

Ifconfig

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1 Article purpose

This article provides the basic information needed to start using the Linux® kernel tool: **ifconfig**^[1].

2 Introduction

The following table provides a brief description of the tool, as well as its availability depending on the software packages:

☑: this tool is either present (ready to use or to be activated), or can be integrated and activated on the software package.

☒: this tool is not present and cannot be integrated, or it is present but cannot be activated on the software package.

Tool			STM32MPU Embedded Software distribution			STM32MPU Embedded Software distribution for Android™		
Name	Category	Purpose	Starter Package	Developer Package	Distribution Package	Starter Package	Developer Package	Distribution Package
		ifconfig ^[1] is a system administration utility						

ifconfig	Monitoring tools	for network interface configuration. ifconfig is deprecated and has been replaced by <i>ip</i> (A web page provides a comparison between ifconfig and ip [2])	✓	✓	✓	✓	✓	✓
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3 Installing the trace and debug tool on your target board

3.1 Using the STM32MPU Embedded Software distribution

ifconfig is installed by default and ready to be used with all STM32MPU Embedded Software Packages.

It comes with the **busybox**:

```
Board $> which ifconfig | xargs ls -la
/sbin/ifconfig -> /bin/busybox.nosuid
```

3.2 Using the STM32MPU Embedded Software distribution for Android™

ifconfig is installed by default and ready to be used with all STM32MPU Embedded Software Packages for Android™.

It comes with the **toybox**:

```
Board $> which ifconfig | xargs ls -la  
/system/bin/ifconfig -> toybox
```

4 Getting started

Follow the sequence described below to get started with the ifconfig tool.



Below information is related to the Android™ distribution

Need to enable root access rights for any changes

- Using ADB shell is ADB link available:

```
PC $> adb root  
PC $> adb shell  
Board $> ...
```

- Using uart console shell:

```
Board $> su  
Board $> ...
```

4.1 List the available network interfaces

```
Board $> ifconfig
```

```
eth0      Link encap:Ethernet  HWaddr 00:80:E1:42:43:65  
          inet addr:10.48.1.144  Bcast:10.48.3.255  Mask:255.255.252.0  
          inet6 addr: fe80::280:elf:fe42:4365%lo/64 Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:181274 errors:0 dropped:14553 overruns:0 frame:0  
          TX packets:28583 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:23082127 (22.0 MiB)  TX bytes:6438412 (6.1 MiB)  
          Interrupt:66 Base address:0x4000  
  
lo        Link encap:Local Loopback  
          inet addr:127.0.0.1  Mask:255.0.0.0  
          inet6 addr: ::1%1/128 Scope:Host  
          UP LOOPBACK RUNNING  MTU:65536  Metric:1  
          RX packets:202 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:202 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:13454 (13.1 KiB)  TX bytes:13454 (13.1 KiB)
```

4.2 Disable the network interface



Please make sure that no remote terminal is connected through this network (ssh), otherwise you will lost your shell connection.

- For example, proceed as follows for eth0

```
Board $> ifconfig eth0 down
```

4.3 Enable the network interface if it is not already available

- For example, proceed as follows for eth0

```
Board $> ifconfig eth0 up
```

4.4 Assign a given IP address to a network interface

- Proceed as follows to assign 10.48.1.324 address to eth0

```
Board $> ifconfig eth0 10.48.1.324
```

5 To go further

Refer to the man page^[1] for more details on command options.

6 References

1. ↑ ^{1.01.11.2} <https://linux.die.net/man/8/ifconfig>
2. ↑ https://tty1.net/blog/2010/ifconfig-ip-comparison_en.html

Receive