

Cisco Interfaces In Use

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Introduction

A really useful task to perform when looking at remote systems is to see what interfaces on a Cisco Switch are in use (as in connected).

Interface Status

Lets look at how to see what interfaces we are using: `sh interfaces status` This has to be performed from the top level, same part of the Cisco menu you would do `sh vlan br` for instance.

sh interfaces status

Port	Name	Status	Vlan	Duplex	Speed	Type
Gi0/1		connected	2	a-full	a-1000	10/100/1000BaseTX
Gi0/2		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/3		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/4		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/5		connected	2	a-full	a-1000	10/100/1000BaseTX
Gi0/6		connected	2	a-full	a-1000	10/100/1000BaseTX
Gi0/7		connected	2	a-full	a-1000	10/100/1000BaseTX
Gi0/8		connected	2	a-full	a-1000	10/100/1000BaseTX
Gi0/9		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/10		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/11		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/12		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/13		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/14		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/15		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/16		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/17		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/18		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/19		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/20		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/21		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/22		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/23		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/24		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/25		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/26		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/27		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/28		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/29		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/30		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/31		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/32		notconnect	2	auto	auto	10/100/1000BaseTX
Gi0/33		connected	3	a-full	a-1000	10/100/1000BaseTX
Gi0/34		connected	3	a-full	a-1000	10/100/1000BaseTX
Gi0/35		notconnect	3	auto	auto	10/100/1000BaseTX
Gi0/36		notconnect	3	auto	auto	10/100/1000BaseTX
Gi0/37		notconnect	3	auto	auto	10/100/1000BaseTX
Gi0/38		notconnect	3	auto	auto	10/100/1000BaseTX
Gi0/39		notconnect	3	auto	auto	10/100/1000BaseTX
Gi0/40		notconnect	3	auto	auto	10/100/1000BaseTX
Gi0/41		notconnect	3	auto	auto	10/100/1000BaseTX
Gi0/42		notconnect	3	auto	auto	10/100/1000BaseTX
Gi0/43		notconnect	3	auto	auto	10/100/1000BaseTX
Gi0/44		notconnect	3	auto	auto	10/100/1000BaseTX
Gi0/45		connected	1	a-full	a-1000	10/100/1000BaseTX
Gi0/46		connected	1	a-full	a-1000	10/100/1000BaseTX
Gi0/47		notconnect	1	auto	auto	Not Present

Gi0/48	notconnect	1	auto	auto	Not Present
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In the above example above we can see that there are 9 interfaces in use, and we can see the following information for each interface:

Port	Name	Status	Vlan	Duplex	Speed	Type
Gi0/1		connected	2	a-full	a-1000	10/100/1000BaseTX

The following is what each field means:

- Port - This is the interface number on the switch
- Name - This only shows if any names have been assigned, generally they are not.
- Status - Connected.
- VLAN - What VLAN the interfaces is currently in.
- DUPLEX - a-full (automatic-full)
- SPEED - a-1000 (auto 1000)
- TYPE - 10/100/1000BaseTX (this interface supports 10Mb/s / 100Mbps and 1GBs)

Show the Mac Address Table

We can use the following to show what MAC Addresses are present on each interface. If you have an interface that is connected to another switch then you will see all MAC addresses from that switch interface.

sh mac address-table

Vlan	Mac Address	Type	Ports
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All	0100.0ccc.cccc	STATIC	CPU
All	0100.0ccc.cccd	STATIC	CPU
All	0180.c200.0000	STATIC	CPU
All	0180.c200.0001	STATIC	CPU
All	0180.c200.0002	STATIC	CPU
All	0180.c200.0003	STATIC	CPU
All	0180.c200.0004	STATIC	CPU
All	0180.c200.0005	STATIC	CPU
All	0180.c200.0006	STATIC	CPU
All	0180.c200.0007	STATIC	CPU
All	0180.c200.0008	STATIC	CPU
All	0180.c200.0009	STATIC	CPU
All	0180.c200.000a	STATIC	CPU
All	0180.c200.000b	STATIC	CPU
All	0180.c200.000c	STATIC	CPU
All	0180.c200.000d	STATIC	CPU
All	0180.c200.000e	STATIC	CPU
All	0180.c200.000f	STATIC	CPU
All	0180.c200.0010	STATIC	CPU
All	ffff.ffff.ffff	STATIC	CPU
2	0025.b4bc.2901	DYNAMIC	Gi0/1
2	74fe.4857.6d4a	DYNAMIC	Gi0/7
2	74fe.4857.72a5	DYNAMIC	Gi0/8
2	a4bf.0169.b7af	DYNAMIC	Gi0/5
2	a4bf.016a.d0eb	DYNAMIC	Gi0/6
3	74fe.4857.6d4c	DYNAMIC	Gi0/33
3	74fe.4857.72a7	DYNAMIC	Gi0/34
1	74fe.4828.799d	DYNAMIC	Gi0/45
1	74fe.4828.c136	DYNAMIC	Gi0/45
1	9418.8266.b82c	DYNAMIC	Gi0/45
1	9418.8266.b82d	DYNAMIC	Gi0/45
1	a4bf.0169.b7ad	DYNAMIC	Gi0/45
1	a4bf.016a.d0e9	DYNAMIC	Gi0/45

I want to look at this specific interface:

Vlan	Mac Address	Type	Ports
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2	a4bf.0169.b7af	DYNAMIC	Gi0/5
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It can be seen that this is interface 5 on our Cisco, that is in VLAN2 and there is a device connected to it with the MAC Address **a4-bf-01-69-b7-af**.

I have logged in to the server that I know is connected to this interface (the servers eno3 is connected) and if I run the command (Linux):

```
ip a show eno3

5: eno3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq master data-out state UP group default qlen 1000
    link/ether a4:bf:01:69:b7:af brd ff:ff:ff:ff:ff:ff
    altname enp61s0f2
```

We can see that the link/ether address is listed as: a4:bf:01:69:b7:af

Look for a specific MAC Address

Because there could be many MAC addresses present on an interface when you use the command **sh mac address-table** we can use a simple filter to only show what we require: (remember, our last search revealed that the MAC Address on Gi05 ended in 'af')

```
sh mac address-table | incl af
```

Now the only result we get back is this:

2	a4bf.0169.b7af	DYNAMIC	Gi0/5
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We may not know what MAC we are looking for, but if we do this is very useful.

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