网迅科技
NETSWIFT

1.0.0		*2023 12 28*
2.0.0		*2024 01 30*

linux

ethtool

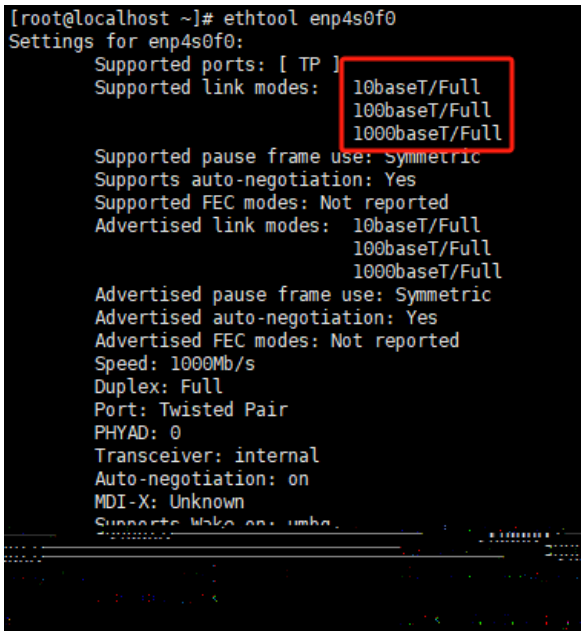
Supported link modes full 1

Supported link modes half full 2

Auto-negotiation on

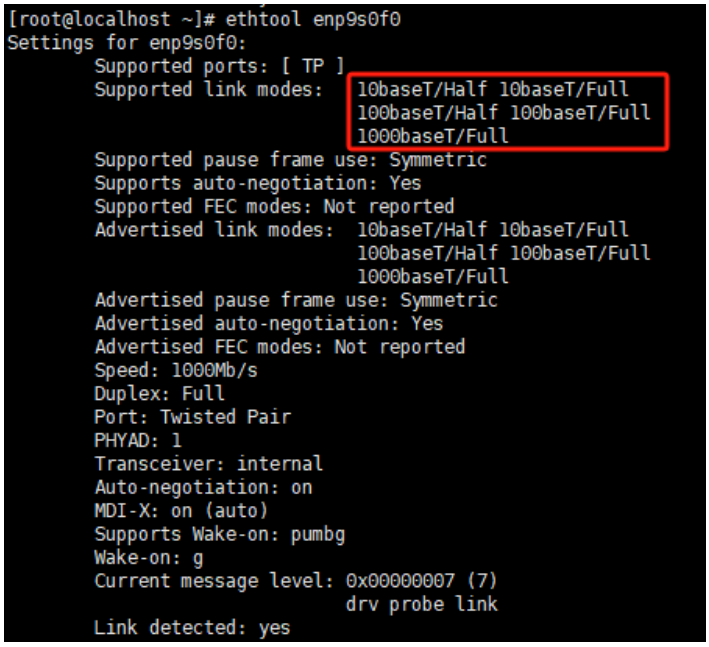
Auto-negotiation off

on



```
[root@localhost ~]# ethtool enp4s0f0
Settings for enp4s0f0:
        Supported ports: [ TP ]
        Supported link modes:   10baseT/Full
                                100baseT/Full
                                1000baseT/Full
        Supported pause frame use: Symmetric
        Supports auto-negotiation: Yes
        Supported FEC modes: Not reported
        Advertised link modes:  10baseT/Full
                                100baseT/Full
                                1000baseT/Full
        Advertised pause frame use: Symmetric
        Advertised auto-negotiation: Yes
        Advertised FEC modes: Not reported
        Speed: 1000Mb/s
        Duplex: Full
        Port: Twisted Pair
        PHYAD: 0
        Transceiver: internal
        Auto-negotiation: on
        MDI-X: Unknown
```

1



```
[root@localhost ~]# ethtool enp9s0f0
Settings for enp9s0f0:
        Supported ports: [ TP ]
        Supported link modes:   10baseT/Half 10baseT/Full
                                100baseT/Half 100baseT/Full
                                1000baseT/Full
        Supported pause frame use: Symmetric
        Supports auto-negotiation: Yes
        Supported FEC modes: Not reported
        Advertised link modes:  10baseT/Half 10baseT/Full
                                100baseT/Half 100baseT/Full
                                1000baseT/Full
        Advertised pause frame use: Symmetric
        Advertised auto-negotiation: Yes
        Advertised FEC modes: Not reported
        Speed: 1000Mb/s
        Duplex: Full
        Port: Twisted Pair
        PHYAD: 1
        Transceiver: internal
        Auto-negotiation: on
        MDI-X: on (auto)
        Supports Wake-on: pumbg
        Wake-on: g
        Current message level: 0x00000007 (7)
                               drv probe link
        Link detected: yes
```

2 I350

link

ethtool

3

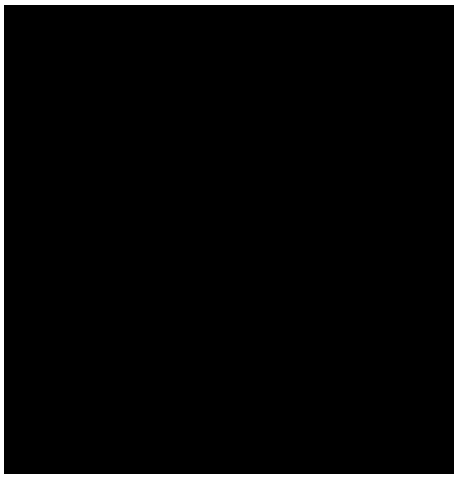
Advertised link modes

Speed link

Duplex: Full

Auto-negotiation off

link yes



3

1G autoneg off 10G autoneg off

10M 100M

ethtool -s ethx speed 10M/100 duplex full/half autoneg on/off

1

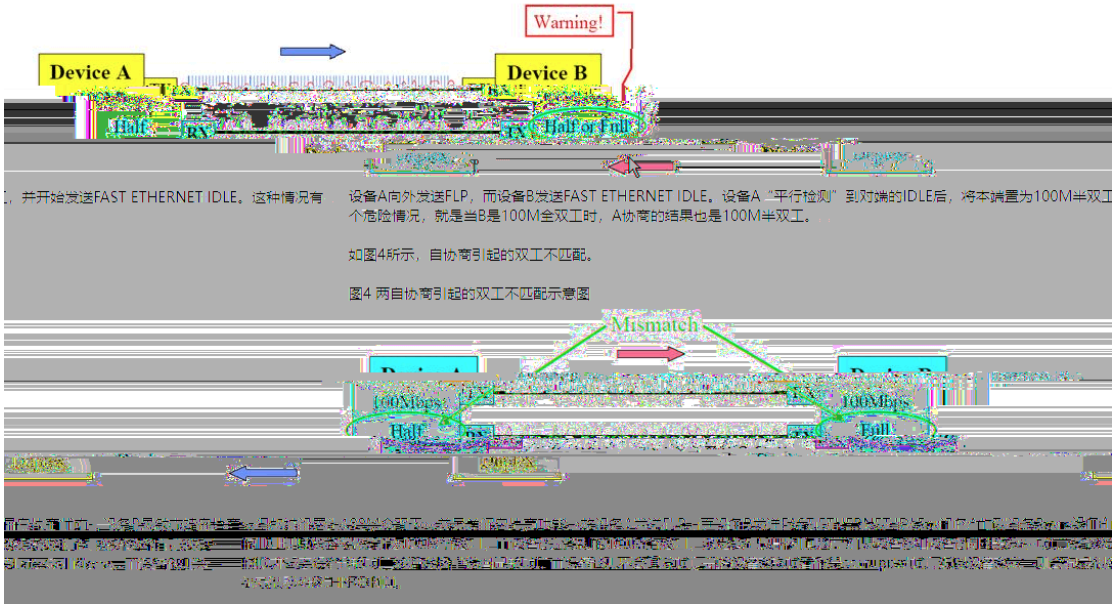
网迅 / 交换机	Auto	10M Full on	10M Full off	100M Full on	100M Full off
Auto	1000F / 1000F	10F / 10F	10F / 10H 备注2	100F / 100F	100F / 100H 备注2
10M Half on	[illegible]	[illegible]	10F / 10H [illegible]	[illegible]	[illegible]
10M Half off	[illegible]	[illegible]	10F / 10H [illegible]	[illegible]	[illegible]
10M Full on	[illegible]	[illegible]	10F / 10F 备注2	[illegible]	[illegible]
10M Full off	10F / [illegible]	10F / [illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] 备注2	[illegible]	No Link 备注2	No Link	No Link	No Link
[illegible] 备注2	[illegible]	No Link 备注2	No Link	No Link	No Link
No Link	[illegible]	[illegible]	No Link	No Link	[illegible]

1 autoneg on duplex full autoneg on autoneg link duplex full autoneg off duplex half autoneg on duplex half autoneg off link

2 autoneg off autoneg duplex full autoneg off duplex half autoneg on duplex half autoneg off link half link , . pause , , , crc error

如图3所示，一台自协商设备和100BASE-T设备互连。

图3 一台自协商设备和100BASE-T设备互连示意图



，并开始发送FAST ETHERNET IDLE。这种情况有

设备A向外发送FLP，而设备B发送FAST ETHERNET IDLE。设备A“平行检测”到对端的IDLE后，将本端置为100M半双工个危险情况，就是当B是100M全双工时，A协商的结果也是100M半双工。

如图4所示，自协商引起的双工不匹配。

图4 两自协商引起的双工不匹配示意图

https://wenwen.sogou.com/z/q705547943.htm

https://support.huawei.com/enterprise/zh/knowledge/EKB1000068108