

User Guide

C2 UI Checks Automation

Prerequisites

Before you begin, ensure you have the following installed on your system:

1. **Python** (version 3.6 or later)
2. **pip** (Python package installer)
3. **GRL_C2_BROWSER_APP**

Step 1: Install Selenium WebDriver

Selenium WebDriver is a powerful tool for controlling web browsers through programs and performing browser automation.

Installation: Open your terminal or command prompt and run the following command:

```
>> pip install selenium
```

Verification: To verify the installation, you can run a simple script to check if Selenium is working:

1.Create a Python Script:

Open your preferred text editor or IDE (such as VS Code, PyCharm, or any text editor).

2.Write the Script:

```
from selenium import webdriver

driver = webdriver.Chrome

driver.get("https://www.google.com")

print("Page title:", driver.title)

driver.quit()

print("Selenium is successfully imported and working.")
```

3. Save and Run the Script:

- Save the script with a .py extension, for example, selenium_test.py.
- Now run selenium_test.py.
- If Selenium is imported correctly and the WebDriver launches Chrome and accesses Google, you should see output similar to:

Page title: Google

Selenium is successfully imported and working.

Make sure you have the appropriate WebDriver for your browser in the directory:

"UI Checks Automation\Resources\chromedriver-win64\chromedriver.exe".

For example, if you're using Chrome, download the ChromeDriver from [here](#).

Step 2: Install PyYAML

Open your terminal or command prompt and run the following command:

```
>> pip install PyYAML
```

PyYAML is a YAML parser and emitter for Python.

Step 3: Install Logging

Open your terminal or command prompt and run the following command:

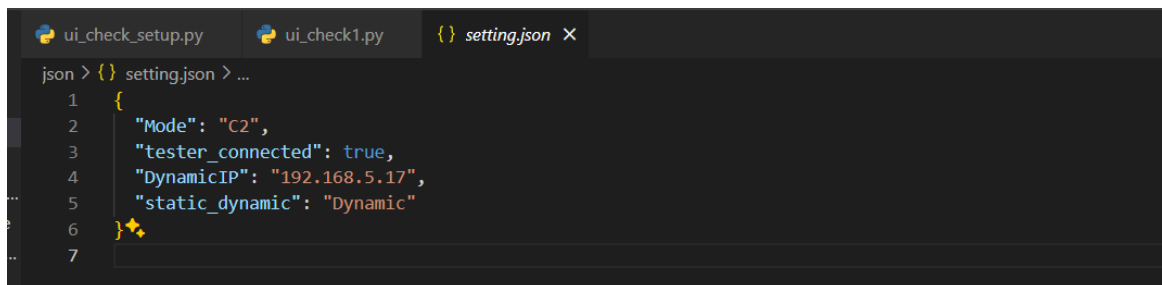
```
>> pip install logging
```

Logging is a module for Python that provides a flexible framework for emitting log messages from Python programs.

Step 4: Changing the mode

In the directory *"UI Checks Automation\json\setting.json"*, update the following fields in the YAML File:

1. **Mode:** If the Tester is "C2", set the mode to "C2". If the Tester is "C2 EPR", set the mode to "C2EPR".
2. **DynamicIP:** Update the IP address as needed. (ex. 192.168.5.17)
3. **Static_dynamic:** Modify this field based on how the tester is connected to the computer. (ex. Static or Dynamic).

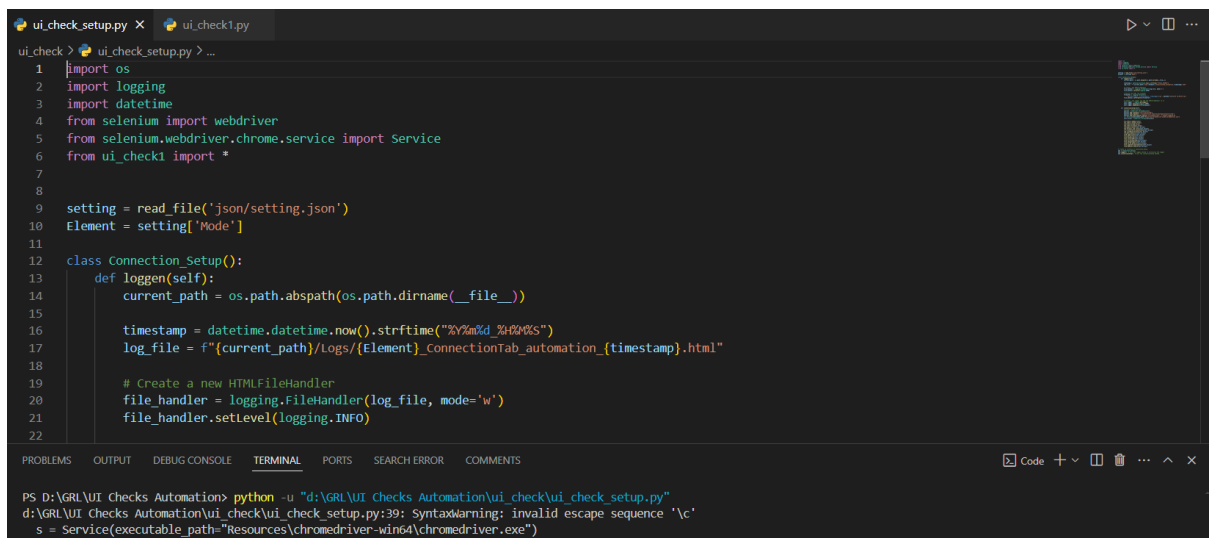


The screenshot shows a code editor with three tabs: `ui_check_setup.py`, `ui_check1.py`, and `setting.json`. The `setting.json` tab is active, displaying a JSON configuration. The configuration includes fields for `Mode`, `tester_connected`, `DynamicIP`, and `static_dynamic`.

```
1 {
2   "Mode": "C2",
3   "tester_connected": true,
4   "DynamicIP": "192.168.5.17",
5   "static_dynamic": "Dynamic"
6 }
7
```

Step 5: Execute the Program

Run the `ui_check_setup.py` script in Visual Studio Code and wait for 2-3 minutes for the execution to complete.



The screenshot shows the Visual Studio Code interface with the `ui_check_setup.py` file open. The code includes imports for `os`, `logging`, `datetime`, `selenium.webdriver`, and `selenium.webdriver.chrome.service`. It defines a `Connection_Setup` class with a `loggen` method. The terminal at the bottom shows the command to run the script and the resulting output, including a syntax warning.

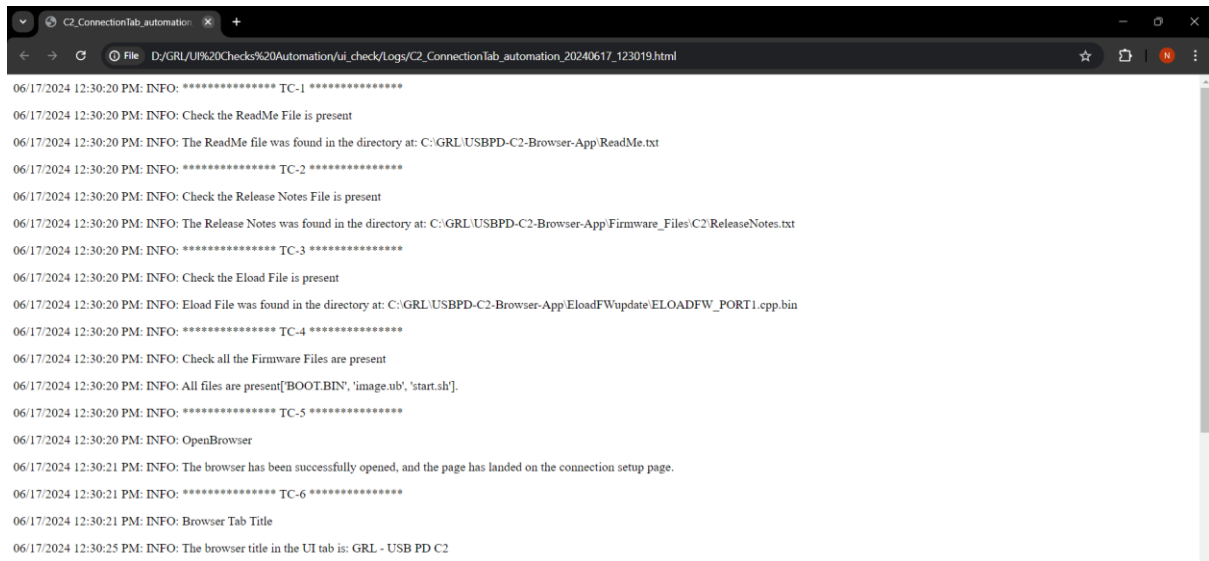
```
1 import os
2 import logging
3 import datetime
4 from selenium import webdriver
5 from selenium.webdriver.chrome.service import Service
6 from ui_check1 import *
7
8
9 setting = read_file('json/setting.json')
10 Element = setting['Mode']
11
12 class Connection_Setup():
13     def loggen(self):
14         current_path = os.path.abspath(os.path.dirname(__file__))
15
16         timestamp = datetime.datetime.now().strftime("%Y%m%d_%H%M%S")
17         log_file = f'{current_path}/Logs/{Element}_ConnectionTab_automation_{timestamp}.html'
18
19         # Create a new HTMLFileHandler
20         file_handler = logging.FileHandler(log_file, mode='w')
21         file_handler.setLevel(logging.INFO)
22
```

Terminal Output:

```
PS D:\GRL\UI Checks Automation> python -u "d:\GRL\UI Checks Automation\ui_check\ui_check_setup.py"
d:\GRL\UI Checks Automation\ui_check\ui_check_setup.py:39: SyntaxWarning: invalid escape sequence '\c'
s = Service(executable_path="Resources\chromedriver-win64\chromedriver.exe")
```

After execution the logs will be stored in the directory.

"UI Checks Automation \ui_check\Logs".



```
06/17/2024 12:30:20 PM: INFO: ***** TC-1 *****
06/17/2024 12:30:20 PM: INFO: Check the ReadMe File is present
06/17/2024 12:30:20 PM: INFO: The ReadMe file was found in the directory at: C:\GRL\USBPD-C2-Browser-App\ReadMe.txt
06/17/2024 12:30:20 PM: INFO: ***** TC-2 *****
06/17/2024 12:30:20 PM: INFO: Check the Release Notes File is present
06/17/2024 12:30:20 PM: INFO: The Release Notes was found in the directory at: C:\GRL\USBPD-C2-Browser-App\Firmware_Files\C2\ReleaseNotes.txt
06/17/2024 12:30:20 PM: INFO: ***** TC-3 *****
06/17/2024 12:30:20 PM: INFO: Check the Eload File is present
06/17/2024 12:30:20 PM: INFO: Eload File was found in the directory at: C:\GRL\USBPD-C2-Browser-App\EloadFWupdate\ELOADFW_PORT1.cpp.bin
06/17/2024 12:30:20 PM: INFO: ***** TC-4 *****
06/17/2024 12:30:20 PM: INFO: Check all the Firmware Files are present
06/17/2024 12:30:20 PM: INFO: All files are present['BOOT.BIN', 'image.ub', 'start.sh'].
06/17/2024 12:30:20 PM: INFO: ***** TC-5 *****
06/17/2024 12:30:20 PM: INFO: OpenBrowser
06/17/2024 12:30:21 PM: INFO: The browser has been successfully opened, and the page has landed on the connection setup page.
06/17/2024 12:30:21 PM: INFO: ***** TC-6 *****
06/17/2024 12:30:21 PM: INFO: Browser Tab Title
06/17/2024 12:30:25 PM: INFO: The browser title in the UI tab is: GRL - USB PD C2
```

Test Cases:

TC-1: Check whether the ReadMe File is present in the specific directory.

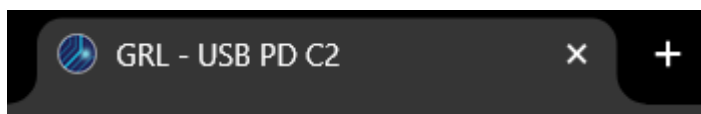
TC-2: Check whether the Release Notes File is present in the specific directory.

TC-3: Check whether the Eload File is present in the specific directory.

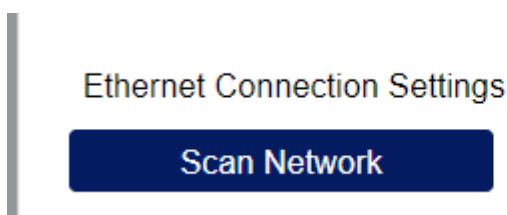
TC-4: Check whether all the Firmware Files are present in the specific directory.

TC-5: Check whether the Browser opens

TC-6: Fetch the Browser Tab Title




TC-7: Check whether that the Scan Network Button is present and whether it's clickable or not.



TC-8: Check whether that after clicking the Scan network button, the loading icon is visible, and the connect button should be disabled, and vice versa

Ethernet Connection Settings

Scan Network



C2 IP Address


192.168.5.17

x ▼

Connect

[Setup Diagram](#)

TC-9: Please ensure that the device details keys are correctly present on the connection setup page

Tester Status
Serial Number
Firmware Version
Tester IP Address Information
Last Calibration Date
Next Calibration Due Date
Test Cable Calibration Status 
C2 Tester Calibration

TC-10: Verify the address Text

C2 IP Address

Please enter/select C2 address

▼

Connect

TC-11: Clicking the scan network, verify default IP is present in the C2 IP Address input box and connect

Ethernet Connection Settings

Scan Network

C2 IP Address

192.168.255.1

Connect

[Setup Diagram](#)

Tester Status	IP address "192.168.255.1" unreachable
Serial Number	N/A
Firmware Version	N/A
Tester IP Address Information	192.168.255.1
Last Calibration Date	-
Next Calibration Due Date	-

TC-12: Verify Connection with Dynamic IP and Verify the Tester Status

Ethernet Connection Settings

Scan Network

C2 IP Address

192.168.5.17

Connect

[Setup Diagram](#)

Tester Status	Connected
Serial Number	342.487.342.057.354.
Firmware Version	2.1.94 / 9.8 / 9.8
Tester IP Address Information	192.168.5.17
Last Calibration Date	2021-11-23
Next Calibration Due Date	2023-02-22

TC-13: Pass Invalid IP Address and Verify the Tester Status

Ethernet Connection Settings

Scan Network

C2 IP Address

1.1.1

Connect

[Setup Diagram](#)

Tester Status	Invalid IP address format : 1.1.1
Serial Number	N/A
Firmware Version	N/A
Tester IP Address Information	1.1.1
Last Calibration Date	-
Next Calibration Due Date	-

TC-14: Pass Unreachable IP Address and Verify the Tester Status

Ethernet Connection Settings

Scan Network

C2 IP Address

192.168.255.2

Connect

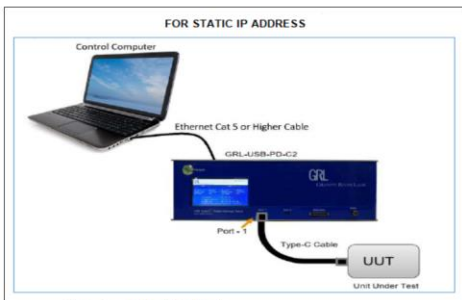
[Setup Diagram](#)

Tester Status	IP address "192.168.255.2" unreachable
Serial Number	N/A
Firmware Version	N/A
Tester IP Address Information	192.168.255.2
Last Calibration Date	-
Next Calibration Due Date	-

TC-15: Verify the Setup Diagram

C2 Setup Diagram

FOR STATIC IP ADDRESS



Please Connect the UUT to Port1

Ok

TC-16: Please ensure that the software and hardware details keys are correctly present on the connection setup page

<div>Ethernet Connection Settings</div> <div>Scan Network</div> <div>C2 IP Address</div> <div>192.168.5.17 x</div> <div>Connect</div> <div>Setup Diagram</div> <div>Tool Updates</div> <div>Update Firmware</div> <div>Firmware Update Instructions</div>	<table><tr><td>Tester Status</td><td>Connected</td></tr><tr><td>Serial Number</td><td>342.487.342.057.354.</td></tr><tr><td>Firmware Version</td><td>2.1.94 / 9.8 / 9.8</td></tr><tr><td>Tester IP Address Information</td><td>192.168.5.17</td></tr><tr><td>Last Calibration Date</td><td>2021-11-23</td></tr><tr><td>Next Calibration Due Date</td><td>2023-02-22</td></tr><tr><td>Test Cable Calibration Status i</td><td>Calibrated</td></tr><tr><td>C2 Tester Calibration</td><td>Calibration Expired</td></tr></table>	Tester Status	Connected	Serial Number	342.487.342.057.354.	Firmware Version	2.1.94 / 9.8 / 9.8	Tester IP Address Information	192.168.5.17	Last Calibration Date	2021-11-23	Next Calibration Due Date	2023-02-22	Test Cable Calibration Status i	Calibrated	C2 Tester Calibration	Calibration Expired
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C2 Tester Calibration	Calibration Expired																

TC-17: Check that the Firmware Update Button is present and whether it's clickable or not.

Tool Updates

Update Firmware

[Firmware Update Instructions](#)

Update E-Load Firmware

TC-18: Check that the Firmware Update Button is clicked and the Tester is Restarted

