Survey Controller from <https://response.epa.gov/viper>.
 - i. Login to the website, navigate to the documents section and select the Survey Controller category. You may need additional rights to download survey controller. If you have any issues, please e-mail ertsupport@epa.gov or call 800-999-6990 and request download rights for Survey Controller. Save the file and extract the "Field Survey Controller Setup - v1.5.3.msi" from the downloaded .zip file.
- c. Uninstall the existing version of Survey Controller
 - i. Use "add or remove programs" feature in Windows
 - ii. Select Viper Field Survey Controller from the list of installed apps
 - iii. Click the Uninstall Button. A warning will be displayed. Click Uninstall again.
 - iv. Close the "apps and features" window when Survey Controller is uninstalled
- d. Install Field Survey Controller v1.5.3
 - i. Browse to the "Field Survey Controller Setup - v1.5.3.msi" saved in step b and double click the file to start installation.
 - ii. On the "Select Installation Folder" window, make sure to select "EVERYONE".
 - iii. Continue through the remaining prompts until Survey Controller is installed.

3. Register Survey Controller

- a. Run Viper Survey Controller and complete the registration fields
- b. Field Operation Name – until the gateway is deployed, enter your Region number followed by Smart Gateway and the Smart Gateway number. For example: R02 Smart Gateway EPAERT273.
- c. Remaining Fields – enter Viper contact information for your region.

4. Install the latest version of PRG2CAP

- a. Download the latest version of PRG2CAP from <https://response.epa.gov/viper>.
 - i. Login to the website, navigate to the documents section and select the Current MeterApps category. You may need additional rights to download PRG2CAP. If you have any issues, please e-mail ertsupport@epa.gov or call 800-999-6990 and request download rights for PRG2CAP. Save the file and extract the "PRG2CAP Setup.msi" from the downloaded .zip file.
- b. Uninstall the existing version of PRG2CAP
 - i. Use "add or remove programs" feature in Windows
 - ii. Select PRG2CAP from the list of installed apps
 - iii. Click the Uninstall Button. A warning will be displayed. Click Uninstall again.
 - iv. Close the "apps and features" window when Survey Controller is uninstalled

- c. Install PRG2CAP v1.2
 - i. Browse to the “PRG2CAP Setup.msii” saved in step a and double click the file to start installation.
 - ii. On the “Select Installation Folder” window, make sure to select “EVERYONE”.
 - iii. Continue through the remaining prompts until PRG2CAP is installed.

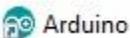
5. **Add the MeterApps to the MeterApp Inventory** in Survey Controller.

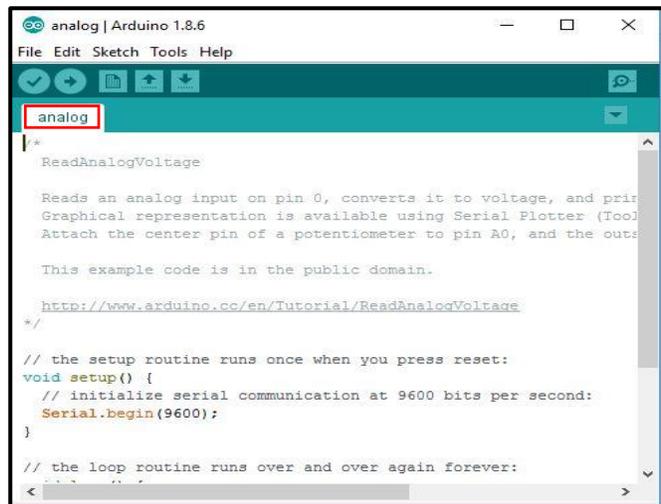
The MeterApps are already installed on the internal laptop but they need to be added to Survey Controller’s meter app inventory.

- a. MeterApps are installed in the following location:
C:\SafeEnv\DNNet40
- b. Refer to the ERT Viper User Guide – Section 2/PartA – for details on adding MeterApps to Survey Controller

6. **Update** the software that reports the **Smart Gateway’s battery voltage**.

In configuring the Smart Gateway an incorrect file was installed causing the Smart Gateway Meter App to incorrectly display the battery voltage. Below is a step-by-step process that can followed to address this issue locally.

1. Exit out of the Smart Gateway Meter App if it is running.
2. From the file manager navigate to the C:\SafeEnv folder.
3. Double click the Arduino icon  to open the Arduino IDE (Integrated Development Environment).
4. The Arduino will automatically open the battery monitor “sketch” (an Arduino term) titled “analog”



The screenshot shows the Arduino IDE interface. The title bar reads "analog | Arduino 1.8.6". The menu bar includes "File", "Edit", "Sketch", "Tools", and "Help". The toolbar contains icons for file operations and a search icon. The sketch name "analog" is highlighted in the top bar. The main editor area displays the following code:

```
ReadAnalogVoltage

Reads an analog input on pin 0, converts it to voltage, and prints the value to the serial monitor.
Graphical representation is available using Serial Plotter (Tools -> Serial Plotter).
Attach the center pin of a potentiometer to pin A0, and the outside pins to GND and 5V.

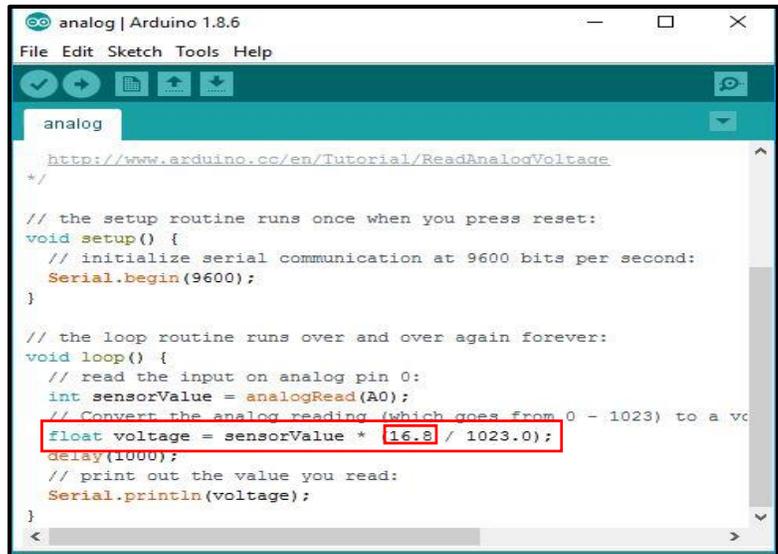
This example code is in the public domain.

http://www.arduino.cc/en/Tutorial/ReadAnalogVoltage
*/

// the setup routine runs once when you press reset:
void setup() {
  // initialize serial communication at 9600 bits per second:
  Serial.begin(9600);
}

// the loop routine runs over and over again forever:
```

5. Scroll all the way to the bottom and change the 5th line from the bottom to read 16.8 rather than 14.8



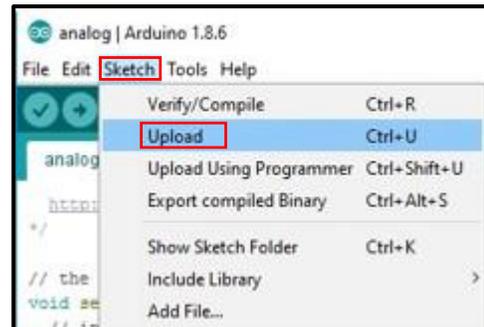
```
analog | Arduino 1.8.6
File Edit Sketch Tools Help

http://www.arduino.cc/en/Tutorial/ReadAnalogVoltage
*/

// the setup routine runs once when you press reset:
void setup() {
  // initialize serial communication at 9600 bits per second:
  Serial.begin(9600);
}

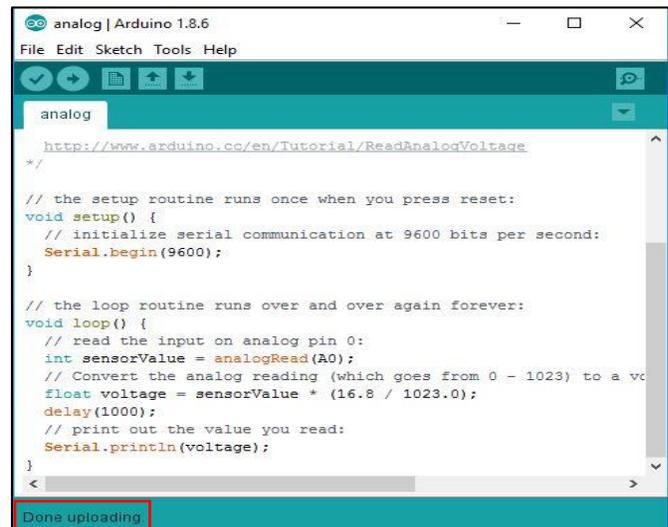
// the loop routine runs over and over again forever:
void loop() {
  // read the input on analog pin 0:
  int sensorValue = analogRead(A0);
  // Convert the analog reading (which goes from 0 - 1023) to a voltage
  float voltage = sensorValue * 16.8 / 1023.0;
  delay(1000);
  // print out the value you read:
  Serial.println(voltage);
}
```

6. From the options at the top of the IDE select Sketch then Upload



7. When complete the IDE will report Done uploading. Exit out of the Arduino IDE

8. Restart Windows or power cycle the Smart Gateway.



Shortcuts:

Shortcuts to the **NOAA Meter App**, **PRG to CAP** and **Password Generator** can be found in the folder on the desktop called Meters. The name of the shortcut for Password Generator is now "SEEPasswordGeneratorPlus.exe".