

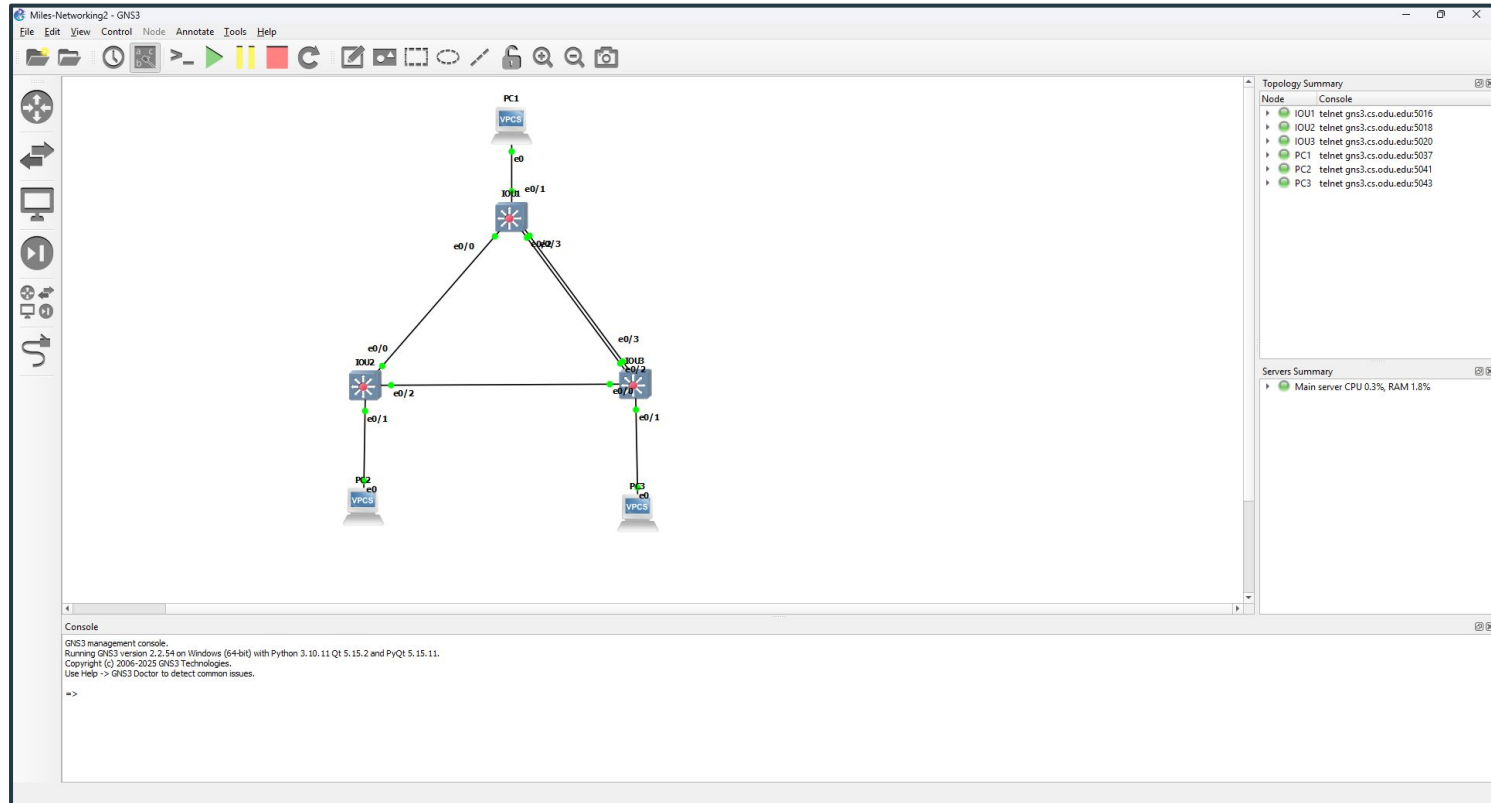


Networking - Link Aggregation and Redundancy Using LACP

Miles Anderson
Made with GNS3



Network Topology



Link Aggregation Control Protocol

Switch IOU1

```
IOU1#show etherchannel summary
Flags: D - down        P - bundled in port-channel
       I - stand-alone  S - suspended
       H - Hot-standby (LACP only)
       R - Layer3       S - Layer2
       U - in use       f - failed to allocate aggregator

       M - not in use, minimum links not met
       u - unsuitable for bundling
       w - waiting to be aggregated
       d - default port

Number of channel-groups in use: 1
Number of aggregators:          1

Group  Port-channel  Protocol    Ports
-----+-----+-----+-----
1      Po1(SU)        LACP        Et0/2(P)  Et0/3(P)

IOU1#show etherchannel port-channel
Channel-group listing:
-----
Group: 1
-----
Port-channels in the group:
-----
Port-channel: Po1    (Primary Aggregator)
-----

Age of the Port-channel   = 0d:00h:42m:53s
Logical slot/port         = 16/0           Number of ports = 2
HotStandBy port = null
Port state                = Port-channel Ag-Inuse
Protocol                  = LACP
Port security              = Disabled

Ports in the Port-channel:

Index  Load  Port    EC state    No of bits
-----+-----+-----+-----+-----
0      00    Et0/2    Active       0
0      00    Et0/3    Active       0

Time since last port bundled:  0d:00h:42m:48s  Et0/2
```

Switch IOU3

```
IOU3#show etherchannel summary
Flags: D - down        P - bundled in port-channel
       I - stand-alone  S - suspended
       H - Hot-standby (LACP only)
       R - Layer3       S - Layer2
       U - in use       f - failed to allocate aggregator

       M - not in use, minimum links not met
       u - unsuitable for bundling
       w - waiting to be aggregated
       d - default port

Number of channel-groups in use: 1
Number of aggregators:          1

Group  Port-channel  Protocol    Ports
-----+-----+-----+-----
1      Po1(SU)        LACP        Et0/2(P)  Et0/3(P)

IOU3#show etherchannel port-channel
Channel-group listing:
-----
Group: 1
-----
Port-channels in the group:
-----
Port-channel: Po1    (Primary Aggregator)
-----

Age of the Port-channel   = 0d:00h:07m:18s
Logical slot/port         = 16/0           Number of ports = 2
HotStandBy port = null
Port state                = Port-channel Ag-Inuse
Protocol                  = LACP
Port security              = Disabled

Ports in the Port-channel:

Index  Load  Port    EC state    No of bits
-----+-----+-----+-----+-----
0      00    Et0/2    Active       0
0      00    Et0/3    Active       0

Time since last port bundled:  0d:00h:07m:12s  Et0/3

IOU3#
IOU3#
```

Port Trunking

Switch IOU2

```
IOU2#int
Translating "int"

Translating "int"
% Unknown command or computer name, or unable to find computer address
IOU2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
IOU2(config)#exit
IOU2#
*Dec  5 22:16:59.191: %SYS-5-CONFIG_I: Configured from console by console
IOU2#show interfaces trunk

Port      Mode           Encapsulation  Status        Native vlan
Et0/0     on             802.1q         trunking      1
Et0/2     on             802.1q         trunking      1

Port      Vlans allowed on trunk
Et0/0     1-4094
Et0/2     1-4094

Port      Vlans allowed and active in management domain
Et0/0     1,10,20,30,999
Et0/2     1,10,20,30,999

Port      Vlans in spanning tree forwarding state and not pruned
Et0/0     1,999
Et0/2     10,20,30
IOU2#
```