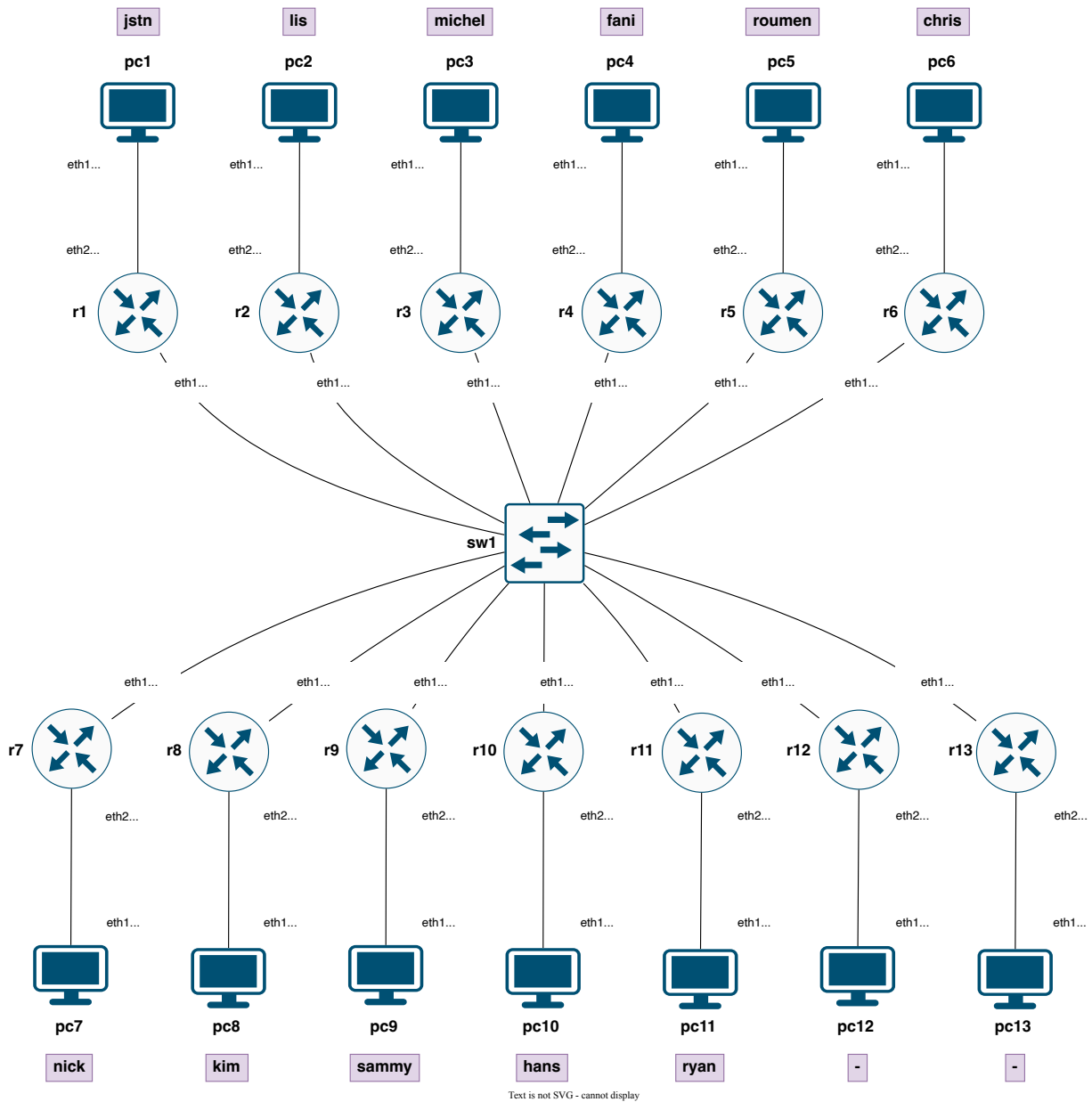

S1E9 - Ohai OSPF

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Topology

Topology: five-routers-five-pcs



Open Shortest Path First

- Link-State Vector
 - takes “cost” of links into account
 - not just “distance”, like RIP
- Forms neighbour relationships
 - negotiates and compares parameters with peers
 - * eg timer values must match
 - * subnet configuration must match
- Has a concept of “Router-ID”

- 32-bit number, expressed as a dotted quad
 - * eg 1.1.1.1
 - * copied from the loopback interface with the highest IP address
 - * or specified manually
- Supports **areas**, for scaling large networks
 - we will all use area 0

Configuration

```
r7#configure
r7(config)#router ospf 100 <- process ID
r7(config-router-ospf)#network 10.0.0.0/24 area 0
r7(config-router-ospf)#network 192.168.x.0/24 area 0
r7(config-router-ospf)#end
r7#show ip ospf interface brief
...
r7#show ip ospf neighbor
...
```

Setting an OSPF router ID

```
r7#configure
r7(config)#interface loopback 1
r7(config-if-Lo1)#ip address 7.7.7.7/32
r7(config-if-Lo1)#ospf network point-to-point
r7(config-if-Lo1)#ip ospf 100 area 0
r7(config-if-Lo1)#end
r7#show ip ospf interface brief
...
r7#show ip ospf ?
...
```

Investigate OSPF!

```
r7#show ip ospf summary
r7#show ip ospf neighbor
r7#show ip ospf database
r7#show ip ospf interface brief
r7#show ip route
r7#show ip ospf
```