YouTestMe

Instructions for Organizing
Off-the-grid Testing
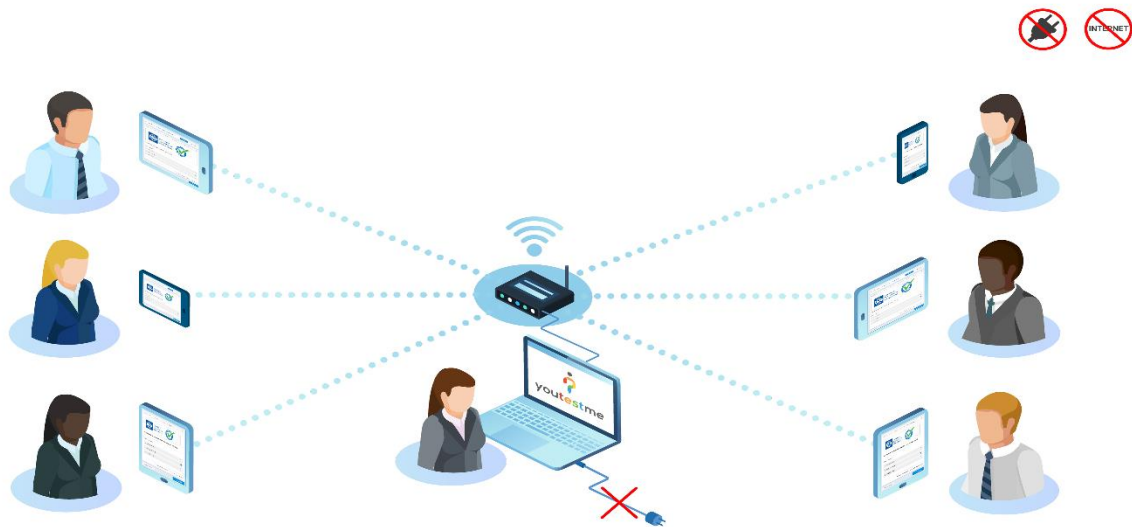
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1 Introduction

This document describes a procedure for using YouTestMe GetCertified knowledge examination platform for organizing off-the-grid testing in areas without electricity and Internet connection.

1.1 Off-the-grid Testing Sessions

A typical workflow contains the following steps:

1. **Configure the necessary equipment** using this document (needs to be done only once):
   a. A Wi-Fi router with a durable battery,
   b. A laptop that will be a server for hosting YouTestMe GetCertified Virtual Machine (Server),
   c. Tablets to be used by students for tests.
2. **Prepare the exam** on the instructor's laptop (or import it from the central server).
3. **Hand out the tablets** intended for test-taking to the students.
4. **Start the testing session**:
   a. Students will access the application using a web browser (no need to install any additional software)
   b. The instructor should have the monitoring panel opened to follow each test-attempt in real-time. From the monitoring panel, they will be able to pause the entire testing session or any test-attempt individually.
5. **Export the reports** from the instructor's laptop (and optionally import them into the central server).

1.2 Synchronizing the Results
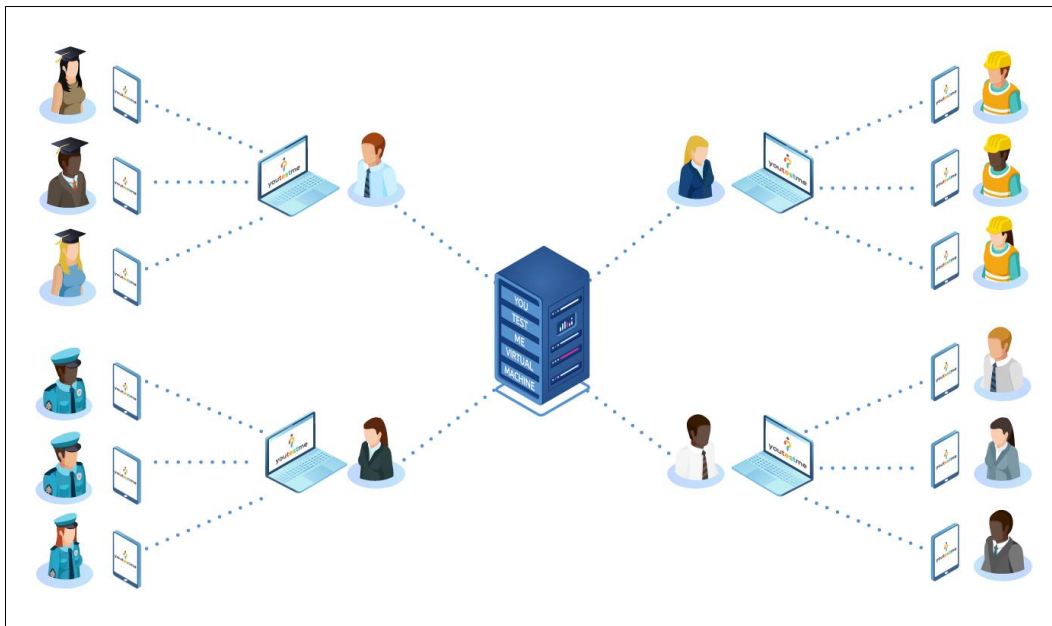
After all of the testing sessions have been conducted, instructors can synchronize the data from various locations with the main server using a network connection (when available) or using the file exchange.

2 Configuring the Equipment

2.1 Configuring a Mobile Wi-Fi Router

YouTestMe recommends TP-Link AC750 Wireless Wi-Fi Travel Router or router with similar characteristics.

This video link provides TP-Link AC750 installation and configuration instructions.

To extend laptop battery capacity, you can use Powerbank for powering the router (to preserve laptop battery).

2.1.1 Set Wi-Fi Router Name and Password

1. Login to router **Settings** page and find **WLAN** settings
2. Go To **WLAN Basic Settings**
3. Set **SSID** to the desired network name
4. Set **security mode** to **WPA-2-PSK** and enter WPA pre-shared key bellow
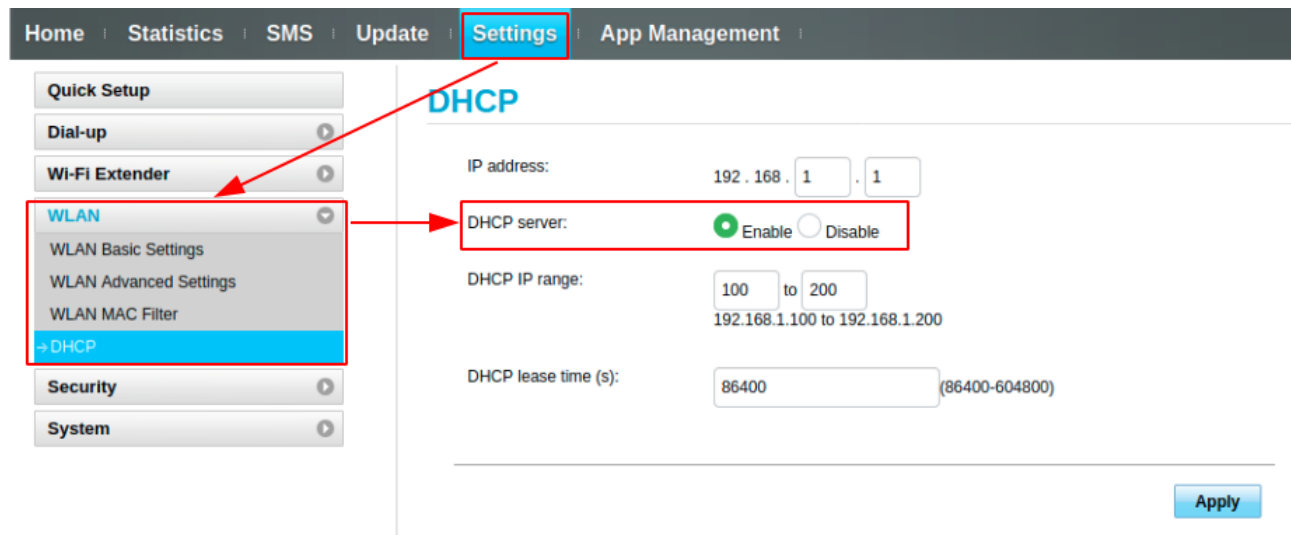5. Set **SSID Broadcast** to **Enable** so test-takers can find the Wi-Fi network easily

2.1.2 DHCP Setup on Mobile Wi-Fi router

1. Login to router **Settings** page and find **WLAN** settings

2. Go to the **DHCP** setup and ensure that the **DHCP server** is set to **Enable**

3. Set **IP address** to **192.168.1.1**

4. Set **DHCP range** to cover a number of students taking an exam (e.g., if 100 students are taking an exam at the same time, cover at least 100 IPs with DHCP IP range)

5. Apply and save settings. The router will restart, and after that, you can access it using IP 192.168.1.1

2.2 Configuring a Server Laptop - YouTestMe GetCertified Appliance

2.2.1 Hardware Requirements

Before configuring a network for off-the-grid testing, the administrator should get familiar with YouTestMe's Installation and Support Manual. It is assumed that laptop hosting YouTestMe GetCertified application meets the following Hardware Requirements.

Hardware	Minimum	Recommended
CPU	2 VCPU Cores	4 VCPU Cores
RAM	12 GB	20 GB
HDD or SSD (recommended)	170 GB	370 GB
Network Connection	Yes	Yes

*Note that the requirements above differ from the ones in the installation manual where you can see the parameters for YouTestMe Virtual Machine.

**YouTestMe Virtual Machine should have a minimum of 2 virtual CPU cores assigned. This is required by the Linux operating system within a virtual machine.

2.2.2 Network Configuration

1. Connect host computer to Mobile Wi-Fi Router using wireless

2. Start GetCertified Virtual Appliance

3. Login to Virtual Appliance as user "**root**"

4. Access Network Manager using **Wired Settings**
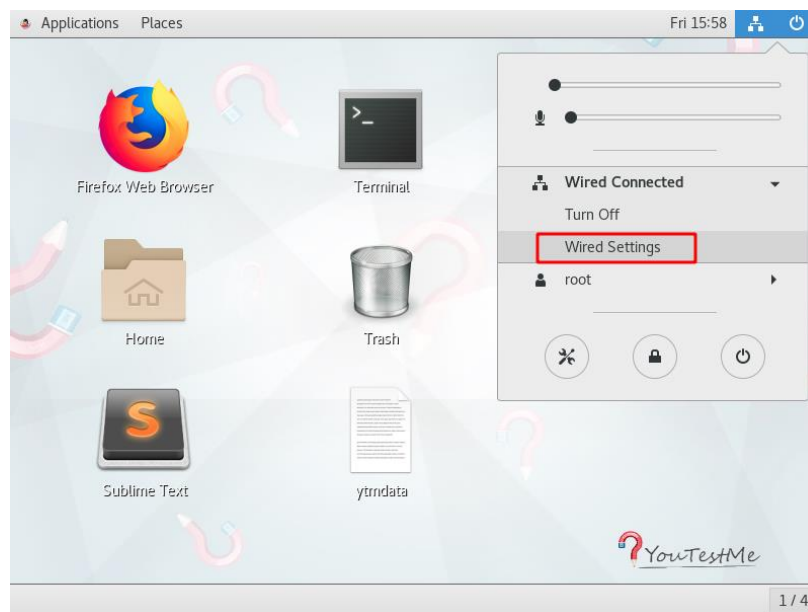
5. Set **Gateway IP** to **192.168.1.1** (the same as in DHCP Setup on Mobile Wi-Fi router)

6. Set **Subnet Mask** to **255.255.255.0**

7. Set address in the range covered by router IP address range (e.g., if the router is configured with IP address and DHCP IP range as mentioned above, you can choose an address from "192.168.1.2-192.168.1.255". It is good practice to keep static IPs out of the DHCP range. The address 192.168.1.90 would be the right choice.)
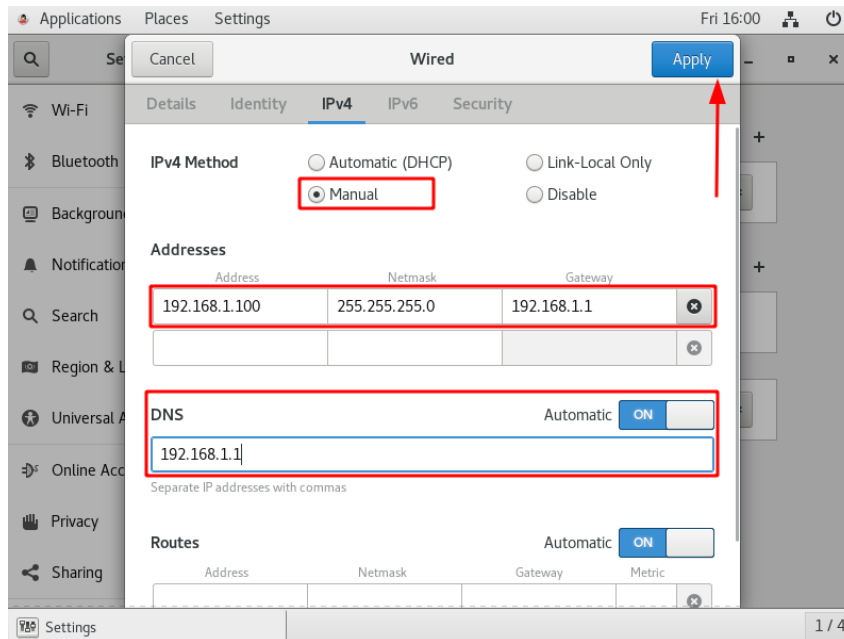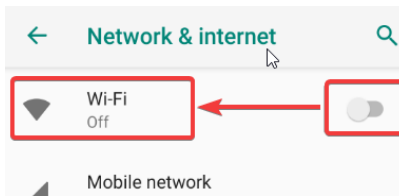

8. More information about network settings can be found in document Installation and Support Manual - "Network Configuration."

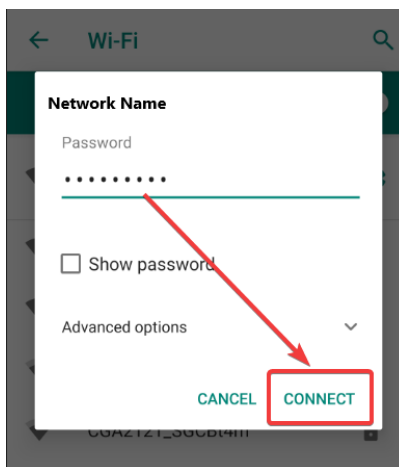## 2.3 Configuring Tablets - Devices for Test-taking

1. Provide students with Wi-Fi credentials to connect using wireless

2. On tablet/phone, go to settings and select **Network & internet**
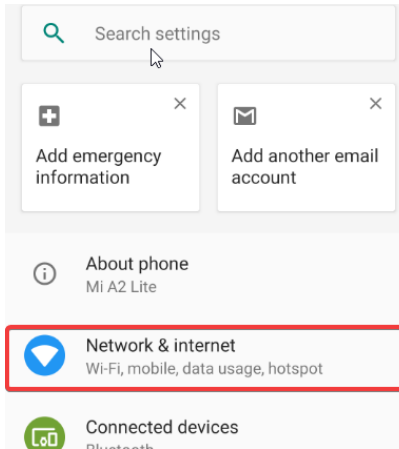
3. Toggle Wi-Fi to **ON** (if it is turned OFF) and tap on **Wi-Fi**

4. Select the provided network name, enter the pre-shared key, and tap on **CONNECT**.

5. At this time, students can access the application by entering the following address in web browsers:

<GetCertified_Virtual_Appliance_IP>:9001