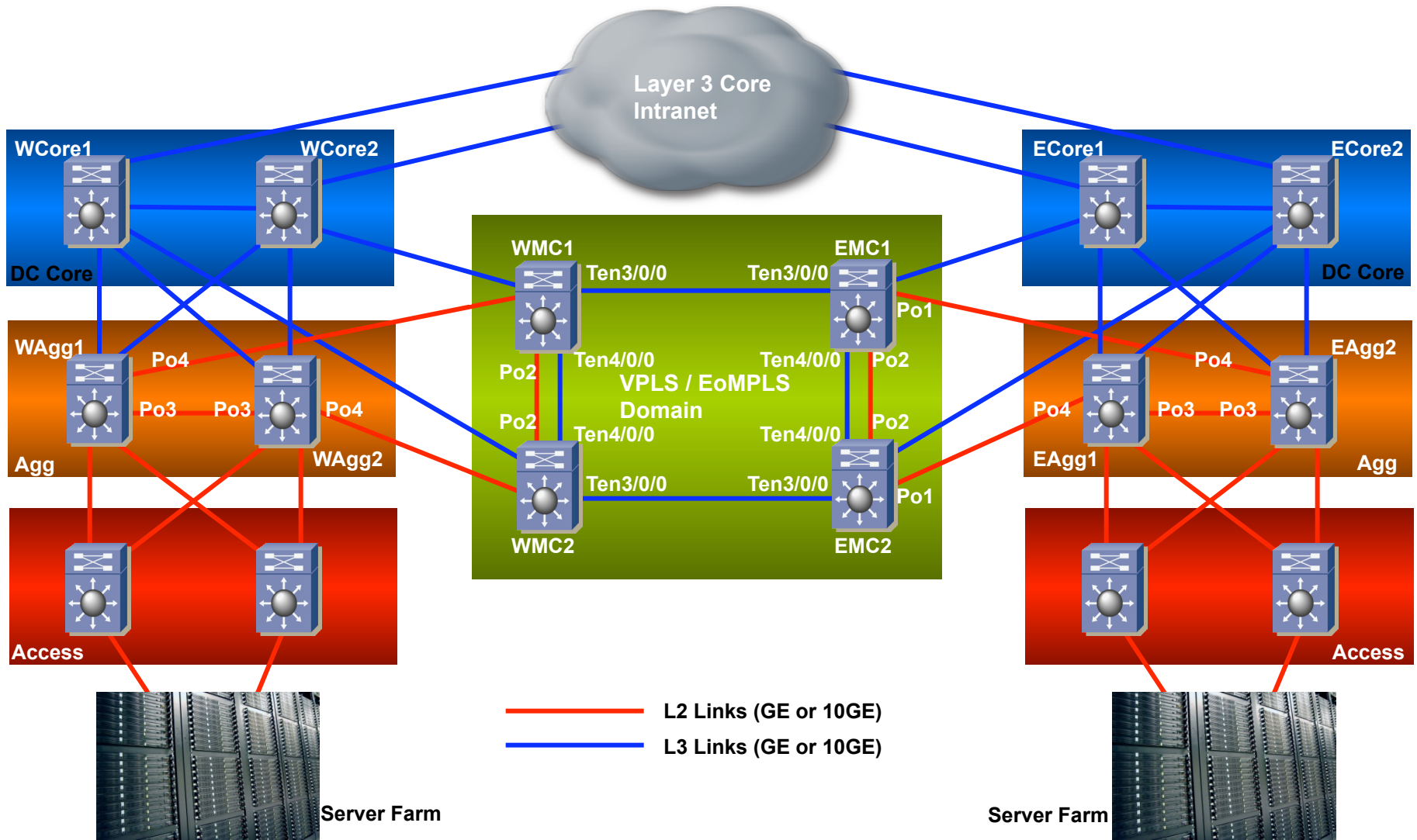


End to End VPLS and EoMPLS Design



Metro Switch interconnectivity (EIGRP)

- Layer3 interface between the Metro Switches configured for MPLS

```
mpls label protocol ldp
```

```
!
```

```
interface TenGigabitEthernet3/0/0  
description MPLS Interface to peer N-PE in DC #2
```

```
mtu 1526
```

```
ip address 192.168.1.1 255.255.255.252
```

```
ip hello-interval eigrp 5 1
```

```
ip hold-time eigrp 5 3
```

```
ip authentication mode eigrp 5 md5
```

```
ip authentication key-chain eigrp 5 password
```

```
logging event link-status
```

```
load-interval 30
```

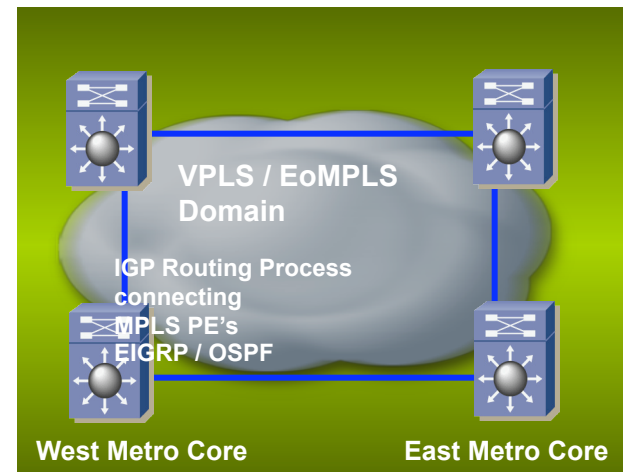
```
udld port disable
```

```
mls qos trust dscp
```

```
mpls ip
```

```
!
```

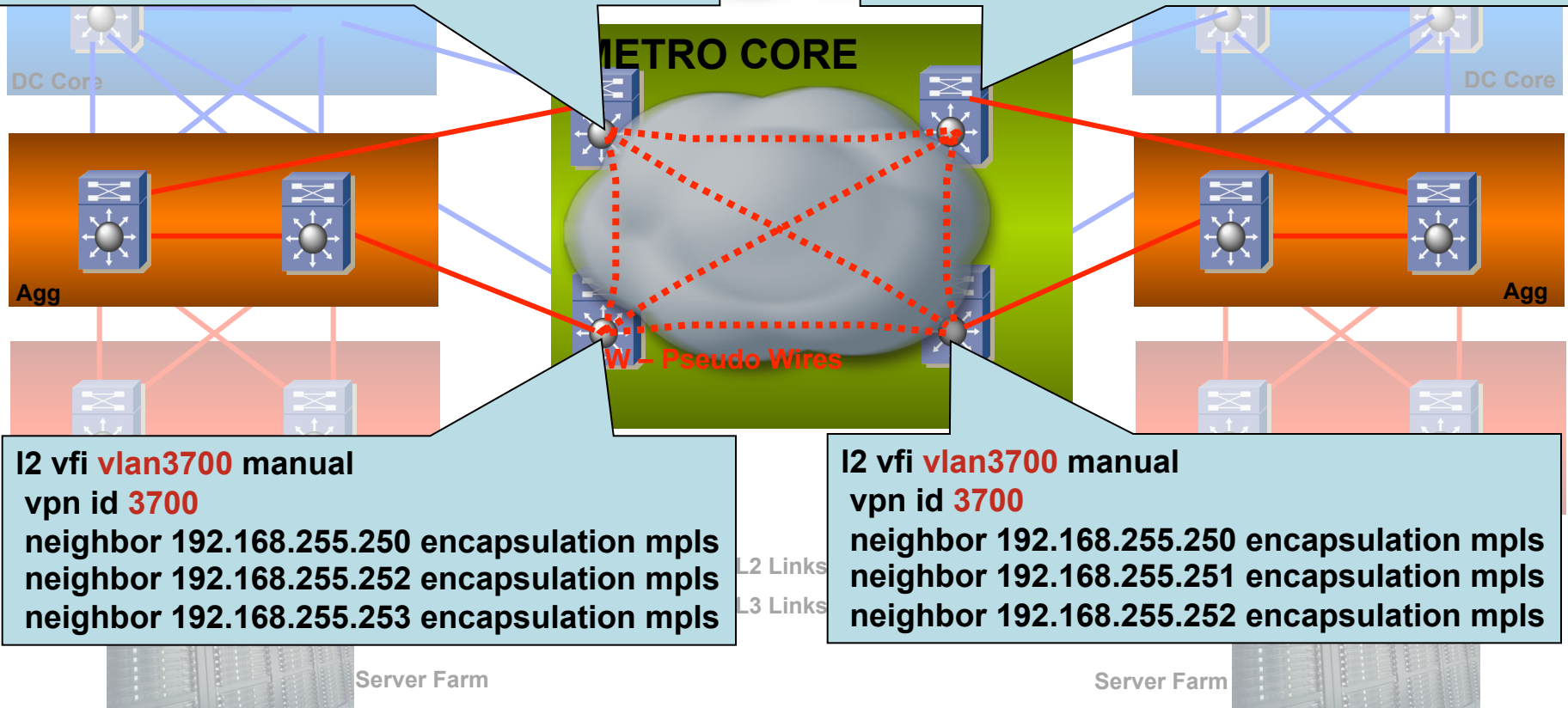
No Dynamic routing between the Metro Core switches and other Data Center switches!



VPLS for Layer2

I2 vfi **vlan3700** manual
 vpn id **3700**
 neighbor 192.168.255.251 encapsulation mpls
 neighbor 192.168.255.252 encapsulation mpls
 neighbor 192.168.255.253 encapsulation mpls

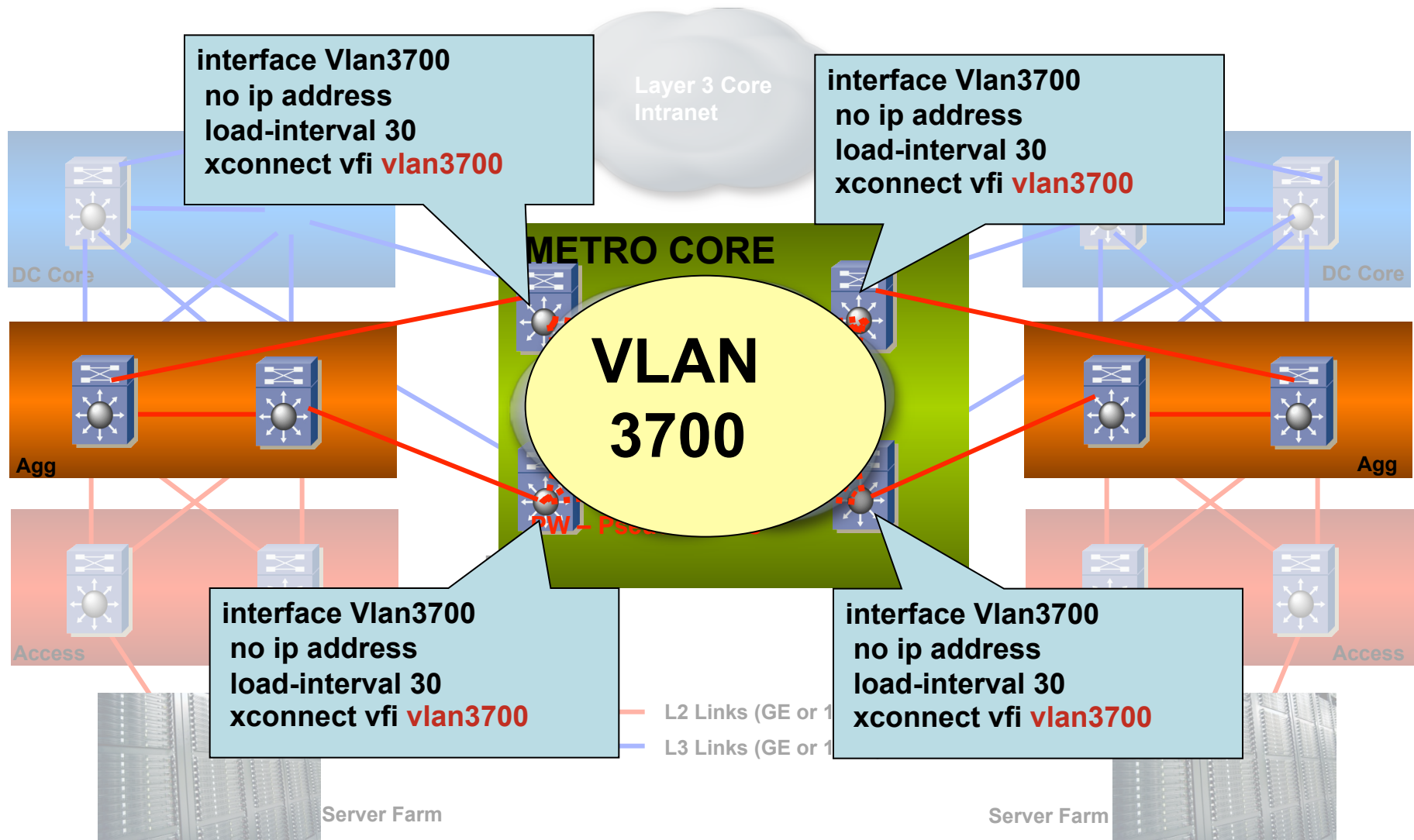
I2 vfi **vlan3700** manual
 vpn id **3700**
 neighbor 192.168.255.250 encapsulation mpls
 neighbor 192.168.255.251 encapsulation mpls
 neighbor 192.168.255.253 encapsulation mpls



I2 vfi **vlan3700** manual
 vpn id **3700**
 neighbor 192.168.255.250 encapsulation mpls
 neighbor 192.168.255.252 encapsulation mpls
 neighbor 192.168.255.253 encapsulation mpls

I2 vfi **vlan3700** manual
 vpn id **3700**
 neighbor 192.168.255.250 encapsulation mpls
 neighbor 192.168.255.251 encapsulation mpls
 neighbor 192.168.255.252 encapsulation mpls

VPLS for Layer2



MPLS benefits for L2 interconnect

- Several improvements can be done using an L2 over MPLS solution versus simple bridging
 - Core spanning tree suppression is achieved by blocking BPDUs
 - Core links protected via L3 reconvergence
 - EoMPLS for point to point links
 - Virtual Private LAN Service (VPLS) for multipoint links
 - Each DC spanning tree will be isolated and restrained