NETCAD — Cisco CCNA 200-301: EtherChannel Lab

Topic: Layer 2 EtherChannel (LACP) & 802.1Q Trunking • **Devices:** 2x Cisco Catalyst 2960 Switches • **Ports:** Fa0/1 – Fa0/3

1. Lab Topology & Interface Details

- **Physical Interfaces:** `FastEthernet 0/1`, `FastEthernet 0/2`, `FastEthernet 0/3`
- **Logical Bundled Interface:** `Port-Channel 1 (Po1)`
- **Protocol:** LACP (IEEE 802.3ad) in `Active` Mode
- **Trunking Standard:** IEEE 802.1Q (native default on Cisco Catalyst 2960)

2. Switch 1 (SW1) Configuration

Task 3.1: Bundle Interfaces with LACP

```
SW1(config)# interface range fastEthernet 0/1 - 3
SW1(config-if-range)# channel-group 1 mode active
SW1(config-if-range)# exit
```

Task 3.3: Configure Port-Channel 1 as a Trunk

> **Packet Tracer Note:** Catalyst 2960 switches use 802.1Q natively, so the encapsulation command is omitted.

```
SW1(config)# interface port-channel 1
SW1(config-if)# switchport mode trunk
SW1(config-if)# exit
```

3. Switch 2 (SW2) Configuration

Task 3.2: Bundle Interfaces with LACP

```
SW2(config)# interface range fastEthernet 0/1 - 3
SW2(config-if-range)# channel-group 1 mode active
SW2(config-if-range)# exit
```

Task 3.3: Configure Port-Channel 1 as a Trunk

```
SW2(config)# interface port-channel 1
SW2(config-if)# switchport mode trunk
SW2(config-if)# exit
```

4. Packet Tracer Verification Commands

Primary Status Check:

```
SW1# show etherchannel summary
```

- Confirm **Po1(SU)** appears (S = Layer 2, U = In Use).
- Confirm **Fa0/1(P) Fa0/2(P) Fa0/3(P)** appear (P = Bundled in channel).

Trunk Link Check:

```
SW1# show interfaces trunk
```

- Confirm **Po1** is listed with status **trunking**.

Detailed Protocol Inspection:

```
SW1# show etherchannel port-channel
```

- Confirm **Protocol = LACP** and **Port state = Port-channel Ag-Inuse**.

5. One-Click Copy-Paste Deployment Blocks

SW1 Complete Script:

```
enable
configure terminal
interface range fastEthernet 0/1 - 3
channel-group 1 mode active
exit
interface port-channel 1
switchport mode trunk
exit
end
write memory
```

SW2 Complete Script:

```
enable
configure terminal
interface range fastEthernet 0/1 - 3
channel-group 1 mode active
exit
interface port-channel 1
switchport mode trunk
exit
end
write memory
```

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