

# Interface

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## Interface Hierarchy

VPP16.09

Device class

- A class of hardware interface devices

## HW interface class

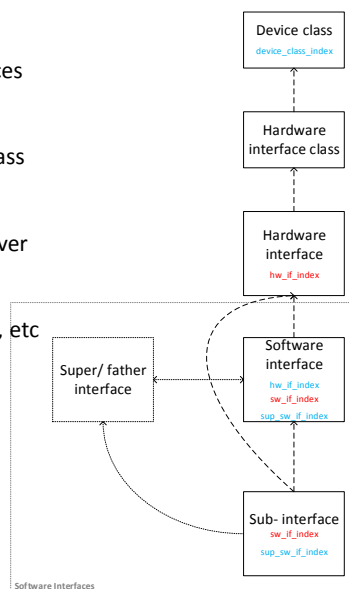
- Layer-2 (e.g. Ethernet) interface class

HW interface

- a physical wire that packets flow over

SW interface

- a Ethernet VLAN, ATM vc, a tunnel, etc



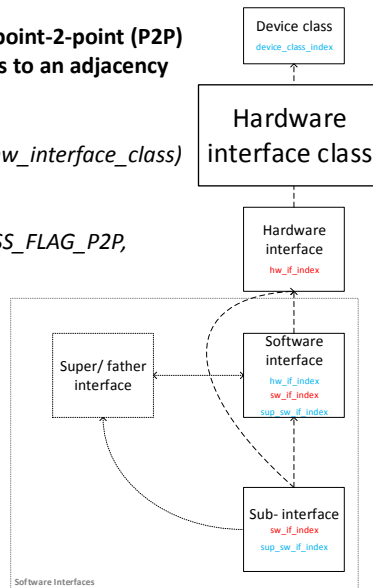
**An interface class that is defined as point-2-point (P2P) will have an interface route that links to an adjacency and not to a glean.**

e.g.

```

VNET_HW_INTERFACE_CLASS (ppp_hw_interface_class)
= {
    .name = "PPP",
    .flags = VNET_HW_INTERFACE_CLASS_FLAG_P2P,
};

```

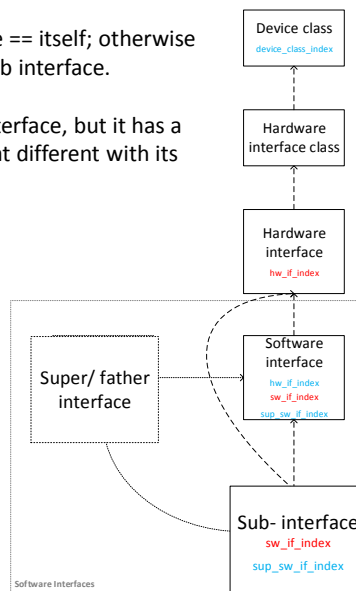


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- If no sub interface, super interface == itself; otherwise to be super interface against to sub interface.
- Sub interface is also a software interface, but it has a super software interface index that different with its own `sw_if_index`.



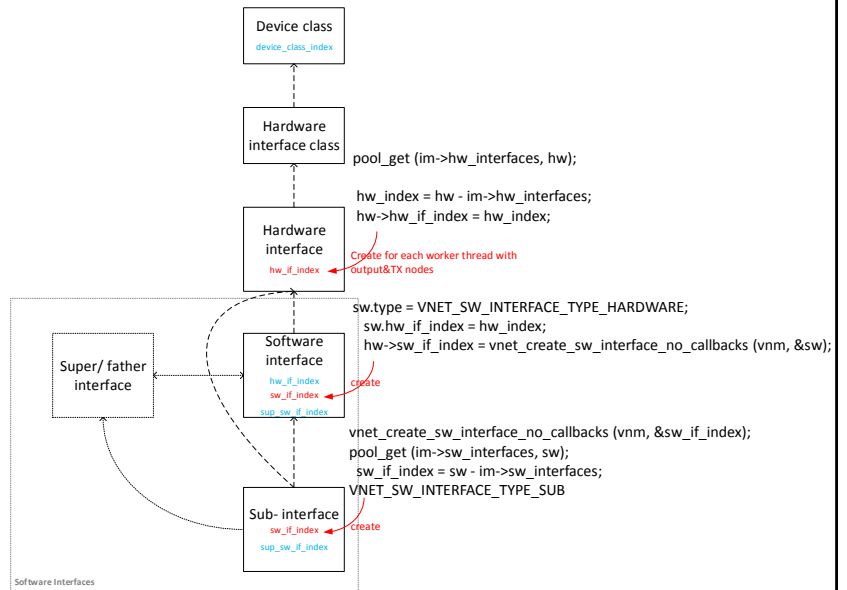
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## Create Interface

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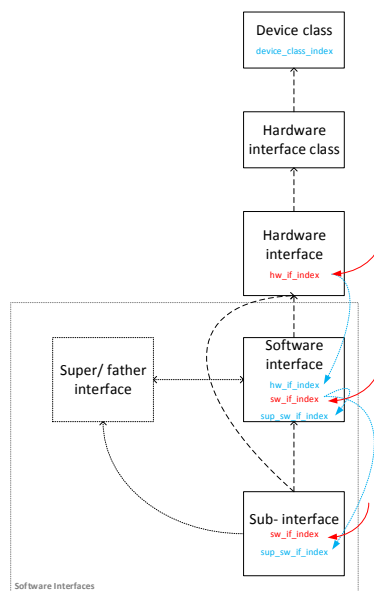
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## Interface Dependencies

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vnet\_interface\_init ()

```
DBGvpp# sh int
```

Name	Idx	State	Counter	Count
TenGigabitEthernet82/0/0	1	up	rx packets rx bytes tx packets tx bytes drops ip4	98398 9195022 98397 9194906 1 86600
TenGigabitEthernet82/0/1	2	up		
local0	0	down	drops	1

#create sub TenGigabitEthernet82/0/0 100  
create\_sub\_interfaces ()

```
DBGvpp# sh int
```

Name	Idx	State	Counter	Count
TenGigabitEthernet82/0/0	1	up	rx packets rx bytes tx packets tx bytes drops ip4 tx-error	57 5434 54 5254 3 53 3
TenGigabitEthernet82/0/0.100	3	down		
TenGigabitEthernet82/0/1	2	up		
local0	0	down		

