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Example 3. This example gives a sample output where the master switch, `psw1`, and `psw2` are started in this order (from three different terminal windows on the same lab workstation). However, since `psw1` delays for 5000 msec, queries from `psw2` comes to the master switch before queries from `psw1`. Note also that while `psw1` delays reading from the data file, the switch has received and processed two relayed packets.

> **Note:** The output below shows all received and transmitted packets for each switch. This feature is not required in the assignment, however, it is highly recommended for gaining partial marks if the submitted assignment does not work as specified.

```
# ex3.dat: data file for a2w22
#     a2w22 master 2
#     a2w22 psw1 ex3.dat null psw2 100-110
#     a2w22 psw2 ex3.dat psw1 null 200-210

psw1  100  102
psw1  delay 5000
psw1  100  200
psw1  100  300
psw2  200  300
psw3  200  300
psw2  200  100
psw2  200  100
psw1  100  103
psw1  100  104
```

Sample output (edited for clarity):

- Master switch output:

```
Received (src= psw1, dest= master) [HELLO]:
         (port0= master, port1= null, port2= psw2, port3= 100-110)
Transmitted (src= master, dest= psw1) [HELLO_ACK]

Received (src= psw2, dest= master) [HELLO]:
 (port0= master, port1= psw1, port2= null, port3= 200-210)
Transmitted (src= master, dest= psw2) [HELLO_ACK]

Received (src= psw2, dest= master) [ASK]:  header= (srcIP= 200, destIP= 300)
Transmitted (src= master, dest= psw2) [ADD]:
 (srcIP= 0-1000, destIP= 300-300, action= DROP:0, pktCount= 0)

Received (src= psw2, dest= master) [ASK]:  header= (srcIP= 200, destIP= 100)
Transmitted (src= master, dest= psw2) [ADD]:
 (srcIP= 0-1000, destIP= 100-110, action= FORWARD:1, pktCount= 0)

Received (src= psw1, dest= master) [ASK]:  header= (srcIP= 100, destIP= 200)
```

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```
Transmitted (src= master, dest= psw1) [ADD]:
 (srcIP= 0-1000, destIP= 200-210, action= FORWARD:2, pktCount= 0)

... ...
```

- Packet switch 1 output:

```
Transmitted (src= psw1, dest= master) [HELLO]:
 (port0= master, port1= null, port2= psw2, port3= 100-110)
Received (src= master, dest= psw1) [HELLO_ACK]

** Entering a delay period of 5000 msec

Received (src= psw2, dest= psw1) [RELAY]:  header= (srcIP= 200, destIP= 100)
Received (src= psw2, dest= psw1) [RELAY]:  header= (srcIP= 200, destIP= 100)

** Delay period ended

Transmitted (src= psw1, dest= master) [ASK]:  header= (srcIP= 100, destIP= 200)
Received (src= master, dest= psw1) [ADD]:
 (srcIP= 0-1000, destIP= 200-210, action= FORWARD:2, pktCount= 0)

... ...
```

- Packet switch 2 output:

```
Transmitted (src= psw2, dest= master) [HELLO]:
 (port0= master, port1= psw1, port2= null, port3= 200-210)
Received (src= master, dest= psw2) [HELLO_ACK]

Transmitted (src= psw2, dest= master) [ASK]:  header= (srcIP= 200, destIP= 300)
Received (src= master, dest= psw2) [ADD]:
 (srcIP= 0-1000, destIP= 300-300, action= DROP:0, pktCount= 0)

Transmitted (src= psw2, dest= master) [ASK]:  header= (srcIP= 200, destIP= 100)
Received (src= master, dest= psw2) [ADD]:
 (srcIP= 0-1000, destIP= 100-110, action= FORWARD:1, pktCount= 0)

... ...
```