Lab - Accessing Kali Across the WAN with NGROK

Overview

In this lab, you will learn how to access Kali Linux across the WAN using NGROK. NGROK is an application that provides external (internet) access to your private systems that reside behind NAT or a firewall. NGROK provides an encrypted TCP tunnel that provides an internet-accessible address (URL) you initiate using a web browser.

Usually, this would not be possible with configuring your router or firewall to allow traffic from the outside to your internal network. Your router or firewall would have to be configured with an access list and a static mapping that would allow the Internet traffic to have access to a specific internal IP address residing on your network running a particular service such as HTTP.

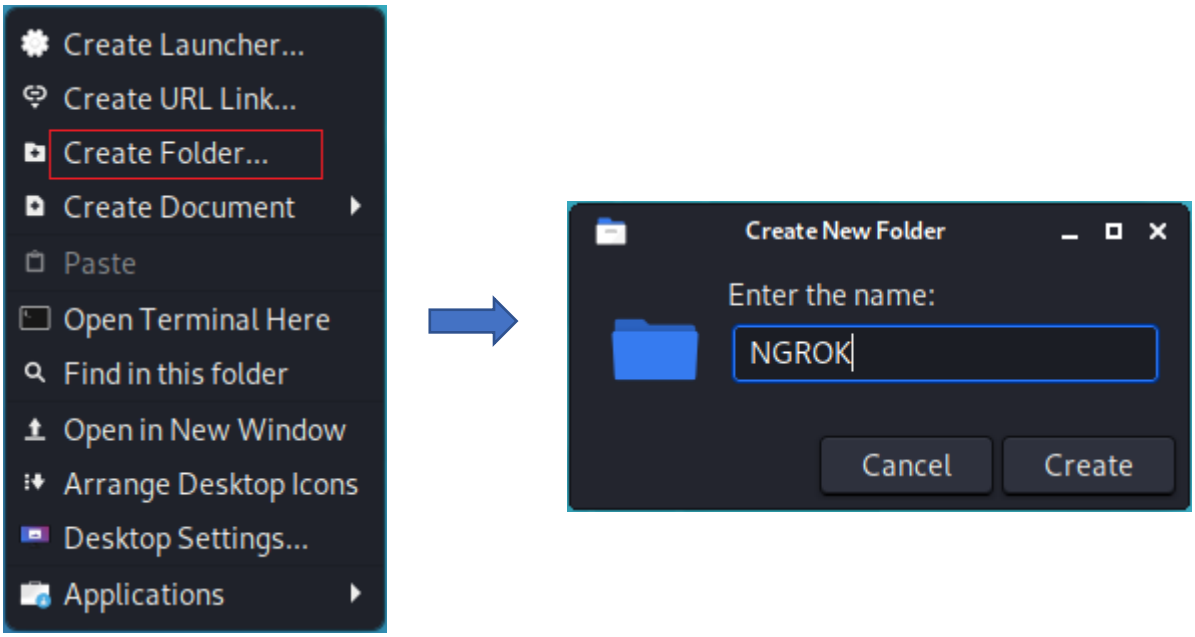
Lab Requirements

- Installation of VirtualBox, latest edition with extension pack.
- One virtual install of Kali Linux recently updated and upgraded.
- One Windows 7 Pro, Windows 10 Pro, or Server 2012, 2106, or 2019.
- All VirtualBox network adapters set to NAT Network.
- Internet access.

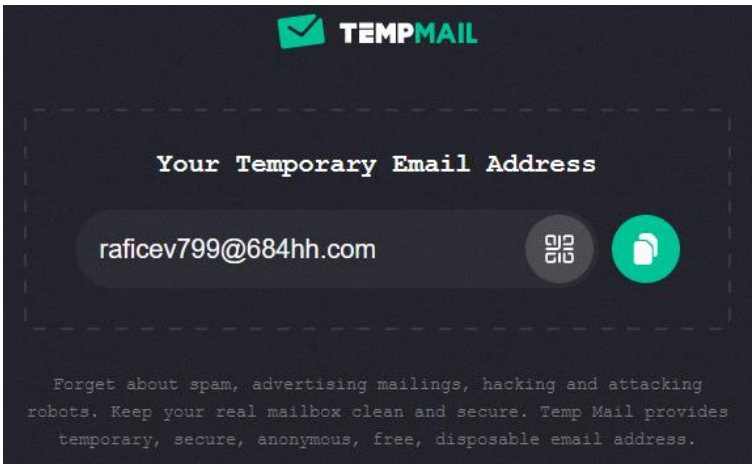
Begin the Lab!

Begin by launching your Kali machine. Right-click on your Kali Desktop, and from the context menu select, **Create Folder**. Name the folder **NGROK**.

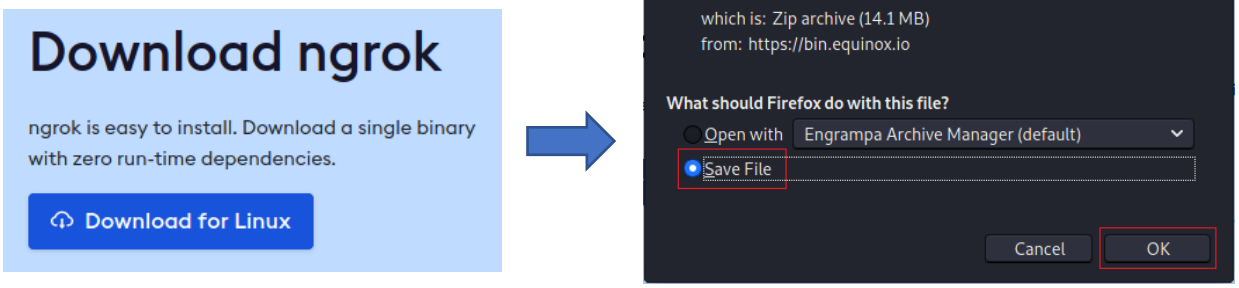
Create a Working Folder



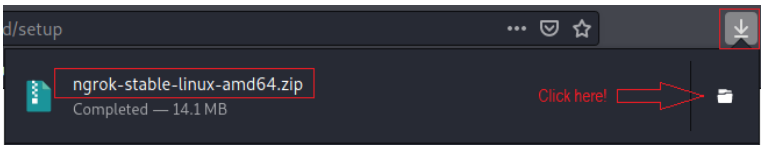
From your Kali machine, launch a browser. Create a free user account at https://ngrok.com/ but before you do, go to https://temp-mail.org/ and create yourself a temporary/disposable email address. Us this address to create your account. Be sure to create a unique username that cannot be traced back to you.



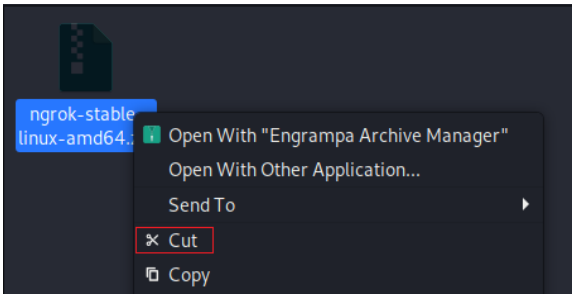
Once you have created your NGROK free account, access your dashboard. At the top, download the zip file for Linux.



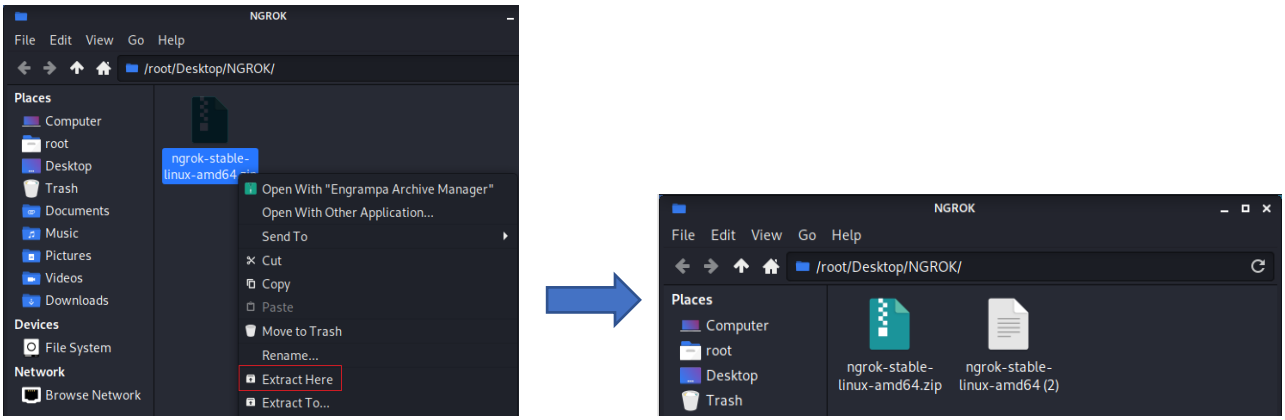
The file is saved to your Download directory. Open the Download directory and move the download to your NGROK download directory.



Right-click on the download, and from the context menu, select cut. Minimize your browser, leaving your NGORK dashboard open.

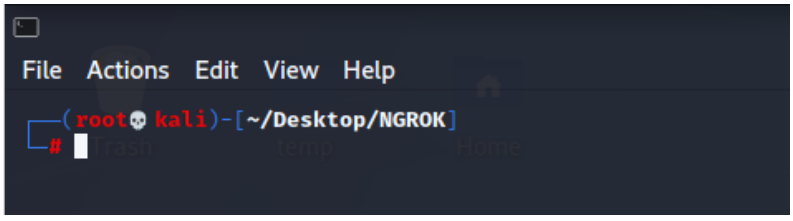


Close the file explorer and open your work folder, NGROK. Right-click in the folder, and from the context menu, select paste. With download present in your work folder, right-click on the zip file, and from the context menu, choose **Extract Here**. You should now see two files in your work folder. Close your work folder.



From your Kali desktop, right-click on your NGROK work folder, and from the context menu, select **Open Terminal Here**.

This is what your terminal should look like.



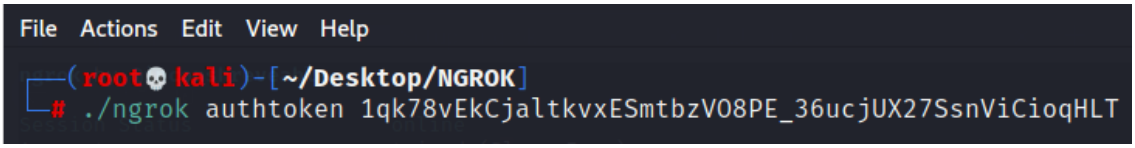
Connect Your Account

Bring back up your Browser. From your NGROK dashboard, in step 2, copy the entire authentication token string, and at your terminal prompt, paste the string and press enter.

2. Connect your account

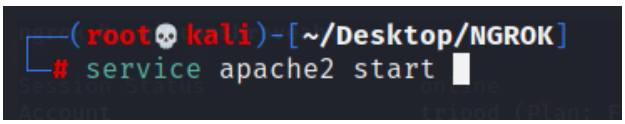
Running this command will add your authtoken to the default `ngrok.yml` configuration file. This will grant you access to more features and longer session times. Running tunnels will be listed on the status page of the dashboard.

```
$ ./ngrok authtoken 1qk78vEkCjaltkvxESmtbzVO8PE_36ucjUX27SsnViCioqHLT
```



Start Your Apache Server

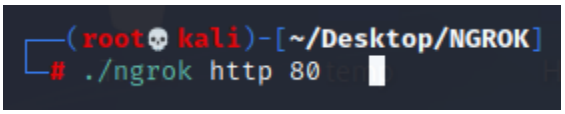
At the prompt, start your Apache webserver. At the prompt, type **`service apache2 start`**



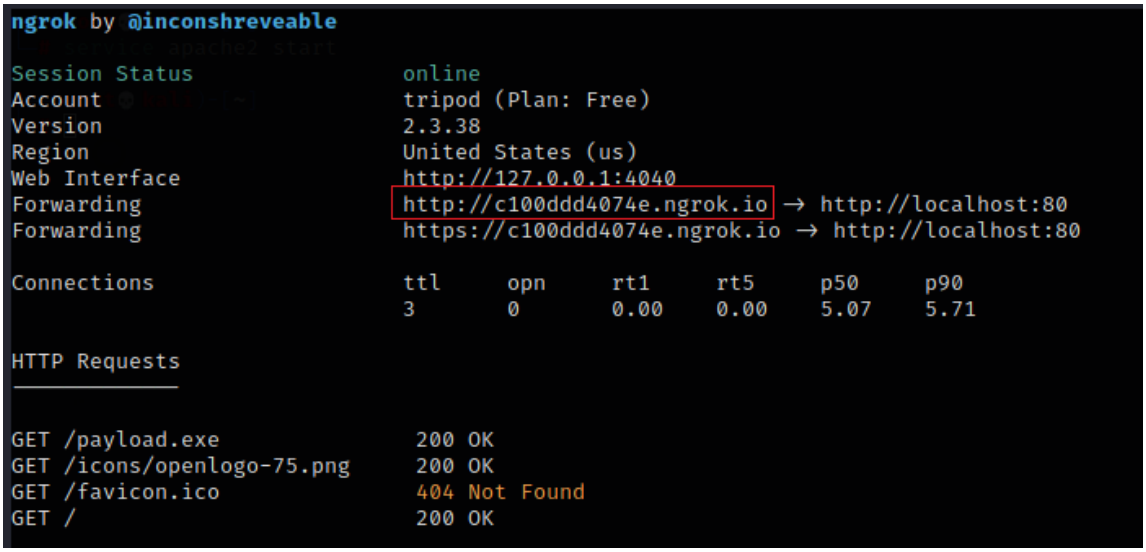
Start the NGROK server

At the terminal prompt, type the following command.

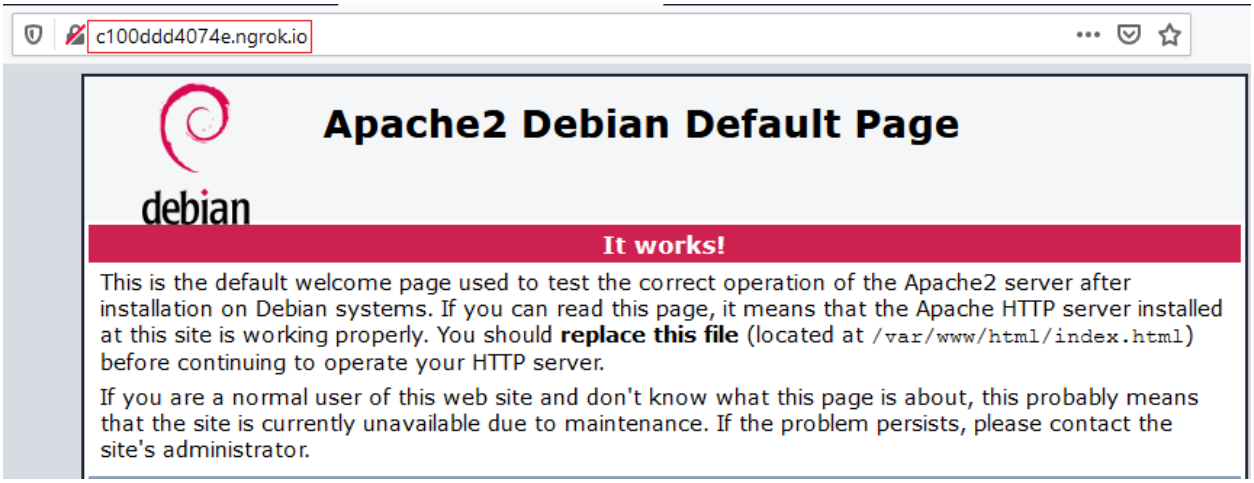
```
./ngrok http 80
```



Once you start the service, a new terminal opens with your account and connection information.



From your physical host machine, open a browser and in the address bar, copy and paste the forwarding address for the NGROK tunnel. This will not work if you did not start your Apache webserver.



Summary –

Ngrok is fantastic because it simplifies external access to internal things through the magic of outbound connections.

1. Tell Ngrok what to push up to the internet.
2. It gives you an internet place to go.
3. Go there and access the internal resource.