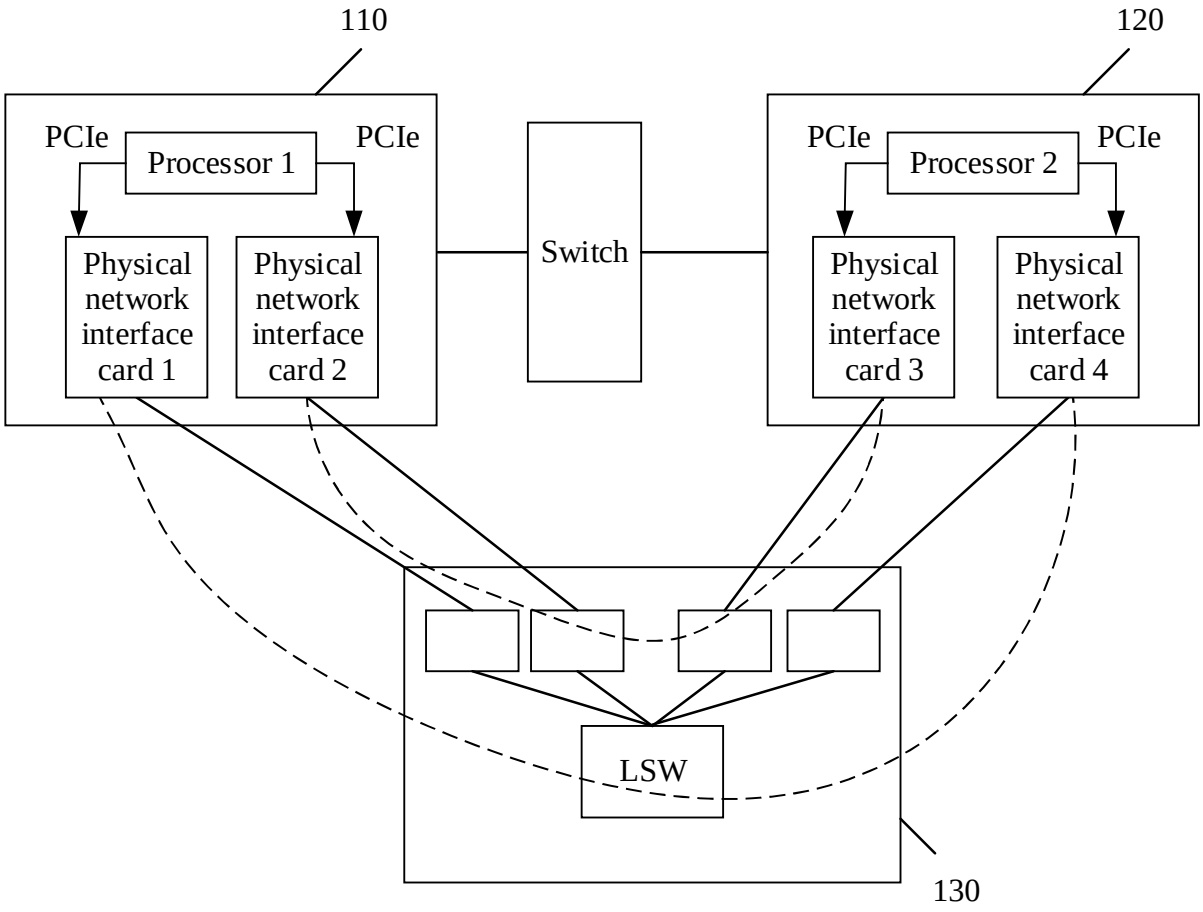
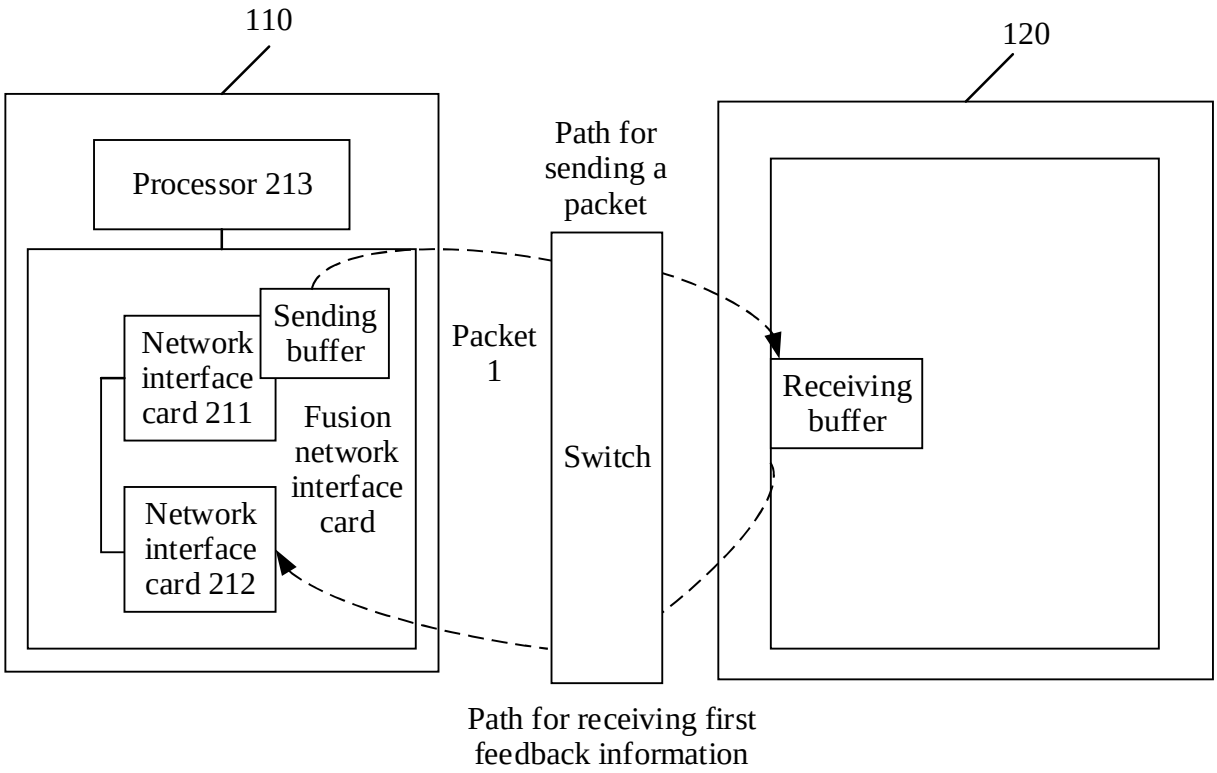
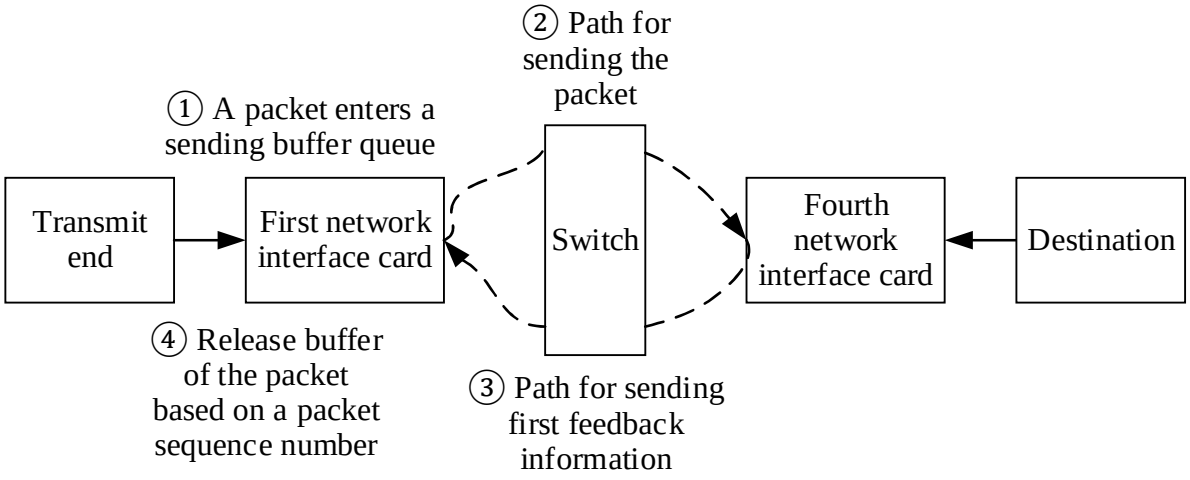
[FIG. 1]


110
120
PCIe
Processor 1
PCIe
PCIe
Processor 2
PCIe
Physical network interface card 1
Physical network interface card 2
Switch
Physical network interface card 3
Physical network interface card 4
LSW
130

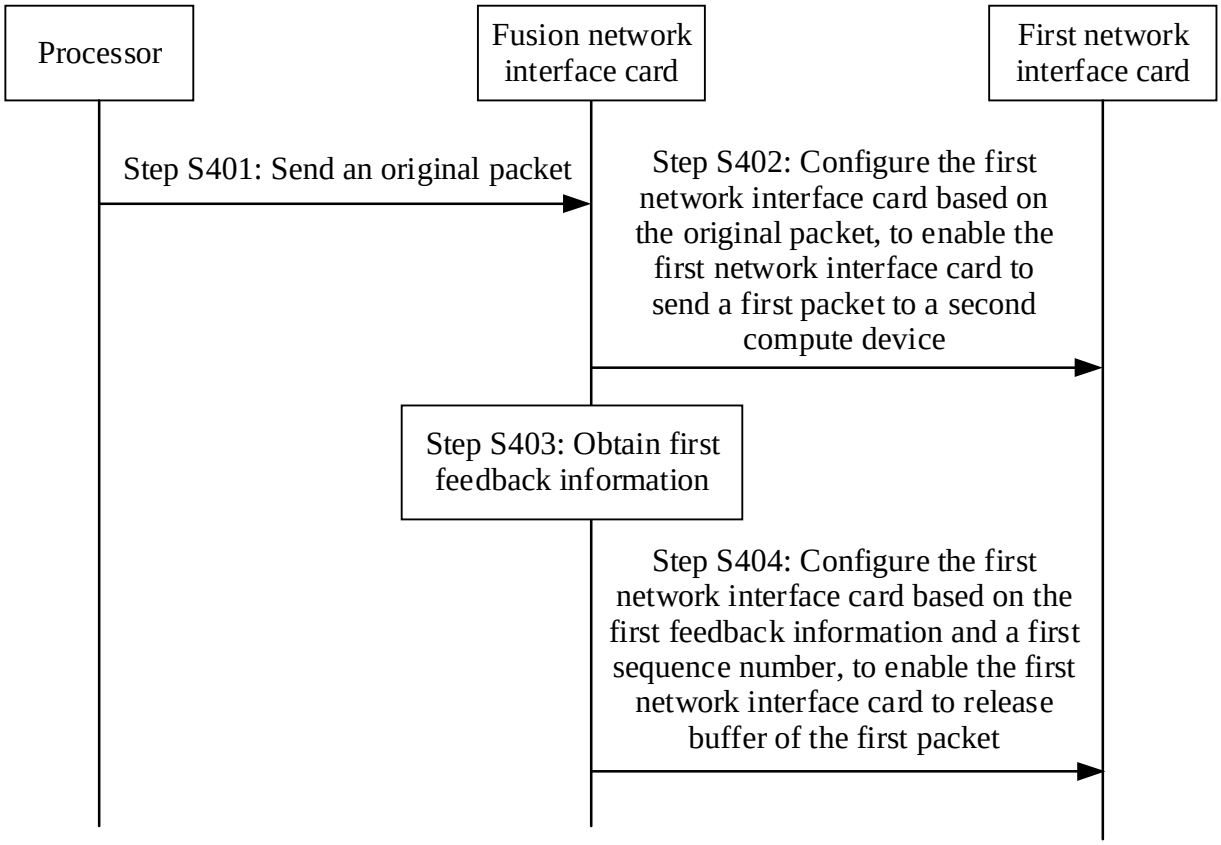
[FIG. 2]


110
120
Processor 213
Path for sending a packet
Sending buffer
Network interface card 211
Packet 1
Receiving buffer
Fusion network interface card
Switch
Network interface card 212
Path for receiving first feedback information

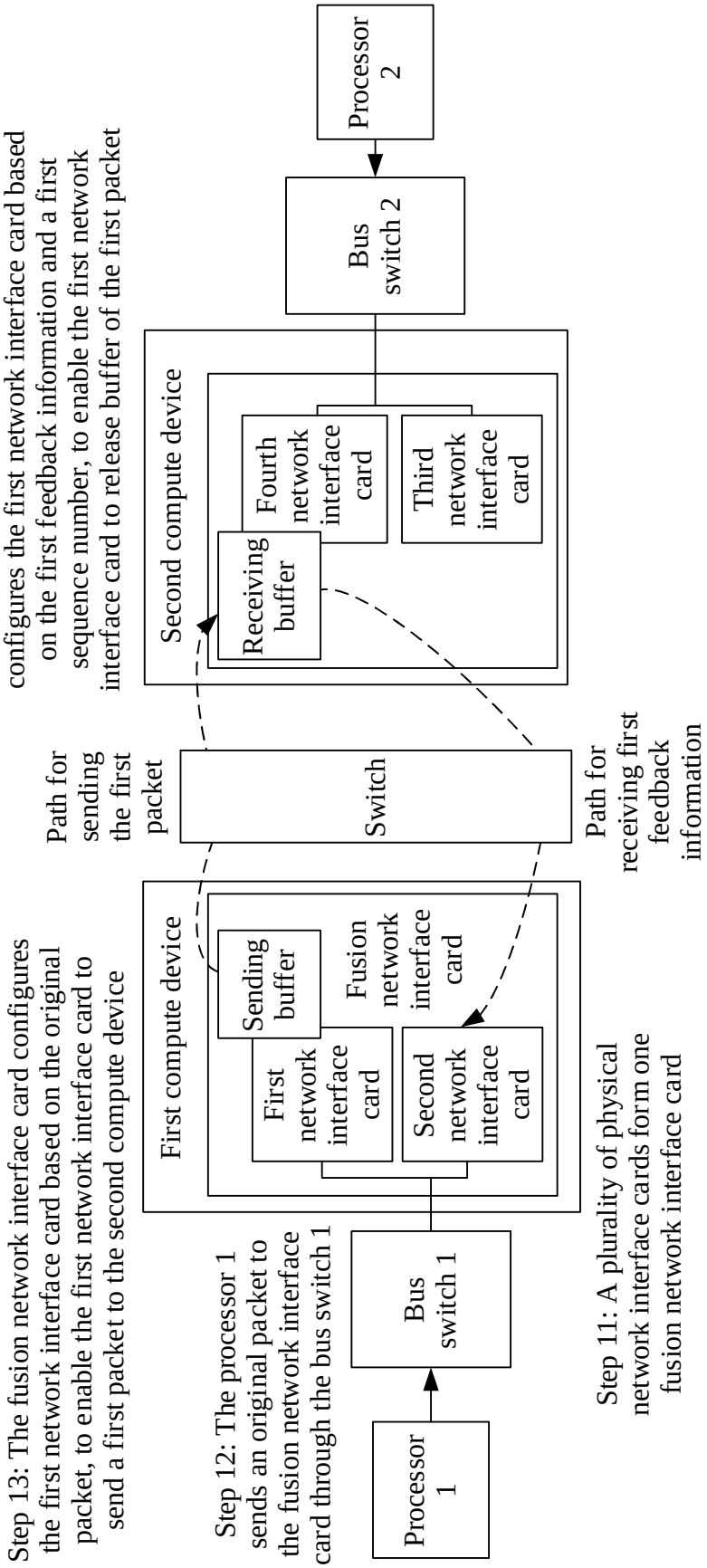
[FIG. 3]


② Path for sending the packet
① A packet enters a sending buffer queue
Transmit end
First network interface card
Switch
Fourth network interface card
Destination
④ Release buffer of the packet based on a packet sequence number
③ Path for sending first feedback information

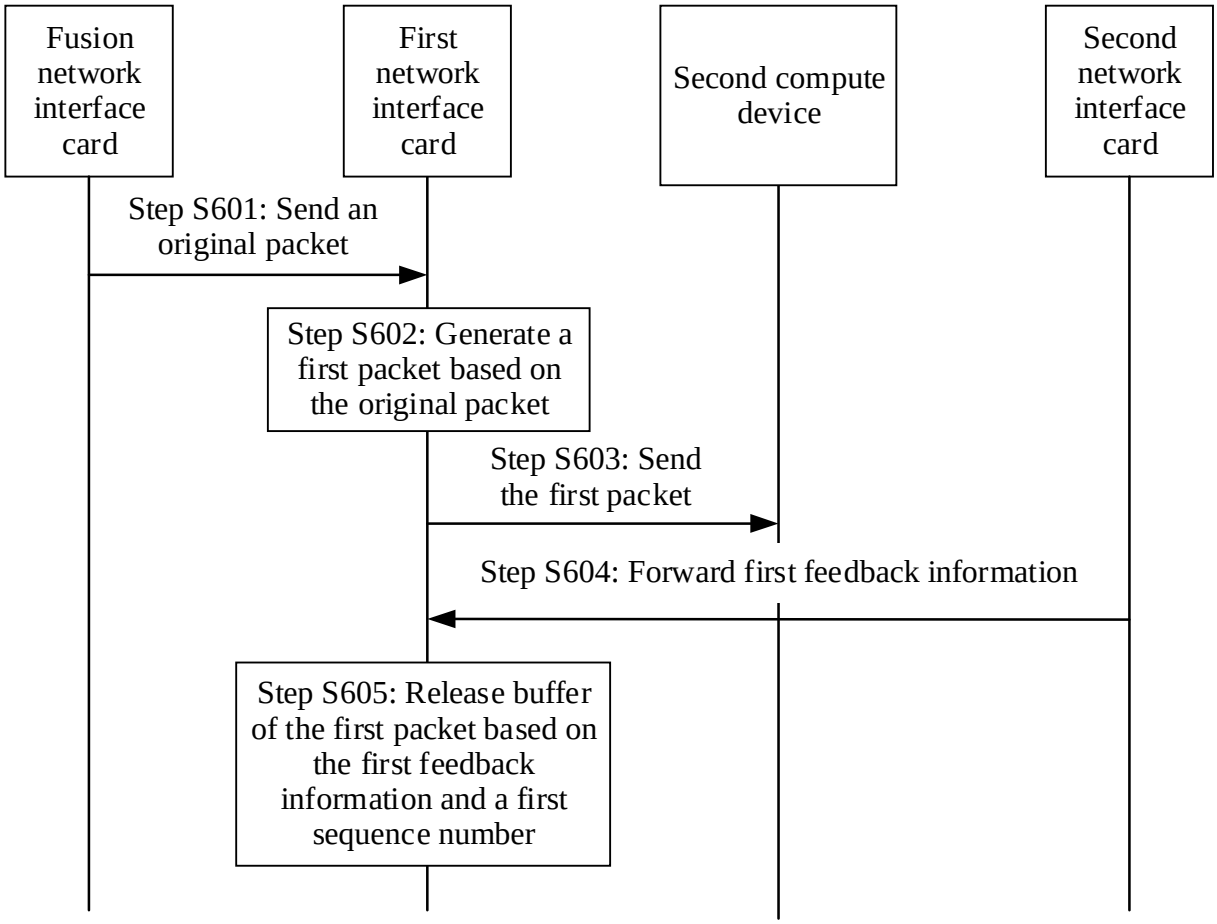
[FIG. 4]


Processor
Fusion network interface card
First network interface card
Step S401: Send an original packet
Step S402: Configure the first network interface card based on the original packet, to enable the first network interface card to send a first packet to a second compute device
Step S403: Obtain first feedback information
Step S404: Configure the first network interface card based on the first feedback information and a first sequence number, to enable the first network interface card to release buffer of the first packet

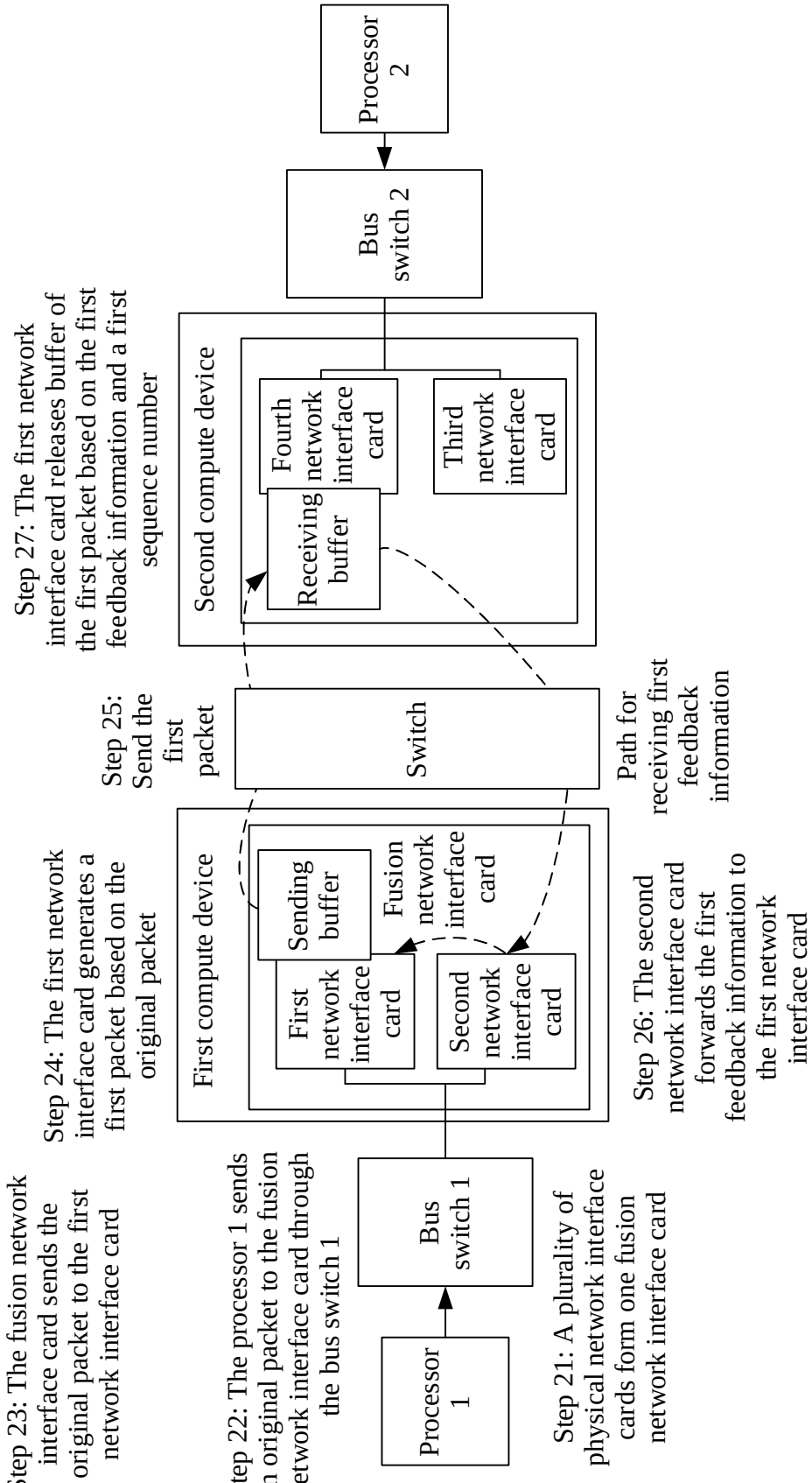
[FIG. 5]


Processor 1
Bus switch 1
Bus switch 2
Processor 2
First compute device
Second compute device
Sending buffer
Fusion network interface card
First network interface card
Second network interface card
Receiving buffer
Fourth network interface card
Third network interface card
Switch
Path for sending the first packet
Path for receiving first feedback information
Step 11: A plurality of physical network interface cards form one fusion network interface card
Step 12: The processor 1 sends an original packet to the fusion network interface card through the bus switch 1
Step 13: The fusion network interface card configures the first network interface card based on the original packet, to enable the first network interface card to send a first packet to the second compute device
Step 14: The fusion network interface card configures the first network interface card based on the first feedback information and a first sequence number, to enable the first network interface card to release buffer of the first packet

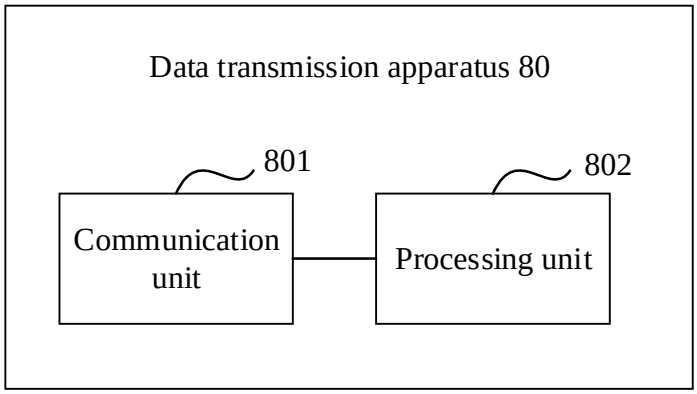
[FIG. 6]


Fusion network interface card
First network interface card
Second compute device
Second network interface card
Step S601: Send an original packet
Step S602: Generate a first packet based on the original packet
Step S603: Send the first packet
Step S604: Forward first feedback information
Step S605: Release buffer of the first packet based on the first feedback information and a first sequence number

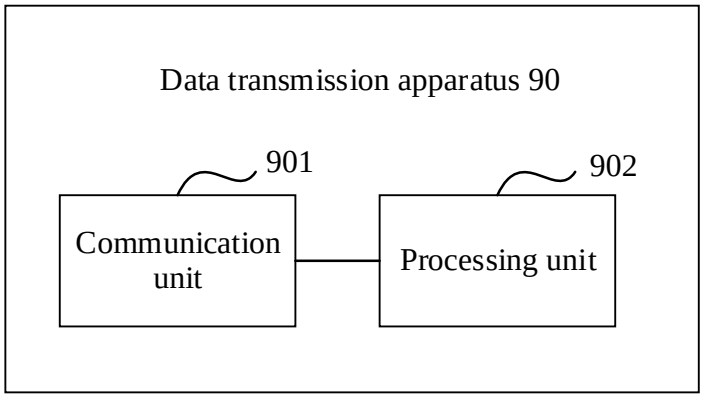
[FIG. 7]


Processor 1
Bus switch 1
Processor 2
Bus switch 2
First compute device
Sending buffer
Fusion network interface card
First network interface card
Second network interface card
Second compute device
Receiving buffer
Fourth network interface card
Third network interface card
Switch
Step 21: A plurality of physical network interface cards form one fusion network interface card
Step 22: The processor 1 sends an original packet to the fusion network interface card through the bus switch 1
Step 23: The fusion network interface card sends the original packet to the first network interface card
Step 24: The first network interface card generates a first packet based on the original packet
Step 25: Send the first packet
Step 26: The second network interface card forwards the first feedback information to the first network interface card
Path for receiving first feedback information
Step 27: The first network interface card releases buffer of the first packet based on the first feedback infomation and a first sequence number

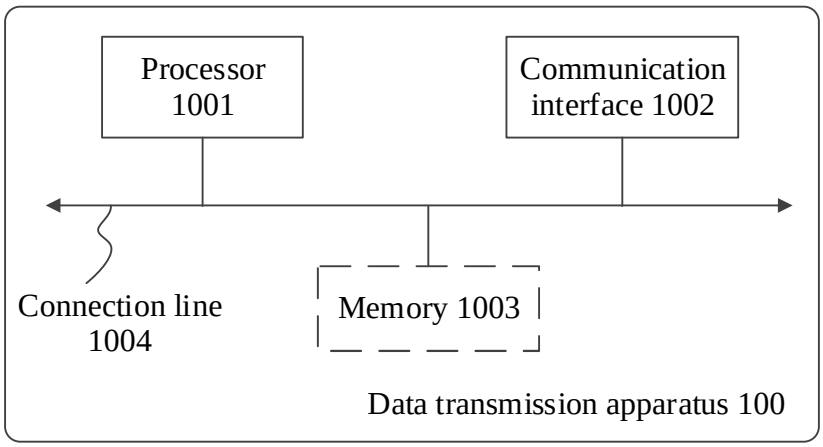
[FIG. 8]



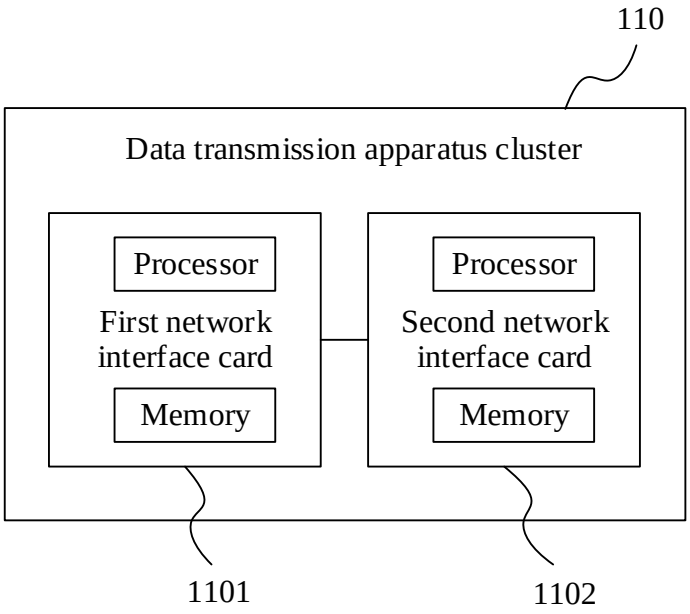
[FIG. 9]



[FIG. 10]



[FIG. 11]


110
Data transmission apparatus cluster
Processor
First network interface card
Memory
Processor
Second network interface card
Memory
1101
1102