

# MTR Guide

This is a guide for gathering useful information on issues with the download and upload speeds that your local machine gets to and from your Ultra.cc service.

You will require your local machine's public IP address to perform all the steps listed in this guide. Disable any VPN/Proxy on your system and then check your IP at [myip.com](https://myip.com).

The guide shows you the following:

1. Perform an MTR test from your Ultra.cc server to your Local Machine.
2. Install MTR to your local machine and use it.
3. Understand the results of the MTR tests you performed.

## MTR

MTR is a diagnostic tool which can be used to determine which routers transmit data packets onto the destination host and which routers may be experiencing problems. This information allows us to figure out where a network problem lies. It is recommended by us to run a trace in both directions when troubleshooting.

(Local Machine -> Ultra.cc Server) & (Ultra.cc Server -> Local Machine).

MTR is installed by default on all our Ultra.cc servers.

## MTR Usage on your Ultra.cc Slot

1. Login to your Ultra.cc slot via [SSH](#)
2. Execute the following command:

```
mtr -w -c 100 <Public IP address of your Local Machine>
```

Example:

```
ultradocs@oblivion:~$ mtr -r -c 100 92.24.175.255
Start: 2021-10-16T08:09:50+0200
HOST: oblivion
Loss%   Snt    Last   Avg    Best   Wrst   StDev
1. |-- 46.232.211.253      0.0%   100    0.2    0.2    0.1    0.8    0.1
2. |-- unn-156-146-32-10.cdn77.c 0.0%   100    0.7    0.4    0.1    0.7    0.2
3. |-- vl1102.lon-tel-core-2.cdn 0.0%   100    8.0    4.1    0.6    8.1    3.7
4. |-- talktalk-lon.cdn77.com    0.0%   100   11.5    9.1    7.8   25.9    2.9
5. |-- ae62-scr102.loh.as13285.n 0.0%   100   13.6    8.8    7.8   25.0    3.0
6. |-- ae50-ner002.loh.as13285.n 0.0%   100    8.4    8.5    7.9   13.5    1.2
7. |-- host-92-24-175-255.as1328 0.0%   100    7.2    8.0    7.1   18.9    1.7
ultradocs@oblivion:~$
```

# Windows

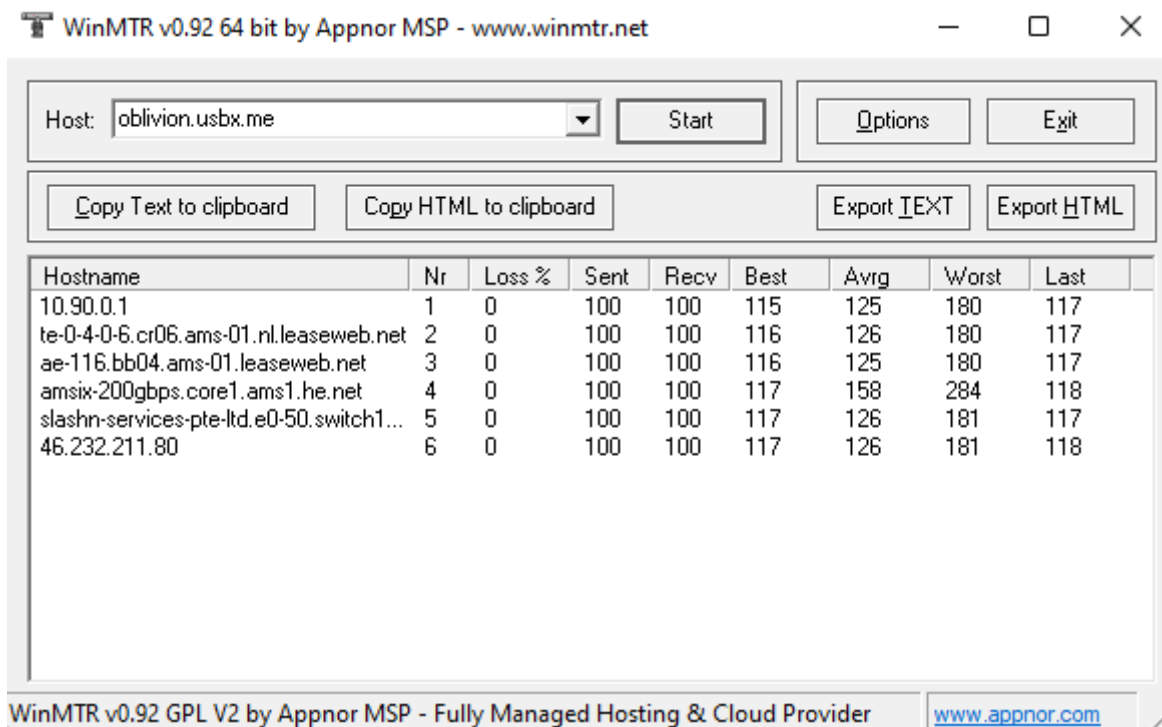
## MTR Installation

1. Download [WinMTR](#).
2. Extract the compressed file using your favorite file archiver utility like WinRAR.
3. Based on your system architecture; x32 or x64 navigate to the respective folder.
4. Run WinMTR.exe

## MTR Usage

1. Enter your slot's hostname i.e `hostname.usbx.me` in the Host field, then click on **Start**.
2. Wait for 100 packets to be sent, you can see this number under the **Sent** column.
3. Once 100 packets are sent, click on **Stop**.
4. In case results need to be shared with staff, the **Copy Text to clipboard** option will come in handy.

Example:



# MacOS

## MTR Installation

1. Open a terminal window. You can do a spotlight search for it (Command + Space and then type Terminal).
2. Install brew if you don't have it installed.

```
/bin/bash -c "$(curl -fsSL  
https://raw.githubusercontent.com/Homebrew/install/master/install.sh)"
```

3. Install MTR using brew.

```
brew install mtr
```

4. Check MTR version

```
ls /usr/local/Cellar/mtr/
```

5. Change directory to MTR's install location.

```
cd /usr/local/Cellar/mtr/<version from Step 4>/sbin
```

Example:

```
cd /usr/local/Cellar/mtr/0.94/sbin
```

6. Make MTR executable by your system.

```
cp -r mtr* /usr/local/bin/
```

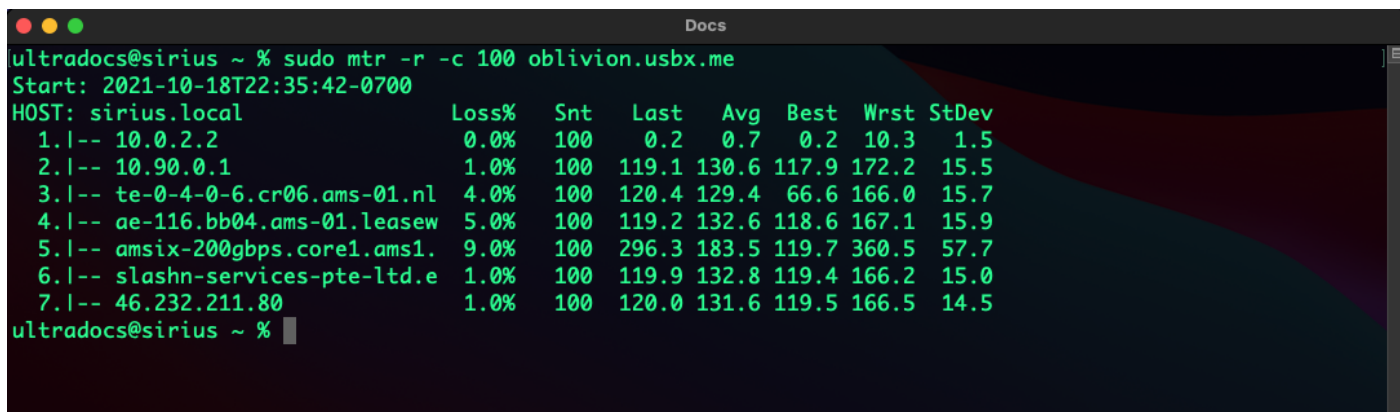
In case the copy command fails due to permission error(s) run it again with sudo.

```
sudo cp -r mtr* /usr/local/bin/
```

## MTR Usage

1. Open a terminal window. You can do a spotlight search for it (Command + Space and then type Terminal).
2. Execute the following command: `sudo mtr -w -c 100 servername.usbx.me`

Example:



```
ultradocs@sirius ~ % sudo mtr -r -c 100 oblivion.usbx.me
Start: 2021-10-18T22:35:42-0700
HOST: sirius.local
  1.1-- 10.0.2.2           0.0% 100 0.2 0.7 0.2 10.3 1.5
  2.1-- 10.90.0.1          1.0% 100 119.1 130.6 117.9 172.2 15.5
  3.1-- te-0-4-0-6.cr06.ams-01.nl 4.0% 100 120.4 129.4 66.6 166.0 15.7
  4.1-- ae-116.bb04.ams-01.leasew 5.0% 100 119.2 132.6 118.6 167.1 15.9
  5.1-- amsix-200gbps.core1.ams1. 9.0% 100 296.3 183.5 119.7 360.5 57.7
  6.1-- slashn-services-pte-ltd.e 1.0% 100 119.9 132.8 119.4 166.2 15.0
  7.1-- 46.232.211.80       1.0% 100 120.0 131.6 119.5 166.5 14.5
ultradocs@sirius ~ %
```

# Linux

## MTR Installation

MTR can be installed on the various Linux Distros using their particular package tools.

- Install MTR on Debian/Ubuntu using apt with the following command:

```
sudo apt update && sudo apt -y install mtr
```

- Install MTR on CentOS/RHEL/Fedora using yum with the following command:

```
sudo yum update && sudo yum -y install mtr
```

- Install MTR on Arch using pacman with the following command:

```
sudo pacman -Syu && sudo pacman -S mtr
```

## MTR Usage

1. Open a terminal window.

2. Run the following command:

```
mtr -w -c 100 hostname.usbx.me
```

### Example:

```
mtr -w -c 100 oblivion.usbx.me
```

# Understanding MTR Results

You should now have two MTR results. One performed from your Ultra.cc slot and one performed from your local device. The former describes the route that your Ultra.cc server is taking to transfer data to your local machine and the latter describes the route that your ISP takes to transfer data from your local device to your Ultra.cc server.

The Loss% at each hop is of importance. If it's 0% then there are no issues with routing and your speed problems lie elsewhere. On the other hand, if there is a lot of loss at multiple hops there is an issue with the route - it is congested.

Unfortunately, in the case that your upload speed isn't great and the route from your local device to your Ultra.cc server is congested, we cannot do much. Your ISP must be queried for this and they must provide better routing.

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Revision #6

Created 19 October 2021 14:31:38 by Joe

Updated 22 October 2023 18:58:45 by varg